

Śodha Pravāha

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CONTENTS

- **Diet for Pregnant Women : A Study of Pregnant Women of Urban Area in Muzaffarpur District** 1-3
Dr. Komal Raj, Ph. D. (Home Science) B. R. A. Bihar University, Muzaffarpur.
- **Non-Agricultural Land Use Pattern In Sheohar District** 4-8
Ekta Dolly, Research Scholar, Department of Geography, B.R.A.Bihar University, Muzaffarpur.
- **The Female Gender in Village** 9-13
Dr. Mayanka Kishori, NET (UGC), Ph. D. (Sociology), B. R. A. Bihar University, Muzaffarpur.
- **Political Activities of Subhas Chandra Bose** 14-16
Dr. Manish Kumar, Department of History, Veer Kunwar Singh University, Ara (Bihar).
- **A study of sports training facilities and its impact in the colleges of District Varanasi** 17-22
Vaibhav Singh, Research Scholar, Deptt. of Physical Education, Banaras Hindu University
- **Socio-Cultural, Political and Economic Participation of Indian Diaspora in USA¹** 23-29
Dr. Siba Sankar Mohanty, Assistant Professor, Centre for Diaspora Studies (Independent Centre), Central University of Gujarat, Gandhinagar
Dr. Nabin Kumar Khara, Lecturer in P.G. Department of Political Science, Kamala Nehru Women's College, R. D. Women's University, Bhubaneswar
- **Maritime security and the Indian Ocean** 30-37
Dr. Lopamudra Maitra Bajpai, (MA, MDMC, PhD- ICHR-JRF) - Visual Anthropologist, author, international columnist- Former, Culture Specialist (Research) SAARC Cultural Centre, Sri Lanka. - Former Assistant Professor- Symbiosis International University.
- **Green Marketing Initiatives and Practices in India: A Study of Electronic Goods Industry** 38-49
Pankaj Kumar Bharti, Research Scholar, Faculty of Commerce, BHU, Varanasi -221005.
Akhilesh Kumar, Research Scholar, Faculty of Commerce, BHU, Varanasi -221005.
- **A Study Of Predicting Effect Of Educational Environment And Parent Child Relationship On Creativity** 50-54
Salini, Research Scholar, Department of Psychology, LNMU, Darbhanga.

- **Financial Inclusion And Growth Of Banking Services In India** 55-59
Dr. Amar Krishna, Assistant Professor, Dept. of Economics, Jagannath Mishra College, Chandwara, Muzaffarpur.
- **Geographical Study of Agricultural Labour Migration in India** 60-63
Dr. Saroj Kumar Mallick, Deptt. of Geography, L.N.M.U., Darbhanga
- **Parent Child Relation of Socially Advantaged and Disadvantaged Children** 64-67
Dr. Anisha Kumari, Ph. D. (Psychology), B. R. A. Bihar University, Muzaffarpur.
- **Adoption of Modern Agricultural Technologies: A Micro Analysis at Farm Level in Bihar** 68-73
Divakar kumar, Research Scholar, Department Of Economics, Village-Bhagwatipur, PS-Rudrapur, Po-Rudrapur, District-Madhubani, Bihar-847411
- **The International Finance Corporation: Origin and Initial Roles and Functions** 74-80
Ajit Kumar, Designation-Pursuing Ph.D. in International Organisation (cipod) From JNU
- **Thyroid disorder among Women: Cause and prevention** 81-85
Smt. Kumari Priti, Research Scholar, P.G. Department of Home Science Ranchi University, Ranchi
Smt. Dr. Renu Kumari, Associate Professor Department of Home Science Ranchi women's College, Ranchi University, Ranchi.
- **Structure and Prospects of India's Foreign Trade in Agriculture Sector** 86-93
Dr. Benoy Kumar Lal, Associate Professor, Department of Economics, Patna University, Patna-05.
- **Role of Education In Women Empowerment** 94-97
marzia mehdi, Research Scholar, Department of English, University of Allahabad.
- **An Analysis On Goods And Service Tax (GST)** 98-103
Saumya Rai, (Masters of Commerce and UGC-NET) Swami Sahajanand post Graduate college, Ghazipur, U.P. (Veer Bahadur Singh Purvanchal University, Jaunpur)
- **Moving Towards Digital Economy: Evidence from India During Covid 19** 104-113
Dr. Dinesh Kumar Sharma, Assistant Professor, N.S.P.S. Govt. P.G. College, Magaraha, Mirzapur
Dr. Rohit Singh, Professor and Dean Academics, School of Business, Auro University, Surat, India

- **India's look West Policy: An Overview** 114-118
Dr. Hari ram Parihar, Assistant Professor in Political Science,
Government College, Jodhpur (Rajasthan)
- **Implementation of Basel II Norms: Issues and Challenges** 119-125
Dr. Vikash, Ph.d in Economics, B.R.A.B.University, Muzaffarpur
- **Truncated Question Hour in the 2020 Monsoon Session of Indian Parliament: Emerging Questions** 126-130
Dr. Bipin Kumar Thakur, Associate Professor, Department of Political Science, Sri Guru Tegh Bahadur Khalsa College, University of Delhi, Delhi-110007
- **David Hume The Idea of Necessary Connection** 131-135
Dr. Bhawana Kumari, Ranchi University,Ranchi
- **Empowerment of women and their Economic Development** 136-139
Dr. Preeti Sharma, Professor and Head in Sociology Govt. D.B. Gils P.G. College, Raipur (C.G.)
Suruchi Bansal. Research Scholar
- **Economic Thought of Mahatama Gandhi** 140-143
Dr.Priya Kumari, Associate Professor, Department of Economics & Rural Development, Dr. R.M.L. Avadh University, Ayodhya
- **Different Retail Formats and How Store Attributes Impact Shoppers' Loyalty in the Context of the Indian Retailing Industry** 144-151
Rabina Verma, Research Scholar, Department of Management, Magadh University, Bodh Gaya, Bihar
- **Decentralization Under Federal Order : Problem and Prospect** 152-155
Dr. Kantesh Kumar, Assistant Professor department of Political Science P.G Centre Saharsha
- **Community Involvement in Promoting Inclusion, Participation and Self Determination Community and Inclusion** 156-158
Mr. Pradeep Kumar, Department of Intellectual Disability, Vision Institute of Applied Studies Faridabad
- **Role of Information and Communication Technology in Rural Development in India** 159-164
Dr. Binay Kumar Singh, Associate Professor, Dept. of Economics, Jagdam College, Chapra, J.P. University, Chapra (Bihar)
- **Analysis of Food Security In India With Reference To The National Food Security Act,2013** 165-169
Om PrakashKannaujia, LL.M. NET, Research Scholar, Faculty of Law, University of Allahabad, Prayagraj

- **Quantitative vs. Qualitative Research Paradigms-
Epistemological, Theoretical and Methodological Perspective** 170-174
Dr. Jai Singh, (Asst. Prof.) Department of Education Vasanta College for Women (BHU) Varanasi-UP
- **Procedure of Community Based Rehabilitation** 175-180
Vijay Bharati, Assistant professor (hearing impairment), Department of hearing impairment Vision institute of applied studies Faridabad
Jyoti, Lecturer (hearing impairment), Department of hearing impairment, Vision institute of applied studies
- **Problems and Prospects of Waste Land in West Champaran District** 181-185
Dr. Vinod Baitha, Associate Professor Department of Economics Marwari College, Darbhanga
- **Juvenile Delinquency and the difficulty in rehabilitation and social re-integration of juveniles in the light of COVID-19 pandemic** 186-193
Vimal Kumar Jha, Research Scholar, P.G. Department of Law Tilka Manjhi Bhagalpur University, Bhagalpur **Reg. No.** - 7858/2018
- **Financial Performance of Regional rural Banks : An Application of Post-Hoc Tukey HSD Test** 194-203
Smt. Manorama Chaurasia, Research Scholar, Banaras Hindu university, Varanasi.
Dr. Preeti Singh, Assistant Professor, (Department of Economics) (Vasanta College for Women, Rajghat) Banaras Hindu University, Varanasi
- **Covid-19: Its Impact on National Parks And Tribes** 204-209
Dr. Rajendra Kumar Singh, Associate Professor, Dept. of Geography, T.D.P.G. College Jaunpur
Nivedita Sigh, Research Scholar, Dept. of Geography, T.D.P.G. College Jaunpur
- **Indigo-Movement And Social Change After First World War : A Case Study of Munger District** 210-214
Dr. (Smt.) Ruby Kumari, Head, Deptt. of History, Jamalpur College, Jamalpur, Munger, Bihar
- **Emerging Trends of Urbanization and Sustainable Development: A Geographical Study** 215-218
Shirin Hayat, Assistant Professor, Department of Geography, S.R.A.P. College, Bara Chakiya (Bihar)
- **The Tribals and Ethnic Diversity in Kandhamal – A Bird's Eye View** 219-228
Ms. Tanuja Singh, Assistant Professor of History, S.M. Government Women's College, Phulbani (Odisha)

- **A Re-examination of Feldstein-Horioka Puzzle in India** 229-239
Ruby singh, Assistant Professor, Department of Economics, Udai Pratap College, Varanasi
- **Agriculture Financing - An Overview** 240-242
Md. Irfan Hussain, Research Scholar, University Department of Commerce, B.R.A.B.U., Muzaffarpur
- **Identifying Eating Habits and Nutritional Status of Children : A Study among children of Delhi Public School Dhanbad Jharkhand** 243-245
Dr Sarita Sinha, Principal Delhi Public School Dhanbad Jharkhand
- **Planning of Agro- Based Industries in Vaishali District** 246-250
Devendra Prasad Sah, Research Scholar, P.G. Dept. of Geography, L.N.Mithila Univ. Darbhanga
- **Ademographic characteristics socio-economic set up and literacy level of s.c. Population of rural service centres of cheria bariarpur block , begusarai district** 251-255
Indradeo Ram, Research Scholar, P.G. Dept. of Geography, L.N.Mithila Univ. Darbhanga
- **Impact of COVID-19 on IT Sector (TCS and Infosys)** 256- 263
Dr. Rasmeet Kaur Malhi, Assistant Professor, Department of Management, BSSS
- **Relevance of Major Provisions For Quality School Education in National Education Policy-2020** 264-271
Dr.Surendra Ram, Associate Professor, Department of Education, MGKVP, Varanasi
- **Synthesis of 1-phenylethanol by fungal mycelia of Lenzitesbetulina MTCC-1183** 272-276
Dr. Saroj Yadav, Department of Chemistry, D.D.U. Gorakhpur University, Gorakhpur-273 009, India
Dr. Vinod Kumar Yadav, Assistant professor in Chemistry, Kashi Naresh Govt. P. G. College, Gyanpur, Bhadohi,
- **A Critical Appraisal of Indian Police in the Context of Institutional Accountability and Functional Autonomy** 277-281
Prakash Kumar Patel , Assistant professor, Dept. of Political Science at Dyal Singh College, (University of Delhi)
- **Extraordinary Work of R.K. Narayan 'The Guide'** 282-286
Dr. Vibhash Ranjan, Asistant Professor (Dept. of English) Patna College Patna University
- **Infrastructural Issues in Destination Place: A Study of Migrants in Cardamom Estates** 287-292
Dr. M. Meena, Assistant Professor of Economics, Saraswathi Narayanan College, Madurai, India

- **History and Archaeology of the Ambedkar Nagar district, Uttar Pradesh: A brief study** 293-297
Santosh Kumar Anand, Department of Ancient History, Culture & Archaeology, University of Allahabad, Prayagraj
- **Effect of Plyometric and Circuit Training on Jumping Ability of Basketball Players** 298-302
Dr. Sanjay Narayan Singh, Asistant Professor (Dept. of English) Patna College Patna University
- **Introduction of FATA : Core of Af-Pak Region’s Instability** 303-307
Vivek Pandey, Assistant Professor, Department of Defence and Strategic Studies, Atarra Post Garduate College, Atarra, Banda-210201, India
- **Re-imagining Federalism in India: Towards cooperative Federalism** 308-314
Deepika, Research Scholar at Department of Political Science, University of Allahabad
- **Tourism Industry of Jammu & Kashmir - Challenges And Opportunities** 315-321
Romasa Shukla, Research Scholar, H. D. School of Commerce, Gujrat University, Ahmedabad
- **A comparative Study of Sports Aggression Among Football, Basketball and Hockey Players of B.H.U** 322-326
Sujeet kumar singh, Research Scholar, Dept. of Physical Education, B.H.U. Varanasi
Prof. Abhimanyu singh, Professor, Dept. of Physical Education, B.H.U. Varanasi
Dr. Shalendra narayan Singh, Physical Education Teacher, S.K. Inter College, Basani, Varanasi
- **Structural and electrical properties of modified lead Tungstate** 327-334
Dr. A.D. Singh, Deptt. of Physics, A.B.R.P.G. College, Anpra Sonondra, (U.P)
- **Oriental (Indic) Narratives: Naïveté, Nativity, Novelty, Occidental Influences – Understanding The Historical Writings of Vrindavan Lal Verma** 335-340
Dr Pankaj Sharma, Associate Professor, Dept. of History, National Defence Academy, Khadakwasla, Pune – 411023
- **Judicial Review and Constitution of India** 341-347
Dr. S.K. Rai, (Associate Professor), Faculty of Law, B.S.A. College Mathura
- **Indian Banking Sector Reforms : An Overview** 348-350
Dr. Abhilash Kumar Srivastava, Associate Professor, Department of Commerce, Atarra P.G College, Atarra (Banda) Uttar Pradesh

- **Nitrogen mustards of Pyrimidine derivatives (potential anticancer agents)** 351-353
Dr. Shubhra Singh, Dept. of Chemistry, H.C.P.G. College, Varanasi
- **A Geographical Analysis of Rural Markets In Bhojpur District** 354-359
Mamtisha Kumari, M.A., Research Scholar Magadh University, Bodhgaya
Prof. (Dr.) Ashok kumar Sinha, University professor, Former H.O.D. Magadh University, Bodhgaya
- **Undercurrent Streams of Romanticism In Prosaic Soil of The Eighteenth Century England** 360-363
Dr. Sanil Kumar, Head Department of English, L.R. Degree College Jsrana, Firozabad (U.P.)
- **Predecaments of Museum Profession In India In 21st Century** 364-367
Sweta Chatterjee, Research Scholar, Museology Section, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi-221005 (U.P.)
- **Ethanol Blending in Petrol : Challenges and Opportunities in India** 368-374
Dharmendra Singh Raghuwanshi, Assistant Professor, Sant Gani Nath Government PG College, Mohammadabad Gohna, Mau (U.P.)
- **Law relating to Pharmaceutical Patents: A Conceptual Analysis** 375-392
Khalid Shamim, Associate Professor, Shibli National PG College, Azamgarh (UP).
- **Comparison of Aerobic, Anaerobic and Body Composition of Defenders and Attackers of Football Players** 393-397
Dr. Xavier Maria Raj, Head, Department of Physical Education St. Andrew's P.G. College, Gorakhpur India
- **Role of Yoga Nidra and Cognitive Therapy on ADHD and Autism Patients : A Thematic Paper** 398-404
Dr. Poonam Dwivedi, Associate Professor and HOD Physical Education, Dayanand Girls PG, College Kanpur.
- **Employees Retention Strategy on QWL In Banking Sector** 405-409
Asha Agrawal, Research Scholar, Faculty of Commerce, Banaras Hindu University
Dr. F. B. Singh, Professor, Faculty of Commerce, Banaras Hindu University
- **Renewable Energy: Pillar of Climate Change Mitigation** 410-412
Dr. Priti Jaiswal, Associate Professor, Dept. of Geography, Atarra P.G. College, Atarra

- **Judicial Reforms And Impact of Judicial Assessment** 413-417
Dr. Dinesh Babu, Dean Law, P.K University, Shivpuri. (M.P.)
- **Rural Non-farm Sector Employment: Issues and Prospects** 418-422
Dr. Arvind Prakash, Associate Professor & Head, Department of P.G. Studies & Research in Economics, Feroze Gandhi College, Rae Bareilly (UP)
- **Alcoholism : A Psychosocial Perspective** 423-425
S. K. Singh, Deptt. of Psychology, R.B.S. College, Agra
- **Environmental Sustainability Dimensions of Sustainable Development Goals – A Brief Discussion** 426-431
Dr. Anamika Kaushiva, Associate Professor, Economics, Sahu Ram Swaroop, Mahila Mahavidyalaya, Bareilly, U.P.
- **Effect of Plyometric Training on Motor Abilities of Volleyball Players of Intercollegiate Level** 432-437
Mr. Raj kumar pal, Assistant Professor, Dept. of Physical Education, Raath Mahavidyalaya, Paithani, Pauri, Garhwal
Dr. Rahul kumar Prasad, Assistant Professor, Dept. of Physical Education, Government Degree College, Patherdeva, Deoria
- **Advantages of Digital Marketing : A Paradigm Shift** 438-442
Aditya Mohan, Marketing Professional, BE, PGDM International Business- Marketing
- **Relationship between Attitude & Aggression among Female Basketball Players** 443-446
Dr. Sarita Yadav, Associate Professor, Department of Physical Education, Arya Kanya Degree College, Hardoi (U.P.)
- **Biopesticides: Scope And Challenges In India** 447-460
Dr. Pramod Kumar, Associate Professor, Department of Ag. Chemistry, C.S.S.S. (PG) College, Machhra, Meerut
- **Extend the Role of Tolerance : The Demand of 21st century to Human Being** 461-466
Dr. Awanish Chand Pandey, Assistant Professor, Dept. of philosophy, S. C. College, Ballia

Diet for Pregnant Women : A Study of Pregnant Women of Urban Area in Muzaffarpur District

*Dr. Komal Raj**

Pregnant women in India have been reported to consume diets deficient in both macro & micro nutrients (Rao et al, 2001; Pathak et al. 2004; NNMB. 2006) consequently a large number of pregnant women have sub optimal nutritional status adversely affecting the pregnant outcome. There is limited data on the dietary pattern & nutritional status in pregnant women in Bihar. Further women residing in Bihar especially in Muzaffarpur are more likely to suffer from nutritional deficiencies because of co-existence of insufficient income, insufficient daily expenditure with poor coverage of basic amenities & health services. There for the present study was carried bout in pregnant women residing in Muzaffarpur district. The present study was undertaken to determine the pregnant women's nutritional problems & dietary pattern.

A total 200 pregnant women were enrolled for study (from hospital/clinic). Through schedule-cum-checklist information related to their socio-demographic details, personal information, anthropometry, dietary intake (using both 24-hour recall & food frequency method) and clinical examination was collected. Sample of local household dishes & utensils (bowls, spoons, cup, plate & glasses) were used for exact amount of foods consumed by them. Cooked intake was converted to its raw equivalents. Nutrients were calculated from the food consumed by the study group using food composition table from the standard of ICMR & NIN (2010).

The socio-economic status of the total sample was assessed by looking at the household setting, monthly household income and associated variables. It was also necessary to determine the amount of money spent on food per day in order to major financial status influence on nutrient intake. According to UNICEF (2009b:38), socioeconomic condition influence the nature of the diet & poor populations tend to have diets low in essential nutrients.

Demographic information: The socio-demographic data indicate that the majority of the pregnant were General caste & Hindu. The majority of the participants had primary or below primary education & below Rs. 15000 family income. DshmuKh et al (2006:140) reported that lower family income is an important predictor of under nutrition. The socioeconomic status of the population plays an essential role in the quality of life, however, the conditions in which the participants live indicates poverty & food insufficiency. It was found that more the half of pregnant daily expend on food below Rs. 200.

The data indicate the nearly half of the pregnant women go married in age of 15-20 years. Child brides are often disempowered, dependent on the husbands and deprived of their fundamental rights to health, education & safety. Neither physically nor emotionally ready to become wives & mothers. Child brides are at greater risk of experiencing dangerous complication in pregnancy & child birth, becoming infected and suffering domestic violence. With little access to education and economic opportunities, they and their families are more likely to live in poverty.

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The results indicate that 30 percent of the pregnant women lived in unhygienic condition. Women living in informal dwellings are more likely not to have basic services such as safe water and proper sanitation. A situation that can put the health of these pregnant in danger and also such environmental factors contribute to the survival of disease borne agents such as parasites, bacteria & mosquitoes. It was found that 45.5 percent of pregnant women were not visit the clinic for regular check-up. Medical checkups & screening tests help keep pregnant & her healthy during pregnancy. It was also found the study that majority of the respondents came to the clinic in their third trimester & thus micronutrient supplementation is interfered with or was not feasible at all. In present study it was found that only 9.5 percent of pregnant were drug/alcohol addict.

Nutrient analysis: Poor nutritional status during pregnancy is an important indicator of fetus health outcome. The result is the present study indicates paucity of dietary diversity which therefore contributes to nutrient deficiency. The food intake in the present study was low particularly with respect to meat, lagumes, cereals, fruits & some milk products. About half of the pregnant women had lower or more energy intake the recommended level. The food consumption pattern indicated that most pregnant consumed rice & wheat at a very high frequency. On both the QFFQ and 254 hr recall reflected the mean daily protein intake in this study as some adequate (55.32%) but the frequency of consumption of some protein rich food such as meat and puses was low. Even though meat, milk & beans were consumed by most participants sufficiently to meet protein need. It was not enough to comply with other micronutrients needs, other foods rich in protein which as fish & egg were not in the top reported by QFFQ or 24 hr recall. The proteins from animal sources are very expensive, thus cannot be afforded by most households or be included in the daily preparation of meal.

Pregnant women are likely not to consume enough iron. Iron requirement increases during pregnancy & is important for blood formation specially for pregnant women, low consumptions is identified in the majority of the pregnant. In this study the pregnant had low calcium intake. In light of these observations, insufficient calcium intake is the result of low consumption of calcium rich food such as milk and its products.

The data indicate that low consumption of fresh fruits. Fruits are rich in complex carbohydrates, dietary fiber, vitamins & minerals. An adequate intake of fruits & vegetables is associated with a decreased risk of atherosclerosis, chronic respiratory diseases, cancer of the colon, esophagus and stomach (Dauchet, Amouyel and Dallongeville, 2009:599),

Anthropometry & clinical: The result indicate that the majority of pregnant (pre pregnancy) BMI is underweight or over weight. Being underweight can bring a small increased risk of pregnancy problems such as premature birth (before 37 weeks) or having a baby that is under weight. The data indicate that only 28 percent pregnant women weight gain as per recommended level. Past studies shows that women who gain too much are more likely to have a large baby or a premature baby.

The data indicate that 41.5 percent of pregnant women general appearance is sunken or hollow cheeks, it indicate that low consumption of protein, energy & fluid. It was found that the only 120% pregnant have normal hair, low consumption of protein; biotin & vitamin C rich food are the main reason for the hair problems. More than half of the pregnant women have skin problems: it shows the inadequate dietary pattern such as low consumption of vitamin A, Zink, niacin, vitamin K & C and fatty acid rich food. The result indicates that the most of the pregnant (84.5%) have normal eye, similarly majority of pregnant (97.5%) pregnant had normal heart. It also found that the almost all the pregnant had normal chest; few of them had respiratory muscle weakness.

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Non-Agricultural Land Use Pattern In Sheohar District

*Ekta Dolly**

Agriculture is the only resource on which man lives on directly or indirectly. Vast majority of population depends directly on agriculture and remain totally engaged in it all the year round. No doubt, the part of the total population having no direct connection with agricultural activities are engaged in either service or business or any other activities. Yet, they need food stuff and demand it from markets. In other words, they are indirectly connected with agriculture. Topography, drainage, weather and climate, soils and water resource jointly determine the character, distributional pattern and production of crops.

To some extent agricultural methods and implements, scientific instruments like tractors, land tillers, threshers, pumping sets, electric motors, etc. used in different parts of the region coupled with the developed methods of cultivation that require only skilled or technical labourers. A vast track of land in the neighborhood of towns, big or small mainly around it, is such that attract technical labourers to operate scientific implements and developed methods of agriculture.¹

The statistical data of the district represents that the district has an old rural economy and the cultivation has been the main stay of the mankind. So, the kinspin of the economy of this region is agriculture. More than 80 percent of the total population derives its subsistence directly or indirectly form the cultivation of the land. The average pressure of population on land is 8 persons per hectare and the average pressure of population on cultivable land to 10 persons per hectare². Somewhere in the district, where there is fertile soil and intensive agricultural is practiced, farmers also try to add extra - unit of land under cultivation. To possess even some patches of cultivable land is regarded as a hall mark of prestige. People engaged in some other occupations as potteries work, blacksmith and even in white colour jobs almost all are in possession of some acres of cultivable land. Hence the pressure of mankind on cultivated land is still more and it seems that the mother earth here is now quite unable to feed the consistently growing number of people until the malpractices in the realm o agriculture is properly diagnosed and treated on modern scientific lines³.

The peasants have been bequeathed the old farming practices by their fore-fathers as legacy. Agriculture which is so important in this region has been neglected for centuries allowing much maladjustment to creeper in the farming pursuits. There is subsistence farming in most of the region. Agriculture has an active role to play in the national economy of the country. It is essentially a public function by private individuals for the care and the use of the land in the national interests and farmers in the course of their pursuit a living and private profits are custodians of the very basis of the national life⁴.

The intensive cultivation of the farm is due to heavy pressure of population. The physical condition allows the cropping and the fields are rarely left to rest. Almost every patch of cultivable land has been brought under the ploughs and these are constantly

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fingered by farmers to yield more and more. Inter cropping is a common practice in this region. Fields are somewhere cropped thrice or somewhere twice. But a vast tract of land is sown once in a year. Near the settlement, the cultivated land is under optimum use.

Multiple cultivation and poly-culture are also the most common agricultural feature in the region⁵. As many types of cropping is done as soil and irrigation facilities favour them. The cultivation of sugarcane has been influenced by the choice of man. The light soil particularly in the region is quite suitable for cane cultivation due to easy well at minimum depth and irrigation facility available in the region. The agriculture is mostly of subsistence type hence most of the products is to locally be consumed and rest is sent to the nearby markets for sale.

The primary aim of land use study is to portray the plan and distribution of land to various uses ranging from field to factory, forest to foundry, pasture to ponds and from sandy sketch to settlement⁶. The study area is a portion of leveled alluvial plain and naturally the patterns of land forms function to a great extent as pattern of Land utilization.

The land is the great heritage of the region under study and its use comprises of the most important aspect for economic activities. It is pertinent to assess the various uses to which the land is put. The most prominent among the various uses is the agricultural land use by which we mean the cropland use. However agricultural land is the chief resource providing substance to all the people directly or indirectly. Its significance is further concerned in the study area where land is the basic source as the livelihood of the people in the region. The total geographical area of the study region has been classified in the following land use categories

Area not available for cultivation: Out of the total geographical area 442.99 square kilometers of the study region, accounting 21.99% is not available for cultivation. Such area has been divided into two sub- categories i.e. barren land and uncultivable waste land.

Land put to non-agricultural uses:

This category of land use in the study area is found on 6060 hectares that accounts 13.68% to the total geographical area of the Sheohar district under study. This category represents such land which is occupied by buildings, roads, railway tracks, water bodies like river, pyne, tank, canal etc⁷. It appears natural as the lands under this head are found to decrease with growth of population, development of industrialization, or the expansion of cultural landscape.

Other uncultivable land:

This category of land includes permanent pasture land, miscellaneous trees and groves and cultivable waste land. All these three sub-categories jointly cover 3.29% of the total geographical area that comprises 14.57 sq. km of land.

Permanent Pasture:

The total area under permanent pasture and other grazing land in the study region is 2.70 hectares that accounts for 0.61% to the total geographical area of the district. The category covers all grazing lands whether or not they are permanent pasture⁸. The land for grazing cattle has been the characteristics of this land use category since decade ago. Owing to an increase in population requiring more land for cultivation, the pasture lands

all over the region has been usurped by agriculture and cattle grazing is done in some particular season in fallow lands. Their feed is supported and supplemented by stalks of grain like paddy, wheat, maize, marua, other green fodders which include janera, peas, khesari etc.

Miscellaneous trees and groves:

This category includes all cultivable land which is not included with net area sown but is put to some agricultural uses⁹. The total area under this category is 9.48 sq. km. of land which accounts to 2.14% to the total geographical area of the district. This type of land is important because it provides scope for the extension of cultivated area. Reclamation measures like deep tilling or leveling and copious use of water and fertilizers bring such land under cultivation.

Cultivable waste land:

Cultivable waste land classed under this category is not cultivated for more than five years¹⁰. They include all lands available for cultivation but not taken up for cultivation or abandoned after a few years for one reason or the other. This type of land is important because it provides scope for the extension of cultivated area. Reclamation measures like deep tilling or leveling or copious use of water and fertilizers bring such land under cultivation. The total area under this category in the study region is 2.39 sq. km that account 0.54% to the total geographical area.

Fallow land:

The total area under fallow land in the study region is 28.71 sq. km that accounts 6.48% to the total geographical area. Fallow land has been divided into two sub-categories

Current fallow land:

The term current fallow is used for such land that has been left uncultivated during the agricultural year¹¹. The need for leaving the land fallow seem to arise when the soil is less fertile and exhausting crops are grown over it without much use of fertilizers.

The total area under this category in the study region 18.65 sq. km. accounting 4.21% to the total geographical area. Early or late arrival of monsoonal rain may also cause the acreage of current fallows to increase. Naturally, soil fertility of this type of agricultural land is poor, though the farmers increase its fertility by using fertilizers. Yet, there is little scope for the extension of cultivation by bringing more current fallows under plough.

Other fallow:

Out of the total geographical areas of the region, 2.27% (10.06 sq. km.) area belongs to this category. Generally speaking, other fallow lands represent all such lands which are normally under cultivation but remain temporarily out of cultivation for a period of not less than one year but not more than five years¹². The fields having poor soil fertility and land under disputed ownership remain land by using manures, fertilizer along with providing irrigational facilities.

Forest:

The present position of forest in the region is more relics of their vast extent covering a few parts of the study area. There is no forest cover in the district as a whole but some scattered forest area exists in the block of Tariani chowk. Except Tariani chowk and Dumri katsari blocks, rest blocks have no forest area in the region. Since man

has penetrated within the precincts of plain, he has been clearing them for better land use. Their deforestation has reached a stage which not only requires protection and preservation but a forestation is now the only remedy to protect and preserve other land use categories¹³.

Perspectives of land utilization:

The need for an appraisal of land resource is imperative for it has been providing all diverse human wants since the very inception of human occupancy of the different parts of the earth. Food has been of prime importance and making it available particularly in the developing world engaged by huge population and covered large land surface. Sour¹⁴ (1952) has asserted that south-east Asia was the cradle of earliest agriculture when he observed. "No other area is equally well suited or equally well furnished for the rise of farming culture than it". The tempo of exploitation of the land and water potentials of the region has been currently high. Owing to heavy pressure of population and of late due to adoption of modern technological innovations. It is presumed that "land degradation may also be aggravated by an increasing population density, which leads to land use of too great intensity without proper change in land management"¹⁵.(1975).

The horizontal expansion of non-agricultural land utilization at an alarming rate in basically an agrarian rural economy poses a big question which requires serious thinking by land economists and planners of the rural economy. If we aspire to have a balanced form and kitchen relation, as after quoted "a hungry world is never likely to be a peaceful world let kitchen not take foothold in every piece of farmland, be it otherwise and the game is lost" (Stamp, 1952, p - 83)¹⁶.

The spectacular expansion of the non-agricultural use of land is truly a baffling problem which calls for immediate solution. Here lies that need of a land utilization survey which may become the basis of future land use planning where by the growing demand on land for non-agricultural purposes may be met without any encroachment on good farm land." (Gosal, 1967)¹⁷.

Therefore, for probing into the perspective of land economics which have crippled the rural economy land use surveys are of fundamental or prime importance. Only when all aspects of the present situation are known can further development plans be made. Decisions on changes in land use should be made only after the present land is investigated from all view points, including cultural, socio-economic and ecological conditions. (Nath, 1958)¹⁸. Owing to increased population, the per capita availability of land has recorded all time low. Land resource is becoming acutely scarce with the passage of time. Therefore, it may be pointed out that there is no possibility of our being to make up the current shortage and to meet the increasing needs unless our techniques of land utilization are highly improved.

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The Female Gender in Village

*Dr. Mayanka Kishori**

‘As we approach the 21st century, we hear the quiet steps of a rising revolution for gender equality. The basic parameters of such a revolution have already changed. Women have greatly expanded their capabilities over the last few decades through a liberal investment in their education. At the same time, women are acquiring much greater control over their lives through dramatic improvements in reproductive health. They stand ready and prepared to assume greater economic and political responsibilities. And technological advances and democratic processes are on their side in this struggle. Progress in technology is already overcoming the handicaps women suffer in holding jobs in the market, since jobs in the future industrial societies will be based not on muscular strength but on skills and discipline. And the democratic transition that is sweeping the globe will make sure that women exercise more political power as they begin to realize the real value of the majority votes that they control. It is quite clear that the 21st century will be a century of much greater gender equality than the world has ever seen before.’Human Development in South Asia, (2000). Gender inequality imposes costs on societies. While it is difficult to empirically establish the relationship between gender inequality and economic growth, a 2006 International Monetary Fund survey (Stotsky, 2006), concluded that “societies that increase women’s access to education, health care, employment, and credit, and that narrow differences between women and men in economic opportunities, increase the pace of economic development and reduce poverty.” Similarly, a recent Goldman Sachs research report, ‘Women Hold Up Half the Sky’ (Lawson, 2008), pointed out that education is key to gender equality, which in turn leads to a virtuous circle of higher productivity, growth of gross domestic product, more entrepreneurial success, higher return on investment and a more favorable demographic structure.

The literature on rising gender equality has identified various factors that promote female empowerment (Inglehart and Welzel 2005; Inglehart, Norris and Welzel 2002). Of the theories explored, research finds the four factors to be particularly important: (1) socioeconomic development; (2) rising gender-egalitarian attitudes that transform economic development into a cultural process of human development; (3) historical legacies streaming from a society’s cultural and political traditions; and (4) institutional design factors. Since gender relations vary both geographically and over time they always have to be investigated in context. It also follows that they are not immutable. Nevertheless, particular manifestations of gender relations are often fiercely defended and regarded as ‘natural’ or God-given. Although many development interventions involve challenges to existing power relations it tends to be those which challenge power relations between men and women which are most strongly contested. While there has been criticism of attempts to ‘import’ Northern feminisms to the South it is patronising and incorrect to assume that feminism is a Northern concept. Women of the South have their own history of organization and struggle against gender-based injustices. Also, gender analysis arising from the second wave of feminism in the North has benefited from extensive criticism of its initial lack of attention to class and ethnicity and its Eurocentricity and there has now been some twenty years of dialogue and joint action between Northern and Southern feminists. The validity of using gender as a critical analysis

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of the position of 'Third World women' (itself a critically contested category) is not universally accepted. Of course the validity of the concept is also contested in the West. We are told that we now inhabit a post-feminist era—the implication being that whatever reasons women may have had in the past for dissatisfaction with their social and political identities (it's usually conceded that our being allowed to vote and own property should stand for example) there is no further need for agitation.

Background of village under study

Paterhi Bhai Khan located in Paterhi Belsar Block of Vaishali district and it is of the large village with total 593 families. It has population of 3161 of which 1488 are females while 1673 are males. Children with age 0-6 is 542, constitute 17.15 % of total village population. Average Sex Ratio is 889 whereas Child Sex Ratio is 926. Village lower literacy rate compared to state. Literacy rate of village is 59.68 %. Wherein, female literacy rate reported as 51.41 while male literacy stands at 67.08 %.

Belsand located in Paterhi Belsar Block of Vaishali district and it is of the large village with total 481 families. It has population of 2843 of which 1346 are females while 1497 are males. Children with age 0-6 is 441, constitute 15.51 % of total village population. Average Sex Ratio is 899 whereas Child Sex Ratio is 926. Village have comprehensive literacy rate compared to state. Literacy rate of village is 74.77. Wherein, female literacy rate reported as 64.55 % while male literacy stands at 83.91 %.

Karneji is a large village under Paterhi Belsar Block with a total of 1013 families residing. Village has population of 5154 of which 2554 are females while 2600 are males as per Census 2011. Literacy rate of village is 57.82 % compared to 61.80 % of Bihar. Wherein, female literacy rate stands at 48.55 % while Male literacy is 66.98 %. The Sex Ratio of village stands at 982 which is higher than state average of 918. Children population with age 0-6 is 932 that comprises of 18.08 % of total population of village with the Child Sex Ratio 954 which is higher than Bihar average of 935.

Sain Berauna is relatively large village of Paterhi Belsar Block under Vaishali district, Bihar. Total 788 families residing that constitute of 4063 population. Among them 2105 are males while 1958 are females. The village population of children with age 0-6 is 622 that comprises 15.31 % of total population of village. Child Sex Ratio stands 962, which is higher than Bihar average of 935. More over Average Sex Ratio of village is 930 which is slightly higher than Bihar state average of 918. As per census 2011, literacy rate of this village is 63.67 % as compared to 61.80 % of Bihar. Wherein, Male literacy stands at 72.20 % while female literacy rate was 54.45 %.

Surahatha Dharampur it is also one of large village located in Paterhi Belsar Block of Vaishali district. It represents total 962 families that constitute of 5242 population of which 2523 are females while 2719 are males. In this village children with age 0-6 is 873 which makes up 16.65 % of total population of village. Child Sex Ratio is 910 which is lower than Bihar average of 935. While the Average Sex Ratio of village is 928 which is higher than state average.

On literacy front this village has lower literacy rate compared to Bihar. Literacy rate of is 60.22 % compared to 61.80 % of Bihar. Female literacy stands at 50.07 % while male literacy rate was 69.67 %.

Rikhar is a large village with a total population of 3611 of which 1651 are females while 1960 are males. It is located in Lalganj Block of Vaishali district, Bihar. This village has children with age 0-6 is 647 which is 17.92 % of total village population. As per census 2011 Child Sex Ratio for the Rikhar is 768, which is lower than state average of 935. Moreover,

Average Sex Ratio of village is 842. On literacy front it this village reflects weak contribution to the state literacy rate. It have literacy rate of 61.03 % compared to 61.80 % of Bihar. In which female literacy rate was 53.43 % while male literacy stands at 67.57%.

Parmanandpur is a small village located of Vaishali district with total 695 population of which 324 are females while 371 are males. Children population with age of 0-6 is 128 that constitute 18.42 % of total village population. Average Sex Ratio is 873 while Child Sex Ratio for the villages is 1133, which is higher than the state average of 935. At literacy front Parmanandpur village has higher literacy rate compared to Bihar. Literacy rate of village is 82.19 % as compared to 61.80 % of state. In Parmanandpur female literacy rate was 77.73 % while male literacy stands at 85.85 %.

Shahpur Tewari Urf Tutha village located in Lalganj Block of Vaishali district, represents total 363 families which constitute of 1791 population of which 871 are females while 920 are males. Children with age 0-6 is 298 which represents 16.64 % of total population of village and the Child Sex Ratio is 961, which is higher than Bihar average of 935. Moreover, Average Sex Ratio of this village is 947 which is also higher than Bihar state average of 918. But on literacy front it has higher literacy rate compared to Bihar. In 2011, literacy rate stands 66.31% compared to 61.80 % of Bihar. Wherein, female literacy rate is 63.45 % while male literacy stands at 69.01 %.

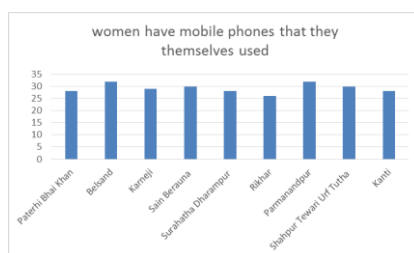
Kanti village located in Lalganj Block of Vaishali district, represents total 342 families which constitute of 2155 population of which 982 are females while 1173 are males. Children with age 0-6 is 345 which represents 16.01 % of total population of village and the Child Sex Ratio is 896, which is lower than Bihar average of 935. Moreover, Average Sex Ratio of this village is 837 which is also lower than Bihar state average of 918. But on literacy front it has higher literacy rate compared to Bihar. In 2011, literacy rate of stands 74.20 % compared to 61.80 % of Bihar. Wherein, female literacy rate is 64.71 % while male literacy stands at 82.04 %.

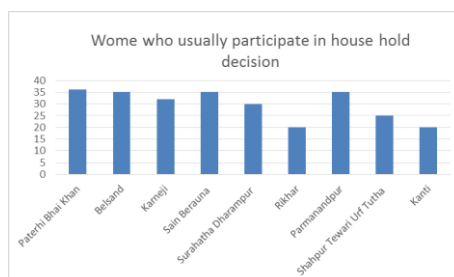
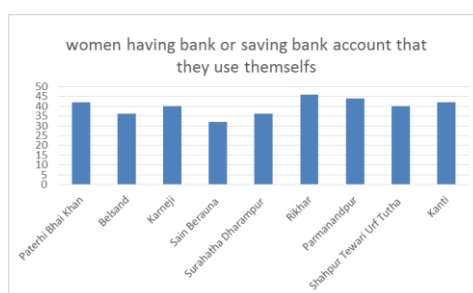
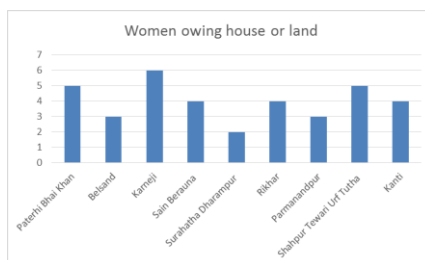
Kaulesar is a small village located under Lalganj Block. A total 128 families residing represents approximate population of 694 of which 398 are males while 296 are females as per Population Census 2011. Children population with age 0-6 is 91 that makes up 13.11 % of total village population. The Sex Ratio of this village is 744 which is significantly lower than the state average of 918. However, Child Sex Ratio as per census 2011 is 1022 which is higher than state average of 935. On literacy front it has higher literacy rate compared to Bihar. The reported literacy rate of village was 83.42 % compared to 61.80 % of Bihar. Wherein Male literacy stands at 98.02 % while female literacy rate is 62.80 %.

Personal characteristics of respondents:

Data were collected from the heterogeneous respondents to seek the complete and get the factual results. The mean age of respondents was 33.62 years. 32.5 of them were lower than 20 percent, 18 of them were ranged from 21 to 30 percent, 20.5 of them were ranged from 31 to 40 percent and 29 of them were more than the 41 percent. 83.5% of them were married, 13.5% of them were Household protector and 6% were single. Majority of the respondents were uneducated (39%) and 1% percent of respondents were diploma and higher education.

Data interpretation:





Results and Conclusion:

Among rural women, significantly have experienced physical violence in their adult lives. Lower caste women are among those who experience the highest levels of physical violence. Approximately 1/4th having mobile phones and 2/3rd having bank account. Most of the women participate in decision making. Least no of women having land in their own name. In rural Bihar, women's economic opportunities remain restricted by social, cultural, and religious barriers. Rural women, particularly of lower caste and class, have the lowest literacy rates, and therefore do not have the capacity to negotiate pay or contracts and most often engage in the unorganized sector, self-employment, or in small scale industry.

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Political Activities of Subhas Chandra Bose

*Dr. Manish Kumar **

Subhas had well-formed political opinions even before joining politics. At Cambridge he studied modern European History including some original source books like Bismarck's Auto-biography, Metternich's Memoirs and Cavour's letters etc! "These original sources", Bose recalls, "more than anything else studied at Cambridge, helped to rouse my political sense and to foster my understanding of the inner currents of inter-national politics." He was firmly convinced that "a nation can be made only by the uncompromising idealism of Hampden and Cromwell" and followed his goal of achieving India's freedom with an uncompromising spirit.

Even when he was in England Subhas did not share the faith of Indian Liberals and others that it was the aim of British policy to grant India progressive constitutional concessions that many of her problems would be solved when Labour came into power. As a reply to his friend Dilip Roy who also shared these views, Bose said.

"Those of us who still fondly believe that India is going to win her independence by raising vast echoes to such nostrums of alien countries are blowing hope-bubbles illusion. They don't know what they are talking about." He further asserted:

"For the obvious reason that nobody helps another disinterestedly—not politics. Recall Mirzafar." Didn't believe, as fondly as you believe in English Labour or Russian Communists, that Clive would help him on to his throne and then gallantly buttress him with the fealty of an obedi-ent vassal? No Dilip, Sri Aurobindo was perfectly right when he said in the Swadeshi days that no outsider would help India. If we ourselves can't win our freedom none will come to our rescue."

Subhas was clear in his mind that the Indian people have to be organised for starting a revolution. Ideas of revolution were not to be imported from Russia or from any other country. The Indian revolutionary movement at the time of partition of Bengal was vivid in his mind.

He was fully conscious of the contribution that was made by the revolutionary movement in the Swadeshi days in creating a national consciousness. When his friend Dilip Roy said that such a movement did not deliver the goods, Subhas sharply reacted :

"That is hardly the way to look at such movements. You might just as well say that the Sinn Fein movement is a failure also since it hasn't delivered the goods yet. When De Valera was sentenced the other day to death whoever thought that he would be released and then reimprisoned again in 1918 only to escape from Lincoln Jail and visit America where he would raise six million dollars for the Irish Republican movement? A revolutionary movement for national liberation is not like a chance detonation which makes the age-long prison-walls topple once for all. It is a slow laborious work of building up brick by brick a citadel of strength without which you can't possibly challenge the powers that be."

It was due to his radical views that the Gandhian ideology could not exert any lasting influence on Bose. It was an interesting coincidence that he travelled in the same ship with Rabindranath Tagore and this short contact helped him to confirm his views on the political problems of India. In his own words :

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"I had occasion to discuss with him the new policy of non co-operation adopted by the Congress. He was only anxious that there should be more of constructive activity... What he suggested was analogous to the constructive side of the Irish Sinn Fein movement and was completely in accord with my views."

On his arrival in Bombay on July 16, 1921 Subhas met Mahatma Gandhi at Mani Bhavan. Gandhi's influence had tremendously increased since the special session of the Congress in Calcutta in the autumn of 1920. Gandhiji was undoubtedly the most prominent leader of the Congress and Subhas wanted to understand him in the light of the ideas acquired at Cambridge, before accepting his leadership.

By the time Subhas came to India, the national movement was entering a new and dynamic phase and Gandhi with his unique weapons of Satyagraha and non-co-operation had emerged as one of the most prominent leaders of the Congress.

It was, therefore, natural on the part of Subhas to meet Gandhi to have a clear conception of his plan of action. He wanted to have elucidation from Gandhi on three points. How were the different activities conducted by the Congress going to culminate in the last stage of the campaign namely, the non-payment of taxes? How could non-payment of taxes or civil disobedience force the Government to retire and grant freedom to Indians? How could the Mahatma promise Swaraj within one year as he had been doing since the last annual session of the Indian National Congress? Subhas was satisfied with Gandhi's answer to the first question but the replies to the other two were not convincing.

"Though I tried to persuade myself at the time that there must have been a lack of understanding on my part, my reason told me clearly, again and again, that there was a deplorable lack of clarity in the plan that the Mahatma had formulated, and that he himself did not have a clear idea of the successive stages of the campaign which would bring India to her cherished goal of freedom."

This was first fateful meeting between Subhas and Gandhi. They had agreement on the ultimate objective of India's free-dom, but there were fundamental differences on the method of achieving the objective. In the words of S.A. Ayer, the Minister for Publicity and Information in the Provisional Government of Azad Hind :

"Agreement on the ultimate objective of India's free-dom from foreign rule, but fundamental differences on the method of achieving the objective largely characterised the political relations between these two leaders from the day Subhas first met the Mahatma in Bombay in July 1921 till they met for the last time at Wardha in June 1940. With the Mahatma, non violence was a living creed; with Subhas, it was an article of faith that the use of force was necessary to dislodge the alien ruler from Indian soil." Bosc's first meeting with Gandhi was "a failure in its immediate purpose" and as it is known to recorded history it "set the tenor for future relations between the two." Mookerjee had observed in a newspaper article that :

"The Common characteristics which united Mahatma Gandhi and S. C. Bose were their ability to transform ideas into facts and their implacable sense of discipline."

Keeping this similarity in view, Alexander Werth tries to point out the reasons for divergences in the approach of these two great leaders of India's freedom movement.

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A study of sports training facilities and its impact in the colleges of District Varanasi

*Vaibhav Singh**

Over the most recent few decades, sports exercises have been increasing an incredible energy in India. In spite of the fact that cricket is the most enthusiastically in India, different games like football, hockey, volleyball, b-ball, badminton, kabaddi, kho-kho and table tennis also are well known among the young today. The presentation of India in the Olympics has consistently been a pitiable one. One of the significant reasons is the helpless consolation of sports at the school and school levels. The absence of offices is a significant unfavorable factor in the advancement of sports culture in the universities. The current investigation is an endeavor to survey the status of the games office and its effect on the universities of Varanasi locale. The analyst himself is a Lect. of Physical Education and Sports by calling and furthermore a player of Athletic and finished our Master level of Physical Education and M.Phil in (Phy. Edu.) from CCS University Meerut Uttar Pradesh. During this period the scientist confronted a lot of troubles regarding the best possible accessibility of sports office like framework, hardware and legitimate unit. In the momentum research work the specialist might want to stress on financing, structure of the foundation, area of the organization, quality of the establishment, monetary effect, perspectives on Management in giving games office to the understudies when contrasted with different exercises. The scientist is of the supposition that offices ought to be concentrated from three viewpoints: Urban, rustic and understudies' association.

History of Sports

Sports are ageless exercises; ones those people have delighted in since at any rate old occasions, as exemplified by the Greek Olympic Games. Undoubtedly, ethnographic and archeological proof, for example, cavern works of art and the records of early European voyagers demonstrate sports may well return to the earliest reference point of mankind. A significant number of the games played and commended today, for example, football, even have their foundations in different kicking and running ball games played all through archaic Europe. Sports, for example, golf and pony hustling were additionally played among the European privileged classes, particularly those of Britain.

Obviously antiquated Olympics, archaic blue-bloods, cavern individuals, and swarms of laborers kicking a ball starting with one town then onto the next is, notwithstanding the parentage, rather far eliminated from sports as we probably am aware them today. The improvement of present day sports is attached especially to the historical backdrop of the mechanical insurgency and the making of the principal government funded schools, the last of which tried to join actual action in the educational plan. The net consequence of this cycle was to scrub (as in diminish vicious components) and systematize different games, for example, soccer or rugby and obviously later on, b-ball and football, the two of which were a lot of molded on school grounds in the last part of the 1800's and mid 1900's, at any rate in the United States.

History of Indian games

India - known for its enthusiasm for cricket and hockey; began its games odyssey long back during the incomparable Vedic Era of India. At first, the advancement of sporting events in

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India assembled energy after its significant part, in keeping up the actual wellbeing, was instituted by the individuals of India. Chasing, swimming, drifting, arrow based weaponry, horse riding, wrestling and fishing mark the phase of outset of Indian Sports (Games). At that point comes the Martial Arts which were additionally a solid method of self protection separated from an enthusiastic actual exercise.

In India, sporting events is viewed as 'a method of understanding the body potential to its fullest'; otherwise called "Dehvada" in antiquated India. The philosophical establishment of the sporting events in India lies in the historical backdrop of India going back to Vedic Era in which the Atharva Veda said: "Duty is in my correct hand and the products of triumph in my left". These words in the customary mantra hold a similar soul as that of the Olympic vow that suggests: ".....For the Honor of my Country and the Glory of Sport." The historical backdrop of India additionally entices of a fascinating connection between Greece (The Motherland of Sports on the planet) and India which goes back to 975 B.C. at the point when both the countries spearheaded in the sporting events like chariot dashing and wrestling.

The brilliant history of sports in India is likewise clear in the godlike Indian stories like Ramayana, Mahabharata and so on Though during the time of Ramayana; chasing, arrow based weaponry, horse riding, swimming were the illustrious games; Mahabharata made an imprint in the games like dicing, acrobatic, wrestling, chess (Shatranj) and gullidanda. Puranas notice about the undermining round of rope battling. The archeological unearthings of Harappa and Mohanjodaro alongside the strict compositions like Puranas and Vedas are the standing tributes of this sublime history of Indian games. The historians believe that many sports (games) like hockey, archery, wrestling and chess originated in India, which are synonymous to strength and speed nowadays. In the late Vedic Era, besides sports; the Yoga and Meditation, the inevitable parts of the toughest "Yogashastra" made India, acquire the seat of spiritualism, all over the world. This dignified discipline of Indian Sports finds its place in Bhagwat Gita too.

Today sports in India have achieved a zenith in terms of popularity and as a career option. Olympics, Commonwealth Games, Asian Games, SAF Games, Wimbledon and many other world sports tournaments see Indians as one of the most leading sports participants in the world. From Tendulkar, Paes, Bhupathi, Anand, GeetSethi, Karthikeyan to SaniaMirza lead the present sports generation of India. Cricket, Hockey, Football, Weightlifting, Snooker, Kabaddi, KhoKho and Archery are the sports of India that have been deep seated into an Indian psyche, whether of a sports person or a sports lover. Not only physical strength, power and satisfaction but also a strong alternative of recreation; sports in India have paved a long way towards the road of success and have made themselves a hallmark in the world of sports

Statement of the Problem

The purpose of the study will be to "a study of sports training facilities and its impact in the colleges of Varanasi"

The above study has been undertake by me researcher with the help of interviews and questionnaire method if these causes would be located, the researcher will suggest the measures for more sports facilities to be adopted in the colleges

Delimitation

The scope of the present study will be delimited to the following aspects:

1. This study will be delimited to the senior colleges of Varanasi District only.
2. This study will be delimited to sports facilities and infrastructure.
3. This study will be delimited to the availability of answers given by Sports Directors of the colleges of Varanasi District only.

Limitation

The researcher would have certain limitations of this study as mentioned below:

1. Researcher can't control prejudiced answers to the questions in the questionnaire by the respondent.
2. No motivational techniques will be adopted to motivate the subjects.
3. Researcher will depend on the answers of the subjects there is no method to judge whether the subject is giving correct answer.
4. This study is limited to the Varanasi Dist. Colleges only.
5. As the researcher cannot visit all the affiliated colleges personally, the related data supplied by various Directors of physical education of colleges and concerned Principals through questionnaire will be collected and the acquired data will be totally dependent on the colleges concerned.
6. The opinions expressed by the respondents would in relation to the responsibility undertaken by them and such differences are likely to arise in the responses which ultimately might affect the findings of this project.

Objectives of the Research

The objectives of the current research are as follows

1. To examine the existing sports training facility and its impact on the senior colleges of Varanasi district. (Universities of Varanasi)
2. To find out the ratio of the available sports facility in the senior colleges of Varanasi district with the enrolled students for the current academic year.
3. To find out the impact of available sports facility on their sports performance in the colleges.
4. To find out the utilization of sports facility in the colleges of Varanasi district.

Hypothesis

Ho1: There is a positive impact of sports facility on performance of the senior College students of district Varanasi.

Ho2: Existing sports facility and its impact increases the attitude towards the Involvement in the colleges

Ho3: More athletes are enrolled in colleges that have better sports training facility

Ho4: There is no relationship between sports facility and its utilization by the College Students

Definitions

College: Colleges are the associations occupied with the headway of information, they educate, train analyze understudies in an assortment of academic; logical and proficient fields. Scholarly interests in colleges characterize the most noteworthy winning degrees of ability in these fields. The colleges give degrees and give openings both to individual from their school personnel and for a portion of their understudies to do unique examination.

Associated Colleges: Means a school which has been conceded connection by the University of Varanasi.

Entomb university competitions: Tournaments of subsidiary schools of University of VARANASI, University which are coordinated by region zonal games panel under sponsorship of Board of sports, Universities of Varanasi.

Varanasi Zone: Comprising of all organizations in Varanasi locale.

Metropolitan: - A Urban zone is characterized as follows:

- (a) All spots with a Municipality, Corporation, Cantonment Board.
- (b) All different spots which fulfill the accompanying models:

- I. A base populace of 50,000.
- ii. At any rate 75 percent of male working populace occupied with non-agrarian interests.
- iii. A thickness of populace of in any event 400 people for every sq. km.

Country: - It will be seen from the above definition that rule (b) would by and large incorporate spots which would some way or another have been considered as provincial for example towns.

Noteworthiness of the examination

1. This exploration will be useful to welcome on record the current games preparing offices accessible in the schools of Varanasi District.
2. This examination will assist with proposing successful games offices for more support of the understudies in the games
3. This examination will assist with expanding the interest of understudies in sports through their cooperation.
4. This will likewise be useful to discover the specific reason for non-accessibility of sports offices
5. It will likewise be useful to the organizations like Government University Colleges and different establishments to recommend the measures for better games offices.

Review of Literature

Researchers, academicians, sportsmen and sports psychologists have over the last few years studied the impact of sports training facilities in academic institutes with respect to development of sports activities and enrollment of students. In the present study some review of some significant and relevant studies has been carried out.

Bogar (2012) studied the trends in the construction and design of recreational sports facilities in the colleges in the U.S. He observed that many new and renovated facilities have integrated important campus functions such as academics, health, wellness, and sport. These recreational sports facilities also contain unique features such as climbing walls, rooftop playing fields, food service, counseling centers, convenience stores, and campus police stations.

Antón (2011) carried out a study titled "How construction trends of Universities sport facilities will be affected by financial crisis". The results showed that a high percentage of the respondents agreed the use, construction and renewal of sport facilities in Spanish Universities would continue increasing for the next three years. They observed that with respect to the architectural trends, the wellness and recreational centres would be more successful than other options such as climbing walls or centres integrating sports and arts. They further observed that these trends are more affected by cultural and social factors than by the economy.

Zhou (2010) studied the relationship between College Sports Facilities and Mass Sports. He feels that industrialization of college sports facilities is a crucial problem that should be solved in Post-Olympic Era. He further suggests that college sports facilities should be open to the public to solve the following problems: to relieve the scarcity of sports facilities; to favor the development on mass sports; to be aware of the characteristic of college sports resources; to clear the relationship between the college sports resources and the development on mass sports; to strengthen the awareness on establishment of the society with its resources shared by the public; to service the public with the abundant resources in college; to establish a new cultural community of the public and the college.

Arslan (2010) conducted a research for recommendations to improve sports facilities in the University. They found that there were very little sports facilities in the University. There was

a lack of proper sports facilities, well trained coaches, separate place for female sports and sports budget etc.

Feng and Humphreys (2008) in their study examined the economic impact on residential housing values. Their results show that sports facilities have a “significant positive effect on the value of surrounding houses and this positive effect decreases as the distance from the facilities increases. They further add that a new sports facility constructed in the core of a large city as part of an urban redevelopment program might possibly cause residential property values within one mile of the facility to increase hundreds of millions of dollars. A new sports facility constructed outside of the center of a large city and unrelated to an urban redevelopment program will cause residential property values around the facility to increase tens of millions of dollars. According to them this might help to explain why cities continue to subsidize sports facilities even when much academic research suggests that they result in little or no tangible economic benefits.

Walia (1971) conducted a survey of facilities of physical education and sports for the students of Higher Secondary Schools of Delhi State, and found that most of the schools did not have sufficient equipment for students to develop their sports. Lack of sports funds, equipment grounds was severely felt in schools. Sports fund was used in majority of schools for the purposes other than sports. It was also observed that whatever little was provided by the Government in budget was not properly utilized.

Gian (1976) conducted a study entitled "Critical Evaluation of Sports facilities available in the college of Punjab State. He made the following conclusion

1. The shortage of women physical education teachers was more than the male physical education teachers.
2. Under-qualified physical education teachers had been employed in most of the colleges.
3. Sixty five colleges out of seventy three respondent colleges fell short of 576 acres giving an average shortage of 9.3 acres play area per college.
4. The position of developed play fields in affiliated colleges of Punjab University was better than that of colleges in the other universities of Punjab.

Dabas (1982) surveyed the facilities and equipments of sports and physical education in engineering colleges and concluded that the student teacher ratio in physical education was satisfactory and only one college had provided special coaching personnel for different games and sports. Out of five engineering colleges, three colleges had sufficient playground facilities as per minimum norms laid down by National plan of Physical Education and Recreation. The study revealed that all the engineering colleges did not possess sufficient number of equipment and playgrounds as per this students' strength.

Work plan

The proposed timetable of the ebb and flow research work would be as per the following-

- Reading of significant writing, readiness of
- Questionnaire by talking about with specialists and guide – a half year.
- Visit to schools, conveyance of surveys, meeting of school specialists, sports staff and understudies. Assortment of information through essential and auxiliary sources – a half year.
- Compilation, investigation and translation of information. Organization, conversations and proposals – a half year.
- Report composing, composing designing and last authoritative – a half year.

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Socio-Cultural, Political and Economic Participation of Indian Diaspora in USA¹

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Indian diaspora in USA is one of the most successful communities in USA. By the dint of their hard work and determination they have established themselves in every sphere of American society. Though we mark the arrival of Indians in USA during the period of British colonialism and before, yet the magnitude in Indian emigration to USA rose after the enactment of 1965 Immigration Act. The pace of Indian emigration was accelerated during the 1990s when a large number of very well educated and highly skilled Indian professionals including doctors, engineers, scientists, software professionals, academicians etc. landed in USA. Indo-Americans stand at the top in almost every profession. In terms of their annual family income, attainment in higher education, their representation in different sectors like, health, science and technology, software profession, in different other economic sectors etc. they stand much higher than the national average. Their participation in the political sphere of USA is quite noteworthy. They are the cultural ambassadors of India, and it is due to their efforts many Americans are attracted to Indian cultural heritage, civilizational values, spiritualism, Yoga etc. Indian diaspora in USA has played a tremendous role in transforming the bilateral relationship between India and USA. The paper makes an attempt to analyze the participation and contribution of Indian diaspora to the socio-cultural, political and economic spheres of USA, and their role in strengthening the bilateral relationship between India and USA.

Key Words: *Diaspora, Soft Power, Globalization, Transnationalism, Networking, Lobby*

Introduction : The United States holds one of the largest and prosperous Indian diasporas across the globe. There are considerable numbers of diasporic Indian communities living in various countries such as Fiji, Guyana, Mauritius, Suriname, Trinidad and Tobago etc. Though the early history of Indian emigration to USA can be traced back to about 1900s, the modern history of Indian diaspora in USA and the emergence of an Indo-American community is to be marked with the passage of new legislation on immigration in 1965 in USA. It was in fact a moving away from the racial and restrictive immigration policies implemented by USA earlier, and it permitted, though with certain conditions, people from other nationalities including Asians and Indians to go to the United States. In spite of several attempts made by the governments in USA to restrict immigration, the number of immigrants to USA has increased over the last few decades, and Indian diaspora in USA has seen a significant rise in the last decade.

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Indian emigration to the developed countries mostly comprises of professionals and some skilled labors and, while Indian emigrants to the other economically rich countries comprise of majorly skilled and semi-skilled labors along with some numbers of professionals. The occupational composition of Indian immigrants in the United States was much more professionally and technically oriented than USA labor force as a whole (Madhavan 1985: 466). The new Indian immigrants in USA, who have migrated in the recent past, are distinct from those Indians who have been residing in USA for many years. While the earlier Indian emigrants to USA mostly comprised of skilled or semi-skilled labourers, students and few numbers of professionals, the new Indian entrants to USA in the last two decades are mostly highly educated professionals such as doctors, engineers, software professionals, scientists, academicians etc. Indian immigrants have much higher educational and economic attainment compared to the people of other ethnic communities in USA. The Indo-American community is swiftly emerging as a strong and influencing force.

It has been observed that the integration of the immigrants in the society, culture, economy and politics has yielded manifold benefits for the host country, and the immigrants have proved themselves as a significant asset for the host country apart from being a very prominent contributor to their home country. The growth in immigration and the resultant changes in demography has resulted in a major shift in public policy of the countries experiencing immigration. As Shutika observes, “Understanding the dynamics of new destinations is essential to understanding issues of contemporary immigration debate because these communities have become some of the most vocal and influential players in immigration politics” (Shutika 2011: 08).

Due to the rise in the size, as well as the increase in the economic and political participation, diaspora has become an important aspect and an increasingly vital element in international politics. But it is important, how the home country frames policies to engage the diaspora. Devesh Kapur points out that the effects of international migration and diasporas on the country of origin depends both on the characteristics of the diaspora and the conditions and policies of the home country (Kapur 2003: 446). Indian diaspora in USA is a very significant player in Indo-USA bilateral relationship. This has been due to Indian diaspora’s active participation in the socio-cultural, economic and political spheres of USA. The paper makes an attempt to study and analyse the proactive participation and role that the Indian diaspora is playing in every sphere of USA, and hence effecting a vital impact on Indo-USA relationship.

A Brief History of Indian Diaspora in USA : USA has been witnessing immigration from a very longer period of time. In fact, some scholars label USA as a country of immigrants. As Ambrosek observes, “The most famous era of immigration in America occurred between the middle of the 1800s and the beginning of the 1900s. This era is known as the Great Period of Immigration, and during this period, more than thirty million immigrants came to the United States, most of them from Europe” (Ambrosek 2008: 11, 12).

In the gradual process various governments in USA have brought about different immigration acts restricting immigration to USA. Before the framing of the 1965 Immigration Act in USA, the immigration laws were very much racial in tone and restraining in nature. In the 1960s, immense social change and debates on the issues of civil rights and racial equality forced the government in the United States to bring a more lenient legislation on immigration. The 1965 Immigration Act followed by some other immigration acts enacted by USA opened doors for the people who can contribute to the economic development of USA. In the recent

years there are really very serious discussions in regard to the implementation of immigration policies to curtail immigrants in USA.

The history of Indian diaspora in USA can be divided into four phases. The first phase can be marked during the period of British colonialism in India in the nineteenth century. During this period many numbers of workers and some numbers of students and semi-skilled professionals went to USA. After India's independence some Indian semi-skilled and skilled workers and business men went to USA. This can be labelled as the second phase. Many numbers of students, academicians, doctors, engineers, scientists etc. went to USA after the passing of the Immigration Act in 1965. This is the third phase of Indian emigration to USA. The fourth phase can be marked in 1990s. Globalization and innovation in science and technology, medical sciences, information technology etc. in USA gave rise to the demand for technically skilled people. And this demand was fulfilled by the emigration of very well educated and proficient Indian professionals. But as documented by Archdeacon, migration into USA can be classified into five different periods: (a) the colonial era (1607-1790s); (b) the old immigration (1790s-1890s); (c) the new immigration (1890s-1930s); (d) the depression (1930s-1965); and (e) third world immigration (1965-present) (Archdeacon 1983). We can mark that after the period of 1960s Indian emigration to USA mostly comprised of professionals. The success and achievement of Indian professional class and business class in USA changed the perception of others towards Indians. Indians in USA are now considered as a model minority community to be emulated.

Indian Diaspora in the Socio-Cultural Sphere of USA : Indian diaspora in USA is one of the most influential diasporas with its enriched socio-cultural heritage, economic achievement and political participation. As Barringer et al. put it, "Today, the Indian diaspora in the United States is quite large and diverse in terms of education, occupation, income, region of origin, religion, etc." (Barringer et al. 1993).

The first generation of Indian diaspora was deeply rooted in their Indian culture and tradition. The subsequent and younger generation of the Indian diaspora have also maintained the rich Indian cultural and civilizational heritage and values. At the same time, they have also acquired the socio-cultural practices of the larger American society. As Gsir and Mescoliput it, "Socio-cultural integration occurs, not only through immigrants' endeavors to learn a new language and culture, but also through the articulation or interaction with the host society and in relation to opportunities to participate in the socio-cultural activities of the receiving society" (Gsir and Mescoli 2015: 12). The socio-cultural interaction, political participation and economic transaction with the other communities have made Indian diaspora to acquire some of their values.

Indian diaspora is very emotional, possessive and protective towards their culture and tradition. It is really very interesting, how the Indian diaspora has been able to maintain its cultural practices in such a changing and vibrant country like USA. Indian festivals like, Holi, Deepavali, Navaratri etc. are celebrated with much pomp and ceremony. People from different communities participate in them donning Indian costume. Americans are greatly attracted towards Yoga, Indian spiritualism and socio-cultural value system, and it is largely due to the vibrant Indian diasporic group there. Culture has in fact brought Indian diaspora together. Culture has also played an important role in Indo-USA cooperation.

Contribution of Indian Diaspora to the Economy of USA and India : Indian diaspora in USA is quite prosperous and they have achieved their excellence through their hard work. There are many entrepreneurs from Indian diaspora in USA as well as so many CEOs of top companies of USA are from Indian diaspora. Many top-class executives in prominent

American companies are from Indian diaspora. As has been mentioned above, Indian diaspora is a vital aspect of India's foreign policy, economic development, cultural ambassador and knowledge enhancement. They have played a very significant role in bringing development to the economy of India and also created a very positive and promising global image of India across the world so that investors can come and invest in India. The diaspora has not only significantly invested in the economy of India but also, they have been a source of attracting investors to India.

On the economic front, for the last two decades the FDI in India has increased. Undoubtedly, Indian diaspora in USA due to their economic achievement, political influence and intellectual brilliance has played a significant role in attracting FDI to India. But India needs to employ Indian diaspora in USA very proactively in a strategic manner to attract more FDI into India. The socio-political environment in India has to be developed to gain the confidence of the investors. Sectors of management, finance, corporate, trade, banking etc. need to be improved so as to attract FDI and carry out the economic development in India.

Diaspora not only helps the home country by their own investments and bringing investments from other corporate houses, but also the remittances sent by the diaspora help in bringing economic development in their home country. Indian diaspora in USA sends a good amount of remittances to India. And these remittances have helped in developing some of the economic activities in their home states or places. Remittances not only enhance the purchasing power of the family members of the diaspora living back home but also help the family members or relatives of diaspora investing in retail trading and in such kinds of business activities. Also, the remittances of the diaspora help in carrying out many philanthropic activities in their region. Here, we may take the case of the state of Gujarat in India. With the remittances of the diaspora, many hospitals, libraries, children park, temples etc. have been built in different regions of the state. Some roads and other infrastructures have also been built by the remittance money.

In the 1990s India had to face the severe balance of payment crisis. The foreign debt of India was mounting. In this period of crisis, the then Indian government appealed to the Indian diaspora or more prominently the Non-Resident Indians (NRIs) to help India in this period of financial crisis. In certain ways Indian diaspora had come in rescue of Indian diaspora. Also, the liberal economic policies adopted by India during this period provided a great opportunity for the diaspora to invest in the economy of India.

In the recent years, economic relation between India and USA has greatly improved. Many American companies have been investing in India. Also, many Indian companies including software companies have been investing in USA. Many people from Indian diaspora are also investing in various sectors of US and Indian economy. Many of the hotels in India located in Gujarat, Punjab etc. are owned by people from Indian diaspora in USA. Both the United States of America and India have identified some of the key sectors of the economy where they can increase their co-operation. Certainly, the end of the Cold War, and the advent of the process of globalization, along with the liberalization of Indian economy has established one of the most prudent partnerships between India and USA. Currently, USA is one of India's biggest trading partners and India is one of the largest investment options for MNCs of USA (Sahay 2009).

The achievement of Indian diaspora in USA is unparalleled. They are considered as a model community to be emulated. Though the Indian population in USA is about just less than one percent of the total US population, yet in terms of their economic and educational achievement they are second to none. Roughly, the annual household income of Indian

community in USA is about one lakh USD, which is much higher, almost double than the national average annual income of U.S. population, which stands at roughly fifty-four thousand USD. Similarly, the attainment of Indo-Americans in higher education is much higher, almost more than double of the national average of U.S. population. Due to their economic achievement and brilliance in higher education attainment, Indian diaspora is a very influential community, and they have played a tremendous role in transforming Indo-USA economic and political relationship. Both the governments in USA and India should engage the Indian diaspora in a more strategic and proactive manner in enhancing their economic relationship.

Indian Diaspora in USA and their Political Participation : People of Indian diaspora in USA have proclaimed their presence and prominence in the political sphere of USA especially in the last three decades by contesting elections, campaigning for different political parties, playing the role of strategist for different political parties and candidates, funding political parties and candidates and participating in the political process of USA. Indian diaspora in USA acts as a powerful lobby group for the interests of India. The powerful lobby of Indian diaspora has helped in developing a positive image of India and improving the discussion on India in the political institutions of USA. As Shain and Barth point out, “The diaspora is bound to have more impact in homeland politics if it is in a stronger position in its relationship with the homeland. This strength relationship is measured in terms of how much the homeland needs diaspora resources for investment, or how much political support the diaspora can mobilize from the host country for homeland benefit” (Shain and Barth 2003:465). India greatly benefits from the brilliance, achievements, skills, technologies, social networks and lobby of Indian diaspora in USA.

In last some years, Indian diaspora have been actively participating in the politics of the United States. There are number of Indian origin people who are prominent politicians in USA. (Namrata) Nikki Haley, former governor of South Carolina, (Piyush) Bobby Jindal, former governor of Louisiana, Kiran Ahuja (chief of staff at USA office of personnel management), Reshma Saujani (first Indian woman to run for Congress), Seema Verma (first Indo-American female administrator of USA centers for Medicare), and many others have made their place in the political domain of USA. Apart from these political voices, Indian diaspora has formed various community level organizations and political institutions to raise voice for various issues pertaining to their benefit.

It is of course true that there are not so many senators, governors etc. from Indo-American community. But if one considers the number or percentage of Indian origin population in USA, their political success and economic achievement is quite significant. The economic success and superb achievement in higher education have added strength to the political participation of Indian diaspora in USA. Indo-American community is an influential political force. They support and favor the cause of India by influencing the framing of USA’s foreign policy. This political activeness of Indians has strengthened their assertiveness. The new Indo-American political assertiveness is particularly important for altering the pessimistic views scenarios about trends in American images of India that were outlined previously (Hymans 2009). Indian diaspora is credited of turning the very dormant and unfriendly Indo-USA relationship to a very active, cordial and promising one. Both the US and Indian government must keep the Indian diasporic community in view while devising foreign policy.

Indian Diaspora in USA: Networking and Lobbying : Now we all are living in the world of networks. Network facilitates the flow of information and at the same time it helps in

developing networking. Globalization and transnationalism have greatly impacted on the facilitation of networks and networking. The innovations and developments in the communication technologies have facilitated diaspora's interaction among themselves and with the homeland. The evolution of highly skilled diaspora networks has gained importance in the last two decades. These networks bring together groups or individuals of immigrant intellectuals who have maintained ties with their countries of origin (Sahay 2009). Countries who have good number of diasporic populations benefit from the diaspora networks. Diasporic networks are mediators between the homeland and the diaspora and among the diaspora groups. As Bhat and Narayan put it, "Efforts of the Government of India and also of the state governments in India have only furthered these ties through formalization of these networks under the contemporary globalization for the mutual advancement of India, Indian diaspora and the countries of the Indian diaspora" (Bhat and Narayan 2010: 22).

Indian diaspora is now able to communicate with their relatives, friends and fellow Indians very easily. The online availability of Indian tv channels, newspapers, magazines, journals etc. acquaint the diaspora with the developments happening in India. Through these modes, diaspora is also able to share their views and ideas with the fellow Indians. Indian diaspora is now a transnational community having networks across the globe, and the transnational character of the diaspora has helped them to live with multiple identities.

Indian diaspora in USA have formed various organizations and associations on the basis of their regional, religious and cultural affiliations. As Gautam observes, "During the early 1980s, the diasporic identity formation through the federation of organized associations took off. Contacts were established with other Indian communities and friends who had already settled in other countries. In the United States of America (USA), the NFIA (National Federation of Indians in America) was already working as a countrywide association. It was a federation of many local Indian organisations" (Gautam 2013: 24).

Some of the associations based on their identity as 'Indians' are India Community Center (Texas), Indo-American Chamber of Commerce (Texas), Indian Association of Western Washington, Indian Association of Greater Boston etc. There are various associations formed on the basis of culture such as Bengali Association of Southern California, Leuva Patidar Samaj of USA, Maharashtra Mandal (USA), Punjabi Cultural Society of Chicago (USA), Chicago Tamil Sangam (USA) and many others. There are various organizations based on different religions such as Swaminarayan Satsang Mandal, Vedanta Society of Southern California, Gurudwara Sachkhand Inc., Gayatri foundation and so on. These organizations interact with their members and among themselves through various communicative networks.

The economic and educational attainment of Indian diaspora and the formation of various associations and organizations by them has given them an edge in becoming a very strong lobby group in USA. Indian diaspora in USA is being viewed as a very robust lobby group who have influenced in devising a very lenient policy of USA towards India. Indian diaspora is also credited for improving and making the Indo-USA bilateral relationship a vibrant and cordial one.

Conclusion : Though there were some numbers of emigration of Indians to USA during the period of British colonialism and before, yet after the enactment of 1965 Immigration Act there was the rise in number of Indian emigrations to USA. But in the late part of the twentieth century and early part of twenty-first century we mark a surge in Indian emigration to USA. By the dint of their hard-working nature, despite of many obstacles, Indians have established themselves in all the spheres of American society. Indo-Americans are conceded as the model community for their economic contribution and achievement, educational attainment, law abiding nature, civilizational values and ethos etc. In terms of their hard work and dedication to work, they are second to none. As Kapur observes, "The greater impact of the Indian community on USA is a function of community's high initial level of education at the time of emigration and consequent success

within USA, coupled with the leveraging of that country's global salience as well" (Kapur 2003: 446). Indo-Americans have immensely contributed to every sphere of American society. As a soft power they are also promoting India in USA. Indian diaspora in USA has transformed Indo-USA bilateral ties, and they are a tremendous asset for India and USA.

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Maritime security and the Indian Ocean

*Dr. Lopamudra Maitra Bajpai**

The region of the Indian Ocean poses itself as an important waterbody to India in terms of geo-politics. Posed with both traditional and non-traditional threats across the region, there are various aspects which needs to be looked into as far as security measures in the Indian Ocean goes. This paper attempts to look into some of the recent challenges in the Indian Ocean, some of the measures which India has already adopted in the past and also tries to highlight some of the important aspects which can be looked into for the future.

Key words : India, Indian Ocean, security, challenges, past, future, possible solutions
Main Paper-

The topic of maritime security is perhaps not a new terminology, especially with reference to national security, however, it is definitely one of the important aspects to look into in the 21st century and the onus is upon us to collectively secure and nurture our oceanic states. This paper especially looks into India and maritime security with reference to the Indian Ocean.

The term maritime security shows important issues and aspects which needs to be looked at for the country's security. India's maritime security needs a holistic assessment of the economic, political and military aspects of India's maritime security, which is often defined as- comprising those issues which pertain to the sea and have a critical bearing on the country's security. These include variously-seaborne trade and commerce in energy resources, the management of living and non-living marine resources, the delimitation of international seaward boundaries, and the deployment and employment of naval and military forces in the Indian Ocean. Thus, there are various issues involved with reference to maritime safety and security within the Indian perspective and the issues are multi-faceted. On a larger platform, these can be both considered to be parts of traditional as well as non-traditional threats.(DelhiSeptember 24 et al., n.d.; IAS, 2020; Nations, n.d.; "Paradip Port Celebrates World Maritime Day 2020," n.d.) The various kinds of traditional security threats can involve a major intra-state conflicts situation as well as terrorist attacks against vulnerable points in the region, particularly offshore oil and gas installations and other mining infrastructure, amidst others. On the other hand, there can also be various non-traditional security threats, including, smuggling of people, arms and drugs, illegal, unreported and unregulated (IUU) fishing. Adding further to the woes are varied kinds of maritime natural disasters. Terrorist attacks across the maritime sector is a great threat due to the presence of extremist groups. The terrorist attack in Mumbai (Maharashtra) in India, November 2008, showed the risks of

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terrorist attacks from the sea, if coastal waters are not made extremely secure. Attacks on offshore facilities have occurred in the past. Three offshore Iraqi oil terminals were attacked in the Persian Gulf in 2003 by explosive-laden speedboats. There are also various non-traditional security threats in the region under study, including climate change and possible rising sea levels, transnational crimes (particularly piracy, drug and arms trafficking, and people smuggling), food shortages, disease and famine, IUU fishing, and maritime natural hazards, such as tsunamis, cyclones and floods. (Singh, 2019). IUU fishing is a serious problem in the Indian Ocean. Increased demand and the depletion of fish stocks elsewhere in the world have led to more fishing in the Indian Ocean and an increasing presence of fishing vessels from outside of the region. The involvement of these vessels is facilitated largely because there is no effective regime for regional fisheries management. The Indian Ocean Tuna Commission (IOTC) is ineffective as a regional fisheries management organisation (Singh, 2019).

While the traditional threats throw up challenges like threat of security from other countries, the non-traditional threats are also a growing majority in present times. Especially considered as part of non-traditional threats, there are challenges like maritime terrorism, smuggling, transnational crimes, drug trafficking, illegal immigration, amidst others. The situation becomes more challenging as, from time to time, there are also various problems arising out of natural calamities, like natural catastrophes, oil spills, effects of climate changes, etc. All these taken together, impinge on the national interests of the Indian Ocean Rims Association (IORA) nations (*Maritime Safety and Security – Indian Ocean Rim Association – IORA*, n.d.). It should also be highlighted at the very onset that these threats also underline the imperative need for protection. Further adding to the problems are also the inevitable disasters as a result of natural catastrophes. Marine natural hazards arise through climate change, tropical storms, tsunamis and other severe oceanic conditions. Southeast Asia and other parts of the IOR are prone to these hazards, and scientific findings suggest that the intensity and frequency of disasters arising from these hazards is increasing. The geo-economics of the Indian Ocean is entwined with geopolitics and its focus on matters of control and access to economic resources. While India's exports and imports has remained mostly across the shipping lanes of the Indian Ocean, the Sea Lanes of Communication (SLOCs) have been a key security issue for India in the twenty-first century. (Kuo, n.d.) In addition, the Central Indian Ocean Basin became the scene for deep sea exploration and licences for scarce mineral resources. Amidst this, it is important to consider India's geo-strategic location- which is centrally located between the eastern and western stretches of the Indian Ocean, thereby able to deploy naval forces in both directions more easily than other littoral states in the Indian Ocean. This maritime can be reflected by Milan naval exercises (*India's Maritime Security Strategy*, n.d.). Milan became a political statement and networking exercise, showing India's ability to take an active and leading role towards other Indo-Pacific states, unaffected by the presence of larger outside powers like the United States or China. Across the Bay of Bengal, Milan

naval exercises has been organised by India since 1995. By 2012 and 2014, these also included others like- Mauritius, Seychelles, Maldives, India, Sri Lanka, Bangladesh, Myanmar, Thailand, Malaysia, Singapore, Indonesia, Australia, Brunei, Vietnam, and the Philippines. (*India's Maritime Security Strategy*, n.d.). The whole concept of the Indo-Pacific cooperations was originally conceived in 2006-2007 for a more constructive geopolitical amalgamation of the Indian Ocean and the western Pacific regions. This included the growing comprehensive power of China. However, it should be mentioned that geopolitics is much about establishing spheres of influence and thus the Indo-Pacific geopolitical construct will necessarily also involve such competition. As the USA seeks to main its influence in the region with Chinese rising challenges, it also seeks to prop up India's influence in the region, especially eastwards of the Malacca Straits and Japan's influence in the Indian Ocean.(Kuo, n.d.).

India and her coastline and the Indian Ocean Rim Association or the IORA-

The Indian Ocean has a vast area, about 68.56 million sq. kms and incorporates coastal regions from South Africa in the west and continuing through the eastern coast of Africa and along the Gulf to South and Southeast Asia and finally ending with Australia in the east. As per the IORA official website(*Maritime Safety and Security – Indian Ocean Rim Association – IORA*, n.d.). IORA is the 'first line of defence' to highlight specific national regional as well as international concerns and thus, also tries to highlight issues, enhance coordination and also help to further harmonise international Maritime Safety and Security (MSS) collaborations (*Maritime Safety and Security – Indian Ocean Rim Association – IORA*, n.d.). The IORA Working Group on MSS is also known as the WGMSS and was established in September 2018. It is presently chaired by Sri Lanka for a period of two years. Sri Lanka is currently advancing the IORA Action Plan (201702021), with Member States developing a regional agenda through a 'MSS Work Plan'. In the year 2017, the 2nd IORA meeting of experts on MSS was held in the month of November in that year. At the end and as an outcome, there was a document, titled- 'Blueprint for Maritime Safety and Security in IORA'. This is a vital document and serves as the base document for all initiatives to be seen and supervised over by the Working Group (*Maritime Safety and Security – Indian Ocean Rim Association – IORA*, n.d.).

In the following two years, there were further changes incorporated within the Working Group, especially in the year 2019. It was in that year (2019), Sri Lanka again came into the forefront and hosted the 1st Meeting of the IORA Maritime Safety and Security Working Group. This marked as an important milestone as it helped to finalise the regional Work Plan for the upcoming two consecutive years- i.e. 2019-2021. According to the official website of the IORA, this meeting was beneficial as it helped the Member States by providing an opportunity to further discuss a way forward and initiate a dialogue for actions pertaining to MSS (*Maritime Safety and Security – Indian Ocean Rim Association – IORA*, n.d.). It is also important to mention here some of the important steps initiated through IORA for a dialogue between countries- e.g. the Indian Ocean Dialogue. This is a key initiative, involving

representatives from diverse fields, including scholars, experts, analysts, policy-makers from varied think tanks, civil society members and also government representatives from IORA Member States (*Maritime Safety and Security – Indian Ocean Rim Association – IORA*, n.d.). The main focus is the discussion of important issues, including MSS. Thus, the association aims at building upon existing national, regional as well as international measures which will all contribute towards a more effective utilisation of resources for enhanced cross-border cooperation and sharing of knowledge, experiences and best practices to secure the Indian Ocean as an ocean which looks into strengthening maritime cooperation for a peaceful, stable and prosperous region.

Thus, an understanding is an important measure and is a vital platform for the vast region of the Indian Ocean, which also helps to bring to focus a common chord of interaction of countries and their various socio-cultural, religious and political differences and needs. These differences and needs also vary between countries, which make it imperative for an understanding to be the major focus as it brings in the thread of connectivity. In the Indian Ocean, concerning the region of India, there is a vast coastline around 7,500 km, with 1,200 islands, and a large exclusive economic zone (EEZ) of about 2 million sq km (Singh, 2019). As far as its present maritime security strategy is concerned, for India, it concentrates attention on the security of the Indian Ocean Sea Lines of Communication (SLOCs) to prevent conflict (Singh, 2019). In order to shape a positive marine environment and marine operations and also maintain assets, India, maintains some vital activities, these include, military operations shaping a favourable and positive maritime environment, along with preventing Indian coastal and offshore assets against attacks (Singh, 2019). This is particularly important as it is relevant due to the fact that ocean-based assets and economic activities offer prospects for new sources of growth, jobs and innovation.

Blue economy and the Indian Ocean-

This region of the Indian Ocean, also often referred to as the Indian Ocean region or IOR, is home to an increasing range of economies from various countries. The varieties amidst these countries, have been mentioned above. It is also interesting to note that the Indian Ocean Rim maintains around a quarter and a third of the world's population. This is close to two billion and this also constitutes a massive market to reckon with. In terms of traffic, it is interesting to note the large traffic that the region looks into- across this vast waterbody. The sea lanes accounts for 70% of the world's traffic of petroleum products, including the region of the Indian sub-continent with India and its neighbouring countries. Further, it is also interesting to note that that about 40 % of the seaborne crude oil passes through the Strait of Hormuz and 50% of the world container ships also passes through the Indian Ocean. Concerning this blue economy, it is also important to speak about the intra-trade amongst the Indian Ocean Rim Association (IORA), which is estimated to be USD 777 billion dollars (Singh, 2019). This also has the potential to grow in the coming years. The ships passing through the Indian ocean has land rims on three sides and

these ships pass through certain ‘choke points’, emanating from the Arabian Sea and the Bay of Bengal and form the southern Indian Ocean. It is also important to mention here the position of India as far as this blue economy of the region is concerned. India is located across the first two regions and she also enjoys a strategical and central position being the most important section I the region and she also oversees the third. Incidentally, the peninsular feature of India also provides a natural reach across wide sea spaces in all directions, which also includes the Andaman and Nicobar Islands on one side (though it is in the Bay of Bengal, but is also connected to the water trade with the Indian Ocean) and ofcourse there is the Lakshadweep islands- which, being located within the Indian Ocean, contributes an important position as far as the economic perspectives are concerned.

It is often mentioned that the troubled maritime environment in the Indian Ocean requires greater naval military presence. India has also prompted the Indian Ocean Naval Symposium (IONS) to help in fostering necessary cooperation between navies and coast guards in the IOR. There are also common interests of IOR coastal and island states- especially pertaining to interests in economic development, security and trade and above all- maritime issues are a common interest for all. There are large marine and aquatic products as stocks, but these are largely under-managed by the region and mostly exploited by the non-Indian Ocean countries. The management of local resources in the Indian Ocean is relatively low in comparison to the Pacific Ocean region. To improve this, the management of aquatic products or fisheries management should be a priority for regional engagements.

The Indian Ocean- Situation amidst Asia and matters of importance for the way forward-

The simultaneous rise of India and China is an important paradigm shift in the international system. In this respect, it is important to add here the recent activities from earlier this year (2020) concerning national and international security pertaining to India. From earlier this year (2020), the recent clashes between India and China over Galwan valley has been a matter of concern for security reasons. In an address, speaking to the armed forces, the Honourable Prime Minister of India, Mr. Narendra Modi addressed the armed forces as mentioning the ‘era of expansionism is over’ (*India’s Maritime Security Strategy*, n.d.). This also looked into India’s stance that it will not abode by the Chinese Aggressive posture at the LAC. (*India’s Maritime Security Strategy*, n.d.). It is also important to add here that through both countries finally agreed to withdraw their troops and agreed to work for mutual peace and cooperation, India should remain cautious of Chinese perspectives, which also includes territorial expansion in small proportion through military intimidation, while proclaiming its commitment to peace and tranquility. Many foreign and security experts argue that India should counter China not only in land frontiers, but also in the maritime domain. Thus, for these important reasons, there should be further a focus of maritime security as an important aspect for India, including the region of the Indian Ocean, especially as both China and India have their respective naval presence in the Indian Ocean. Also, to note is the fact that China’s trade interests coincide with

India's target of being the most important power and security provider. It is not surprising that within such circumstances, there are always opportunities of differences of opinion. Also, it is additionally important to mention here the presence of extra-regional powers, e.g. the USA, who has played a vital role in maintaining peace and security in the region. India's concerns about the wide presence of China on the Indian Ocean is vital as it apprehends The String of Pearls rising a fear about Chinese interests of India and the fear that it may occupy the same place in the Indian Ocean as it has done in the South and East China Seas. India has also responded to China's response to her presence in the Indian Ocean by launching a navy communication satellite and setting up a monitoring station in Madagascar. Also, on the other hand, India has also been strengthening her ties with other regions including, Japan and Africa- which is an important move. These actions are a step towards making India realise her dream of being the dominant power and security provider in the Indian Ocean. With this respect, there is an ongoing contest between India's aspirations and China's stakes in the Indian Ocean, but the presence of extra-regional powers, like the USA could ensure that the power tussle does not go out of proportion.

Thus, there should be a focus on not only land boundaries but also maritime securities with respect to India. On the other hand, a better understanding of the vast waterbody of the Indian Ocean also can further contribute towards smooth functioning on various sectors. These can better be explained through the unique characteristics of the Indian Ocean, one of them being, unlike the Pacific and the Atlantic Oceans, it is enclosed on three sides by land masses. Due to this, the currents changes each year across the Indian Ocean. This does not occur on other major oceans of the world (*India's Maritime Security Strategy*, n.d.). The very strong trough-like flow of water from the Pacific Ocean to the Indian Ocean, through the Indonesian archipelago is another factor. This also has major impact on oceanographic conditions in the Indian Ocean. Thus, more researches can be conducted on the Indian Ocean about these aspects. Concerning this, it is also vital to keep politics at bay and cooperate in formulating a help in the development of proper marine scientific research. In this respect, more researches can be conducted with respect to the region of the Indian Ocean. It should always be mentioned that there is a close link between oceanographic conditions and regional weather patterns. A better knowledge about oceanography would bring in marked improvements pertaining to climate research. This will also help to benefit all the IOR countries, including such important aspects like predicting sudden changes within climatic patterns or any severe changes within the weather or climate, e.g. cyclones, tsunamis or even short or lengthy period of drought. Often, it is also critiqued that the region of the Indian Ocean can benefit from a format of a 'sagar panchayat' (*India's Maritime Security Strategy*, n.d.). This is to establish India's collaborations with Indian Ocean Rim countries to establish the common good order at sea. This can be comprised of a shape of a cluster of Indo-Pacific nations to uphold a rule or law and security of sea. Some other aspects which

can also further contribute towards a smooth functioning of the region as far as security measures are concerned involves, increasing interoperability at sea, intelligence-sharing and maintaining freedom of navigation and in both these areas, India can work closely with like-minded nations. In this context the four-nation Quad (United States, Japan, Australia and India) is an important work-in-progress and should be an aspect to be in the focus in years to come. Furthermore, this grouping can be expanded by including the ASEAN nations. Additionally, with her high stakes and matters of concerns in the Indian Ocean, it is very significant for India to develop blue-water naval capabilities. Apart from developing indigenous naval capacities, there is also a need to push for development of three aircraft carrier groups, one for each command and set to operate in western, southern and eastern quadrants of the Indian Ocean.

Finally, last, but not the least, one should end with reference to the recent observation of the World Maritime Day. Observed on September 24, across the world, it marks the contribution of international maritime industries towards the economy of the world, especially shipping. Every year, the International Maritime Organisation (IMO), celebrates World Maritime Day, however, the exact date is left for the individual governments to decide, but it is generally and the world over, is celebrated across the last week of the month of September and generally the last Thursday of the month. In this year (2020), the theme for the World Maritime Day was 'Sustainable shipping for a sustainable planet'. This theme is also to help raise awareness about the concept of the same of the United Nations through its Sustainable Development Goals (SDGs). The shipping industry, with the support of the IMP regulatory framework, has already been working towards a sustainable future. In spite of the Covid-19 restrictions and lockdowns, the day was celebrated as an online event, due to social distancing measures caused by the pandemic. Shipping has continued to transport more than 80% of the world trade, including vital medical supplies, food and other basic goods, which are critical for the Covid-19 situation. There were also hundreds of seafarers, who have faced crisis, during the present and ongoing pandemic situation, who have also been stranded at sea and oceans, unable to operate or get off the ships as the contracts extended by months. The Indian Ocean has also been a witness to the same, including the many trips of sea voyages to Sri Lanka and other neighbouring regions with medical supplies as well as transporting stranded Indians back home as a result of the Vande Bharat Mission of the Government of India. In this regard, across the last several months, there have emerged a whole new chapter in the perspective of the Indian Ocean altogether- something that had not been explored earlier and a factor which looked into the humanitarian aspects of the Indian Ocean through cooperative lenses rather than the usual maritime trade and commerce or military viewpoints. These humanitarian approaches have also rendered more insights to consider about the varied involvements of the Indian Ocean and factors which can further contribute in the future towards building up a more approachable and cooperative platform. Thus, keeping in sight, the significant aspects of security concerns as well as other additional features like maritime, trade and commerce in

sight, the maritime security concerns of the Indian Ocean, at present, encompasses several parameters. It is not only a simple perspective of looking into national, regional or international matters of security, but also looks into an overall understanding of smooth-functioning between countries of the region. This requires proper facilitation of scholarly, military aspects as well as commercial and economic considerations and none of these can be achieved through stand-alone examples. There should be an encouragement of the participation of think-tanks from various sectors- all of which will further go into making the region of the Indian Ocean safe and secure.

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Green Marketing Initiatives and Practices in India: A Study of Electronic Goods Industry

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In the modern market, consumers are giving their attention towards environment. Consumers are directing their behaviour towards eco-friendly products which are presumed to be green or environment friendly like low power consuming (energy efficient) electrical appliances, organic food, lead free paints, recyclable papers, phosphate free detergents etc. Nowadays, people and countries have become more concerned about the safety of environment, so the Indian marketers and manufacturers also realising the importance of Green Marketing Concept. The term Green Marketing enabled the marketers and manufacturers for the re-marketing and packaging of existing products in eco-friendly material in the modern market. Green Marketing refers to marketing of that product which are presumed to be environmentally safe including range of activities like modifying the product, modification in the production process, packaging and advertising which affect the environment in negative way. Green marketing is emerging as a popular promotional strategy owing to increased consumer awareness and concerns.

This paper will discuss the Green Marketing Initiatives and Practices in India in Electronic Industry. It will also discuss how the Green Marketing Initiatives and Practices helps the marketers and manufacturers to fulfil their corporate responsibility and attract more consumers to capture the more share of market. The paper also examines the present trends of green marketing in India and describes the reasons why companies are adopting it and future of green marketing and concludes that green marketing is something that will continuously grow in both practice and demand.

Key Words: Green Marketing, Green Product, Eco-Friendly, Green Marketing Strategy, Green Marketing Initiatives, Green Management

Introduction

Green Marketing refers to the process of selling products and services based on their environmental benefits. Green Marketing has been defined by American Marketing Association as “marketing of products that are presumed to be environmentally safe.” Society becomes more concerned about the natural environment when ill effects of the environment degradation are experienced by the society i.e. climate change, global warming, increasing air and water pollution etc. The growing awareness of consumers about the environment brings changes in the market place, now they want eco-friendly products. So the manufacturers have to modify its products which satisfy consumers and have the minimal detrimental effect on the environment i.e. modification in the production process, packaging, its constituents, as well as modifying advertising activities that impact the environment in negative way. It is reported that, to a great extent, environmental degradation has been brought about by the over consumption activities of private households. India is no exception to this rule. With the growth of Indian economy, the Indian consumer has higher disposable income than before. With the ever-increasing penetration of internet and social media, the purchasing behaviour of

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Indian consumers has changed dramatically. The spread of education and thus awareness has made Indian consumer pay attention towards deteriorating environment. However, the consumers' indications of positive attitude towards environmental issues do not necessarily lead to actual environmentally friendly purchasing behaviour. An important aspect of green marketing is the willingness and ability of consumers to buy green products and pay more for it. The USA for example has 3.5 million confirmed green consumers. However there is very little data available on the consumer base in India and the willingness and ability of consumer to pay extra for green products.

Green Products refers to sustainable products designed to minimize its environmental impacts during its whole life-cycle and even after it's of no use. Green products are usually identified by having two basic goals – reducing waste and maximizing resource efficiency. According to Simmon (1995), “**green products**” as products made with reduced amounts of materials, highly recyclable materials, non-toxic materials, do not involve animal testing, do not adversely affect protected species, require less energy during production or use or have minimal or no packaging. Nimse (2007) stated green products as those that use recyclable materials, minimal wastages, and reduce the use of water, save energy, have minimal packaging, and emit less toxic substances. Compared with the other products, green products bring less harm to humankind and offer more long term practical development opportunities from a social and economic perspective. Green products are environmentally friendly products. Thus green products are products that are designed and manufactured in such a manner as to minimize the adverse environmental impact involved in its production, distribution and consumption. This could involve the use of recyclable materials, biodegradable elements and components such as catalytic converters in motor cars, which reduce sulphur emissions.

Green Marketing Strategy refers to firm's strategy related to green management practice and green objectives. It is firm's strategy where firm are shifting from traditional marketing practices to green marketing practices in order to survive and to remain competent in green competitive world. *Green Marketing Management* as the process of planning and implementation of the marketing mix to facilitate consumption, production, distribution, promotion, packaging, and product reclamation in a manner that is sensitive or responsive to ecological concerns.

Review of Literature :

In the context of the objective of this research paper to understand the Green Marketing Initiatives and Practices in India in Electronic Industry, the paper will examine and present a detailed review on how it helps the marketers and manufacturers to fulfil their corporate responsibility and attract more consumers to capture the more share of market. **Aswal, Chandani and Kadyan, Arti (2013)** in a research study found that green marketing acts as a platform to attract new customers and the impact of green marketing on the consumers are found to be positive. Consumers are ready to pay more for eco-friendly products and also become environmental concerns. **P. Maheshwari, Dr. Shruti (2014)** did study on consumer awareness and its influence on their perception and preferences and find that in the world there is increasing awareness about green marketing and products but in India, consumers are still in the nascent stage of green awareness. **Bhatiya, Mayank and Jain, Amit (2013)** in a research study found that consumers are aware about the green products and practices. However most of the consumers are not aware about the initiatives taken for promoting green marketing practices by central/state government, NGOs and

business houses in India suggesting need for better marketing communication from these entities and have to strongly communicate to the customers about their green initiatives. **Gaikwad, Ms.Anuradha and Ingavale, Ms.Deepa (2011)** in a research paper found that no significant relationship is visible between income, educational qualification and occupation with respect to awareness about Green marketing. It seems that people who belong to the service category among occupation are more aware and willing to buy eco-friendly products. **Yazdarifard and Mercy (2011)** said that environmental protection is the ultimate aim of green marketing. Producing ecologically safe products, good pollution control systems, recyclable packaging, development of operations which are energy efficient and water efficient are the parts of Green Marketing. Our present and future generations, animals, plant and plant species are the stakeholders in green marketing. Companies should focus on customer satisfaction as well along with environmental protection because customer satisfaction will only lead to customer loyalty. **Dahlstorm (2011) and Ottman (2011)** have characterized green marketing as an integration of ecological concerns into marketing aspects including production, distribution and logistics, promotion and packaging along with marketing communications. **G.,Manjunath and Manjunath, Gundupagi (2013)** in the study found that majority of consumers have realised that their behaviour had a direct impact on environment there is mounting amount of evidence indicating that consumers are shifting traditional products to green products to have a positive impact on the natural environment.

Objectives of the Study :

- To understand the concept of Green Marketing, Green Product, Green Marketing Strategy and Green Management.
- To study the need, importance and challenges and opportunities of green marketing.
- To study and evaluate the implementation of Green Marketing Strategy by the electronic sectors in India.

Methodology :

This paper studies the theoretical concepts of Green Marketing, Green Product, Eco-Friendly, Green Marketing Strategy, Green Marketing Initiatives, and Green Management. The paper also studies the Green Marketing Initiatives and Practices in India in Electronic Industry. It will also discuss how the Green Marketing Initiatives and Practices helps the marketers and manufacturers to fulfil their corporate responsibility and attract more consumers to capture the more share of market.

Need and Importance of Green Marketing :

We all know that there is drastic increase in production and business activities which are polluting the natural environment. It dramatically damages the people and the environment around the world. Majority of the consumers have realised that their behaviour have direct impact on environment, so they have developed the interest towards the protection of natural environment. That is why Green Marketing has become inevitable in which marketers communicate with the consumers that they are using the resources efficiently which have minimal negative effect on the environment. These are some points which have explained the need and importance of Green Marketing:

- I. **Environmental Advantage:** It is an environmentally responsible behaviour which helps to protect the environment. It is estimated that most of the greenhouse gases comes from energy production that business uses to heat, cool and light work place. Reducing these energy needs reduce greenhouses gases output which helps to control global warming. Green products have minimal negative impact on environment.

- II. **Economic Advantage:** The decrease in the wastes helps to lower the operating costs of the organisations which lead to more savings. Eco-friendly business equipment and practices in the organisations such as use of low-wattage lights, use of natural lightings, water conservation policies, mandatory recycling and reuse helps to save money on utilities, fuel and office supplies. With the help of green practices organisation improves its goodwill which helps in positive attraction of consumers, potential investors, distributors, communities, prospective employees etc. towards the organisation. Thus it helps the organisation to access new markets and enjoying competitive advantages.
- III. **Sustainability:** Green Marketing helps organisations to get sustainable profits. It makes them competitive in green world and attracts the new markets leads to future profits.
- IV. **Efficient use of Resources:** We all know that the human needs and wants are unlimited but the available resources for use are limited. Green Marketing and practices helps in efficient use of resources.
- V. **Consumer Attraction:** Nowadays consumers are more concerned towards environment protection. Green marketing helps to design socially and sustainable products which attracts the consumers.
- VI. **Innovation:** Green Marketing helps to design products that are economically affordable and satisfy the human needs efficiently. It helps to produce innovative green products that consume less resources.
- VII. **Competitive Advantage:** Companies which are adopting green marketing techniques and practices gain more competitive advantage over other companies which are not conscious about these green techniques and practices and environment. Companies which develop innovative products and services with innovative qualities at affordable rates are successful in the market.
- VIII. **Moral Obligations towards Social Responsibility:** Organisations believe that they have a moral obligation to be more socially responsible. They believe that they have wider community and that is why they must behave in an environmentally responsible members. They can use this fact that they are environmentally responsible as a marketing tool. It helps to integrate environmental issues into the firm's corporate culture.
- IX. **Government Pressure/Legal Boundation:** Government is also concerned about the protection of environment. There are several government regulations regarding environmental marketing which are designed to protect consumers as well as environment.

Challenges of Green Marketing :

Many organizations want to turn green, as an increasing number of consumers' want to associate themselves with environmental-friendly products. Alongside, one also witnesses confusion among the consumers regarding the products. In particular, one often finds distrust regarding the credibility of green products. Therefore, to ensure consumer confidence, marketers of green products need to be much more transparent, and refrain from breaching any law or standards relating to products or business practices. There are numerous challenges in the field of green marketing. Some of the major hurdles are as following:

- I. It is found that very less green campaigns are entirely true. There is a huge lack of standardisation to authenticate the green claims. Regulatory bodies are in need to be in place to authenticate credibility of greenness of the products.

- II. Indian literate and urban consumers are more aware about the green products but it is still a new concept for the masses. There should be a green marketing campaign that need to reach the masses and it will take a lot of time and efforts.
- III. Green marketing is a long term investment opportunity so it will give the benefits in long run. So companies have to have a lot of patience with no immediate benefits.
- IV. There is existence of green myopia in the market where companies marketed their products as green product but it did not meet the criteria of the same. There is no standardisation of green product. That is why green companies might have face the challenge of unacceptance of their green products.
- V. Green products require renewable and recyclable materials which are costly. Improvement in technology for the production of green product need huge investment in Research and Development. Majority of the people are not aware of the green products and their uses and are not willing to pay more for the green products.

Opportunities of Green Marketing :

Adoption of green marketing and green marketing practices in the organisations lead to following opportunities for the organisations:

- I. Competitive Advantage
- II. Increasing the consumer base
- III. Subsidies from government
- IV. Reduction in its operating costs
- V. Corporate Social Responsibility

Green Marketing Initiatives in India :

Phillips Carbon Black Limited (PCBL)

Phillips Carbon Black Limited has its one of CSR policies as “Preserving and enriching the environment where we do business”. It has been implementing several CSR projects in the area of environment sustainability, health and community development. Its aim is to continuously improve its business operations and align itself with the National Action Plan on Climate Change (NAPCC) of the Government of India. Maintaining green environment around its plants in line with the EHS Policy, PCBL has established management systems certified by various accreditation bodies such as ISO 14001 and OHSAS 18001. PCBL’s co-generation power plants generate power from the tail gas of the carbon black process, thereby replacing the equal amount of fossil fuel fired by the plants. The plants also reduce the Greenhouse Gas (GHG) emissions by 3, 91,780 MT of CO₂ on an annual basis. The 12 MW co-generation power plant at Palej was the first unit in the world to be registered as a Clean Development Mechanism (CDM) under the United Nations Framework Convention on Climate Change (UNFCCC). The Company has installed a facility for rain water harvesting from the existing building roof to reduce the raw water consumption. It would ensure a stable supply of fresh water and most of its manufacturing units recycle the water through the Effluent Treatment Plant (ETP). In doing so this process results in zero discharge of waste from its factories. More than 90% of the solid waste generated is recycled internally across its facilities.

Philips

Philips EcoVision program is the main driver of green marketing initiatives. In 2007, Royal Philips Electronics has launched “EcoVision 4” programme. The sales of green products were continuously increased around 39% in 2011 to around 45% in 2012 and around 50% in 2012. Philips has made huge investment in Green Innovation to ensure green products well stocked and launched 91 green products in the market. Philips has started focusing on its

energy efficiency, products and operations. It also announced the “Voluntary Recycling Initiatives” in India, Brazil, Argentina and China. With the help of its eco designed products it has managed to reduce its cost of products, energy consumption and CO₂ emissions. The green campaign launched by Philips has positive impact on consumers as sales has drastically increased.

Wipro and Infosys

Wipro has taken various initiatives to be green and the main objective of the company is to become carbon neutral, water positive and energy saving in the business. Wipro has designed the products and solutions that can reduce the hazardous wastes. Wipro has launched the green products such as laptops, desktops etc. as its green wares. Wipro and Infosys are actively seeking to become very green company. Infosys had plans to be fully carbon neutral by 2017 i.e. achieve net zero carbon emissions by balancing the carbon released by the company with an equivalent amount offset. Between 2007 and 2012 Infosys reduced its per capita electricity consumptions by more than 32%. In 2011-12, it procured 48GWh of renewable energy, 18% of its total electricity consumptions and it has increased as 21% in 2012-13. Wipro's 18 buildings are certified to the International LEED (Green) standards. Wipro has 800 virtual servers running on 120 physical servers, contributing to energy savings of about three million units annually. Wipro and Infosys has installed solar panel in their campus which is around 70% cheaper than power of diesel.

Hewlett-Packard (HP), Company

HP had a portfolio of information technology products and services that addressed the needs of consumers and businesses, had won many accolades in the 21st century for its corporate environmental responsibility. The company had taken various environment-friendly initiatives in the areas of chemicals management in product design; reducing the carbon footprint of its operations; bringing innovations in energy-efficient solutions for its customers; establishing a vast network for recycling of various categories of products; and finally, making its supply chain actively participate in the company's environmental sustainability commitment. It has already cut its global energy consumptions by around 20% till 2010. It delivers energy efficient products and services, institutes energy efficient operating practices in its facilities worldwide.

Haier

Haier is one of the largest home appliances and consumer electronic brands that had launched “Eco-Life” series in India as its green initiatives. The initiative is a part of global rebranding exercise aimed at designing smart products which not only meet customers' needs but also adhere to the environmental norms. Its products are energy efficient and safe to the environment. The company also launched its latest eco-friendly products including Refrigerator, Semi and Full Automatic Washing Machines, Split and Windows Air Conditioners, a wide range of LED/LCD TVs and the spa range of water heaters. The company has launched three new green products in India including laptops, home theatres and cameras. It has renewed its microwaves and dishwashers categories with green norms.

Samsung India

Samsung's commitment is “Planet First: Earth is Priority”. Samsung Electronics put Earth and Environment first and have Eco-management into actions, offering eco-friendly solutions to the customers and leading the way to a sustainable future through innovative and eco-friendly technology. It had declared green management strategy in 2009. “Planet First” pursues its corporate social responsibility and sustainable management through its green

activities. Samsung's basic philosophy is to contribute to the flourishing of humankind and preservation of the environment by doing business in a way that respect both humanity and nature. Samsung Electronics have sets its green management goals to reduce greenhouse gas, to manufacture products with minimal negative environmental impact, and to achieve circular economy. Samsung Electronics has reduced CO₂ emissions of 250 million tons from 2009 to 2020, collected 3.8 million tons waste material globally from 2009 to 2020 and made compliance with newly developed products with Eco-Label Standards.

Panasonic

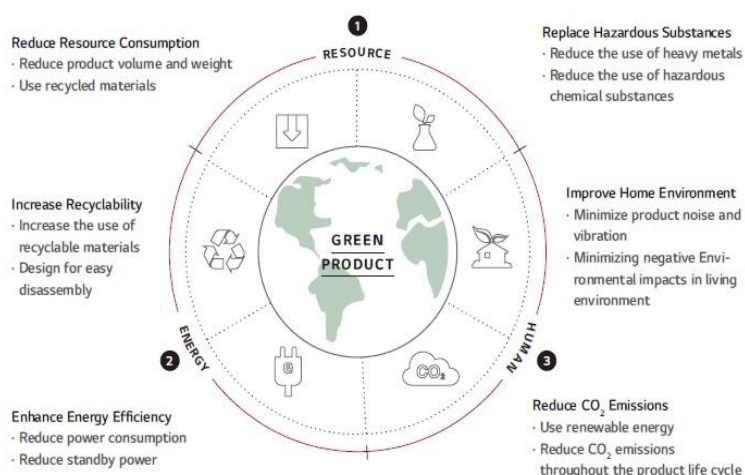
Panasonic's vision is to contribute to the sustainable development of the society by working with employees, their families, the local community and society at large to provide "A Better Life, A Better World. In May 2012, Panasonic India launched its comprehensive electronic waste recycling program called "I Recycle". The program is being executed through an agreement with an authorized recycler. Under the program, the products that are recycled are office e-waste, including telephones (all types), electrical and electronic typewriters, fax machines, printers, including cartridges, copying equipment, user terminals and systems, notebook and notepad computers; e-waste generated from service and repair of products, and end-of-life (EOL) products, which include Panasonic India products that have run out their utility to the consumers, including air conditioners excluding centralised air conditioning plants, washing machines, refrigerators and TV sets based on CRT, LCD, LED technology. Panasonic has continued to become one of the best green company in electronic industry with the help of manufacturing its product by recycled resources i.e. refrigerators glass wool insulation is made with approximately 90% recycled glass from used CRT TVs, using Panasonic unique recycling techniques. Company is focusing on three main environmental policies as are followings:

- Maximising energy saving performance
- Promoting three R's (Reduce, Reuse, Recycle)
- Reducing the use of chemical substances having negative environmental effect

Panasonic has enhanced the core performance its products with the help of energy efficiency and recycling materials. Panasonic's Environment Vision 2050 is to work towards creation and more efficient utilization of energy which exceeds the amount of energy used, aiming for a society with clean energy and a more comfortable lifestyle.

Life's Good (LG)

Green marketing has become one of the LG's corporate social responsibility. Green marketing has being employed by LG Electronics in the development and marketing of products to minimise negative effects on the environment. LG Electronics has set a strategy to develop products that reduce environmental impacts throughout the life cycle of the products. It is classified in three categories i.e. human, energy and resources. LG Electronics' strategies for products with greener features are followings:



LG's Global consumption of renewable energy amounts to 100GW a year, and it's expected to rise to 300GW by 2030. LG Electronics will continue to contribute to creating a better world for customers by reducing greenhouse gas emissions and taking initiatives to tackle other environmental issues with its intelligent systems. As a green business leader in the areas of renewable energy and electric vehicles, LG Electronics will continue to contribute to sustainable environmentally friendly growth for the present and future generations through the innovation of smart and green hardware and software. LG Group has a green management strategy known as "Green-2020" to focus its capabilities on sustainable management for green growth. Green-2020 is a three pronged strategy as followings:

- Create a green workplace
- Expanding greener products
- Strengthening green business

LG Group is promoting and contributing towards environmental protection through green practices and initiatives.

SONY

SONY has recognised the importance of preserving the natural environment in order to create a sustainable society for our future generations. SONY endeavour to reduce environmental impact in our wide range of products. These efforts are evident in compact, lightweight, energy-efficient designs that reduce wasted resources and power consumption, and our commitment to using recycled materials. SONY involved in developing environmental technologies to reduce the negative impact on the environment. Sony is using their technology in an innovative way to address environmental problems. Sony has become the latest major manufacturer to join O2's campaign to rid the market of unnecessary mobile phone chargers. Sony has joined manufacturers HTC and Nokia which have already signed up to the O2 initiative, called 'Charger out of the box'. The campaign aims to take all chargers out of new phone boxes by 2015, as they are a gigantic environmental waste issue for the industry. For its continued commitment to eco-friendly projects and Eco initiatives, Sony wins the Greenest Company for 2009 by the Environmental Graffiti website in its annual awards.

Dell India

Dell manufactures sells and supports computers and electronic-related services and products. According to Fortune 500, Dell is ranked as number 41 in largest technological corporations around the world. Dell is committed to reducing carbon dioxide emissions, also the first company in its industry to create a product recycling goal and complete the implementation of it. Dell India foddors a recycling discount coupon to encourage the recycling of computers. Dell customers who send in old Dell systems to Dell for free recycling will receive a special discount coupon on their next Dell purchase. Another program is the Dell Go Green Challenge. This challenge raises community awareness and involvement in green projects throughout India. Dell has launched one of its green initiatives as recycling from home option. Dell uses majority of recycled and recyclable material for products and working alongside reliable, safe and environmentally friendly materials.

Table 1: Company's Green Marketing Initiatives

S.N.	Company	Green Marketing Initiatives
1	Phillips Carbon Black Limited	<ul style="list-style-type: none"> • ESD • Wires and Cables

2	Philips	<ul style="list-style-type: none"> • Energy Saving lights • Medical equipment • Household appliances • Personal care appliances
3	Wipro and Infosys	<ul style="list-style-type: none"> • Energy efficient Desktops • Energy efficient Laptops • Recycled plastics • Sustainable IT products and solutions, which help customers, achieve high productivity in energy, space and asset management through the lifecycle.
4	Hewlett-Packard (HP)	<ul style="list-style-type: none"> • Energy efficient PCs- desktops and notebooks • Multifunction handheld devices • Energy efficient all in one printers • Energy-efficient products and services and institute energy-efficient operating practices
5	Haier	<ul style="list-style-type: none"> • Energy efficient Refrigerator • Semi and Full Automatic Washing Machines • Split and Windows Air Conditioners • A wide range of LED/LCD TVs • Spa range of water heaters.
6	Samsung India	<ul style="list-style-type: none"> • Solar Powered Mobile Phones • Bio plastic Mobile

		<ul style="list-style-type: none"> Phones • Eco-Refrigerator • Green Memory • Quick Drive Washing Machines • Energy efficient Dryers
7	Panasonic	<ul style="list-style-type: none"> • FA Servo Motor and Servo Amplifier with wireless dongle • Data Archiver "freeze-ray" • Wall-mounted energy recovery ventilator (ERV) unit • COMBO, compact size version • HIT Photovoltaic Modules for Automobile • Se-HEV Lithium-ion Battery System • High-reliability, lead-free manganese dry cell • LED high-ceiling lighting, LED light projector • Tankless toilet New A La Uno • Solar module HIT • Eco-friendly refrigerators, air conditioners, washing machines. • Plasma TV, LCD.
8	Life's Good (LG)	<ul style="list-style-type: none"> • Green Workplace • Renewable energy consumptions • House appliances • Energy efficient smart phones
9	SONY	<ul style="list-style-type: none"> • Cameras for cinema • Lenses • Sound bar

		<ul style="list-style-type: none"> • Projectors • Electronic entertainment products • Light weight and energy efficient products
10	Dell India	<ul style="list-style-type: none"> • Energy efficient Personal Computers and laptops • Data Storage Devices • Computer peripherals • Cameras • MP3 Players • Printers

Conclusions :

The problems of environment is increasing at fast pace in India. Most of the consumers have realised that their buying behaviour have direct impact on the environment shifting them from traditional products to green products. Green Marketing act as a tool for the companies to attract the new customers. That is why marketers have to understand the effect of green products on the environment. Most of the country's government and consumers have concerned about the environmental problems so marketers has to implement the green practices in the business. Green Marketing has made huge changes in the business and is saving the world from pollution. The organisations have to understand the challenges while adopting green marketing strategies into practice and adopt the innovative technologies in such a way which overcome the existing challenges as well as have minimal harmful effects on the environment. Green marketing improves the organisation's image and reputation and trustworthiness among the consumers and helps to grab the new consumers in the market. Organisations have the responsibility towards cleaner environment so they have to do awareness programmes in the field. Consumers have to aware about the green initiatives taken by the organisations to shift their buying behaviour towards green purchase. In India, electronic sector has made a beautiful contribution towards green initiatives into the practices. There is huge potential exists for green products in electronic sector, sector provided that organisations understand consumers' buying behaviour. Organisations has to make huge investment in technology, Research & Development that have less harmful impact on the environment.

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A Study of Predicting Effect of Educational Environment And Parent Child Relationship on Creativity

Salini*

The purpose of study was to find out the predicting effect of educational environment and Parent child relationship on creativity of school going adolescents. For this purpose total sample size is 426 students in which 216 from Private school and 210 children from Government schools. The age range of students was 14-16 yrs. A schedule consists of Hindi version of Baqer Mehdi's(2009) Verbal test of creative thinking, Singh & Imam School climate scale and Pandey & Singh Parent child relationship scale were used. The results revealed that the predicting value of Educational environment is 77% and Parent child relationship is 28%. The B values are significant ($p < .00$). Findings were discussed in the light of previous research.

Keywords : Educational environment, Parent-child Relationship, Creativity.

Introduction :

Creative people are different from other people in sense that they process unique characteristics. Creative people often share some common habits and they take great delight in profound thinking. Claire(1987), creative people also can hold two different ideas for the same thing. They remain calm even when the going gets tough. concept creativity manifests in daily life. It comes through in how one prepares a meal, decorates a room or interprets and shares experiences. Everyday creativity generally begins with an innovative. It is often unconventional approach to life that involves capitalizing on hidden opportunities, undertaking common tasks in uncommon ways and finding solutions to challenges as they arise.

Creativity is the most uniquely human trait. It enables us to overtake the present, reconstruct the past, and visualise the future, so that it may interpret something that does not exist and change the world with it (Gabora, 2013). It is difficult to define because not all creative works are useful, and not all are aesthetically pleasing. Both usefulness and aesthetic value capture, in some sense, what creativity is about.

Spearman (1930) took creation as purely a process. The thought of creative thinking as process of seeing or creating relationships on conscious or subconscious level. Graham wallas (1926) explained in detail the steps involved in problem solving. Therefore the stages suggested by him are as follow- preparation, incubation, inspiration and verification. These studies may be observational, involve questionnaires, or neuroscientific methods such as functional magnetic resonance imaging (fMRI).

Guilford (1950) has made a distinction between two types of thinking abilities convergent thinking and divergent thinking. He defines divergent thinking as a kind of mental operation that leads significantly away from the beaten track. Divergent production involves novel responses to a given stimulus, unlike convergent thinking where the outcome is conventional. Guilford relates divergent thinking to certain well-known ability factors which seem to go with creative output. The primary traits related to divergent thinking and therefore, to creativity, have been enumerated to include: sensitivity to problems, the flexibility of thinking, and fluency of thinking, originality, redefinition and elaboration.

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Bartlett (1959) has explained creativity in terms of adventures thinking including several characteristics like “getting away from the main track breaking out of the mould being open to expense and permitting one thing to lead to another. Chrutchfield (1962) throughout of a creative person as an independent functioning unit who has the capacity to function effectively under an stress and strain. He is relatively unsusceptible to anxiety and relatively free from inferiority feeling and able to mobilise all available resources. As a matter of fact, the creative person has a unique personality quite different from common men's personality.

The surprise is sometimes added as a third criterion (Boden, 2004). Creativity has also been defined as a complex or syndrome. It broadly includes novelty-generating processes in the biological world or the universe.

Educational environment and Parent child relationship :

Most psychologists believe that creativity involves a combination of expertise, chance, and intuition. Psychologists who emphasize intuition and associative processes tend to view creativity as more domain-general because associative thinking can produce metaphors that connect different domains, and we gain understanding and control over experiences by translating and re-expressing them through the constraints of different domains. This view is supported by studies involving self-report scales, creativity checklists, and other sorts of psychometric or personality data tend to support the view that creativity is domain-general (Plucker 1998).

Schools can indeed vary significantly in terms of providing children with environments that allow democratic decisions, such as the ones proposed in alternative educational programs (Clandfield & Sivell, 1990), as well as the presence or absence of a mentor (Torrance, 1981).

Family is the primary and most important organization of society. It has an influence on one's life and in society. Children are more influenced by the family. The impact of the family on the child and its roles in the development of creativity, social, moral and cultural aspects are very important. Although children are influenced by society and peers, a balanced parent-child relationship would significantly contribute to children's mental health. Research has shown that reciprocal parent-child interaction and parents' dealing with children are the essential factors contributing to child-rearing and the development of bright personality. This macro variable also affects the child's proximate social environment beyond the family circle.

For example, children from higher-status families are further likely to participate in extra-curricular activities, which in turn are believed to impact the development of creativity (Milgram & Hong, 1999). The development of creativity in children was studied by Miller and Gerard (1979) their review highlighted a variety of parenting factors, including parenting styles that influence creativity.

Purabdoli et al. (2008) reported that when parents hold higher expectations, greater responsiveness (warmness, acceptance and commitment) and highly demanding behaviour (control and supervision) and tend to deal with their children authoritatively, children enjoy greater creativity. Several studies have been conducted on creativity, and behavioural scientists have always paid attention to the factors both contributing to and hindering creativity development. The type of parenting Style also influenced child creativity. Yarrow (2008) observed that there is extensive evidence of the importance to the child's social and mental adjustment of the close interrelationships between parent and child.

Objective and hypothesis :

The major objective was to find out the predicting effect of educational environment and parent child relationship on creativity of adolescents. A hypothesis was formulated as “there would be significant interactional effects of educational environment and Parent-child relationships on creativity.

Methodology**Sample :**

The present study was conducted among various Private and Government schools of Darbhanga district. A sample of 426 school students of Class IX and Class X, were selected for the present study. Their age ranged between 12 to 16 yrs, with an average age of 15 yrs. In which 222 boys and 204 students is girl participated in this study. Number of students participated in the data collection 216 from private schools and 210 students from Government schools.

Measures Used:

Following Research instruments were used in this study-

1. Personal data sheet : For collecting personal demographic information such as age, gender, type of school, locality, parents education, and parents occupation etc. An open ended interview. This schedule proved valid in assessing demographic (biographic) characteristics of respondents.
2. Baqer Mehdi verbal creativity test : To measure the creativity of respondents, hindi version of Baqer Mehdi's(2009) verbal test of creative thinking has been used. The test is used to identify creativity talent at all stages of education except pre-primary and primary. This scale consists of four sub tests and each subtest measuring three dimensions of creativity namely fluency, flexibility and originality aspects.
3. Pandey and Singh Parent Child Relationship Scale : To measure the parent child relationship Pandey and Singh parent child relationship questionnaire has been used. The PCRQ was developed to measure parent child relationship in Indian culture.
4. Singh and Imam School Climate Scale : To measure the academic environment of schools hindi version of School Climate Scale (2015) has been used. The SCS(2015) was developed by S. P. Singh and Ali Imam.

Result and Discussion :

To measure the predicting effect of Educational environment and Parent-child relationship on creativity of adolescents, Multiple regression were used.

Effect of Parent-child Relationship and Academic Environment on Composite value of creativity

To measure the effect of parent-child relationship and academic environment on the composite scores of the creativity, multiple regressions were also computed. The results are given in the Table 5.1, Table 5.2 and in table 5.3.

Table-5.1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.302 ^a	.091	.087	26.27993

a. Predictors: (Constant), AES, PCR

Table-5.2
ANOVA^a

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29261.987	2	14630.994	21.185	.000 ^b
	Residual	292138.595	423	690.635		
	Total	321400.582	425			

a. Dependent Variable: Composite

b. Predictors: (Constant), AES, PCR

Table-5.3

Coefficients^a						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.785	12.414		.708	.480
	PCR	.287	.103	.131	2.786	.006
	AES	.773	.143	.253	5.403	.000

a. Dependent Variable: Composite value of creativity

The R^2 here is .091 given in the Table 5.19 states that overall predicting effect of both independent variables i.e., parent-child relationship and academic environment on the composite scores of creativity is merely 9%. The obtained F-ratio is 21.185 given in the Table 5.20. It is highly significant ($p < .000$) justifying regression model is fit and significant. The Unstandardised B value of parent-child relationship score is .287 and academic environment score is .773 which states that the predicting value of parent-child relationship is 28% and academic environment is 77%. The B values are significant ($P < .00$). Thus the hypothesis is here accepted.

Conclusions :

Several important findings have emerged in this study, better parental care and better school environment play important role in the development of creativity in students. Parents and School should provide such an environment give their children opportunity to think and act independently with exposure to new, problems encouraging Divergent thinking.

Thus, it was found in the statistical analysis of the data obtained on a sample of 426 high school students that creativity is an important aspect on which an intensive research is required to unfold various facts and myths.

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Financial Inclusion And Growth of Banking Services In India

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Financial inclusion promotes thrift and develops culture of saving, improves access to credit both entrepreneurial and personal emergency and also enables efficient payment mechanism. For achieving growth of business banks have to take on the role of an advisor for poor and disadvantaged as the right advice at a difficult time can go a long way. In order to expand the credit and financial services to the wider sections of the population, a wide network of financial institutions has been established over the years in India. Banks should give wide publicity to the facility of no frills account. With the help of technology banking products can get access in remote areas also. ATMs cash dispensing machines can be modified suitably to make them user friendly for people who are illiterate, less educated or do not know English. The involvement of Self-help Groups and Micro Finance Institutions is also must for development of effective financial inclusion models by commercial banks. Recently, the RBI Governor Raghuram Rajan outlined, in conceptual terms, what inclusion should be. "Simplicity and reliability in financial inclusion in India, though not a cure all, can be a way of liberating the poor from dependence on indifferently delivered public services and from venal politicians," Thus, the objective of Financial Inclusion is to extend financial services to the large hitherto un-served population of the country to unlock its growth potential. In addition, it strives towards a more inclusive growth by making financing available to the poor in particular.

Keywords: Financial Inclusion, Growth, Banking Services, Functioning Branches.

Introduction

Financial inclusion is the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost in a fair and transparent manner by mainstream institutional players. Financial inclusion has become one of the most critical aspects in the context of inclusive growth and development. Banking sector plays considerable role in bringing financially excluded people in to formal financial sector. This will help to serve dual-purpose i.e. financial inclusion as well as growth of the banking business of the country. Traditionally, it has been understood to mean opening new bank branches in rural and banked areas. Nowadays, however, financial inclusion is seen to be something more than opening bank branches in unbanked areas to take formal financial services across the length and breadth of the country. This article makes an attempt to study financial inclusion along with the growth of the banking sector in India. It is studied on the basis data available from the Department of Financial services, Ministry of Finance, Govt. of India.

Meaning of Financial Inclusion:

Before we understand financial inclusion we should have knowledge about financial exclusion. The word of financial exclusion first time used in 1993 by Leyshon and thrift who were concerned about limited access on banking services as a result number of bank branches were closed. In 1999, Kempson and Whyley defined financial exclusion in border sense which refers to those people who have excluded access to mainstream financial services and product till date numbers of analysts added their views to define financial exclusion.

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'Financial exclusion' describes as a situation in which people do not have access to mainstream financial product and services such as banks accounts, credit cards and insurance policies, particularly home insurance, education loan. The effects of financial exclusion can include exclusion from other mainstream services, such as pension or saving schemes, and can also lead to debt and/or cut off from essential utilities.

According to the European Commission, Financial exclusion is: A process whereby people encounter difficulties accessing or using financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong. In India, The Report of the financial inclusion in January 2008 by C Rangarajan, Financial exclusion is defined as restricted access to financial services to certain segment of the society. Generally, this large section of the population comprises individuals or family falling into low income groups, which are not able to access even the most basic banking services like bank accounts, credit, insurance, financial advisory services and payment services. So basically, financial exclusion is the situation where certain group of population is excluded or unable to access low cost an appropriate mainstream financial products and services.

Many studies (Aghion & Bolton, 1997; Banerjee & Newman, 1993; Banerjee, 2001) discussed that access to finance has been seen as a critical factor in enabling people to transform their production, employment activities and to exit poverty. Researchers have been argued that the very fundamental activity of the banking sector, delivery of credit, are essential to boost any economic activity and enables the generation of capabilities (Sen, 2000). Dangi and Kumar (2013) examined the initiatives and policy measures taken by RBI and Government of India. This study also focused on current status and future prospects of financial inclusion in India. It has been concluded that financial inclusion shows progressive and valuable changes but sufficient provisions should be incorporate in the business model to certify that the poor are not driven away from banking. Suryanarayana (2008) focused on definition of inclusion/exclusion with reference to an outcome scenario for broad-based growth as reflected in estimates of production, income, and consumption distribution. The study helps in drawing a sketch of occupational, social, regional profiles of the excluded in the mainstream growth process. Hence researcher made an attempt to provide a perspective, a measure of inclusion, and finally an evaluation based on the available estimates of consumption distribution for the year 2004–2005 for India. Agrawal (2008) studied the financial inclusion from the behavioural perspective based on both factors supply and demand end. Results revealed that evaluation from the behavioural perspective provided the scope for the policy-makers and marketers to strategically align their approach with the behavioural aspect, without confining their thoughts to the economical evaluations.

On the other hand, in 2003, the RBI policy of financial inclusion was to provide access to financial service to the underprivileged could be earmarked as another bold initiative in serving the rural transects targeting inclusive growth. Committee on financial inclusion in 2008 (Rangarajan Committee) observed that financial inclusion to hitherto excluded segments of the population was critical to sustain and accelerate growth momentum. For achievement of the objective, the committee had put forward multi-pronged strategies include establishment of National mission on financial inclusion, revitalizing the RRBs and Cooperatives, introducing MFI model (SHG-bank linkage) and Business Facilitator and Business Correspondents Model. Mukherjee and Chakraborty (2012) studied the role and efficiency of the commercial banks in Jharkhand state with their capacity and role of institutions like regional rural banks (RRBs), self-help groups (SHGs), non-banking financial

companies (NBFCs) for the purpose of promoting financial inclusion. The results of analysis shown that banks were not able to achieve the desired aims and study suggested that every bank should reports to the RBI on its achievement on financial inclusion more frequently. Uma and Rupa (2013) made an attempt to examine the role of SHGs in financial inclusion and reflected the positive relationship between SHGs membership and financial inclusion. The study revealed that after the membership to SHGs there was increase in the number of bank accounts, credit availed by the members and annual repayment of the loan also shown positive trend.

Joseph and Varghese (2014) analyzed the effect of financial inclusion on the development of Indian economy by bank growth rate in terms of number of bank branches, usage of debit card and credit cards. It has been observed that the usage of debit cards increased tremendously throughout the study period and decreased the number of people with access to the products and services offered by the banking system continues to be very limited, even years after introduction of inclusive banking initiatives in the country. Ravikumar (n.d.) made an attempt to assess the role of banking sector in financial inclusion process from different viewpoints namely branch penetration, ATM penetration, population per branch, distribution of banking branches, credits, deposits of SCBs and Co- operative banks in India. This study revealed that banking is a key driver for financial inclusion/inclusive growth but large proportion of population excluded from the formal financial system also show higher poverty ratios and higher inequality. Paramasivan and Ganesh kumar (2013) discussed the overview of financial inclusion in India and concluded that branch density has a significant impact on financial inclusion. Julie (2013) analyzed the relationship between financial inclusion and economic growth in Kenya and found that both have a strong positive relationship. Economic growth has a strong positive relationship with branch networks and a weak positive relationship with the number of mobile money users/accounts. The study also concluded the weak negative relationship with the number of automated teller machines in the country and a strong negative relationship with the bank lending interest rates. Study conducted in India by Kamboj (2014) found out the positive relationship between number of bank branch networks and number of ATMs in the country with the GDP growth rate of the country.

Financial exclusion in India:

India is place of the largest unbanked population where, only 35 percent adults having an account in financial institutions which shows that percentage of account penetration in India just below rest of the developing world. About 50 percent of adult's reports in Andhra Pradesh and Delhi NCR and 40 percent in Gujarat, Kerala, and Maharashtra having a formal account but Bihar, Orissa, and Rajasthan reports less than 30 percent account penetration. As per data available from Census 2011, India is having population of around 1.22 billion and 65 per cent of adults across the country are excluded from the formal financial system. As per the report of World Bank, In India, only 35.2 percent adults above the age of 15 years have an account at formal financial institutions. 55 percent population has deposit accounts and only 9 percent population have credit accounts with formal financial institutions. Reports show that there is one bank branch per 14,000 persons. Just 18 percent are debit card holders and less than 2 percent are credit cards holders. In India, despite expansion of bank branches post reform period, the total branches of commercial banks including RRB and SCB has still stood only 48000 in a country to provide service to 6 lakh villages. So, there is only one bank

branch over the 12.5 villages. In India and other BRICS economies unbanked respondents reported obstacles to access formal accounts.

RBI's Policy on 'Financial Inclusion'

- **No-Frills' Account:**

In the Mid Term Review of the Policy (2005-06), RBI exhorted the banks, with a view to achieving greater financial inclusion, to make available a basic banking 'no frills' account either with 'NIL' or very minimum balances as well as charges that would make such accounts accessible to vast sections of the population. The nature and number of transactions in such accounts would be restricted and made known to customers in advance in a transparent manner.

- **'Simplification of 'Know Your Customer (KYC)' Norms:**

Banks are required to provide a choice of a 'no frills account' where the minimum balance is nil or very small but having restrictions on number of withdrawals, etc., to facilitate easy access to bank accounts.

Further, in order to ensure that persons belonging to low income group both in urban and rural areas do not face difficulty in opening the bank accounts due to the procedural hassles, the 'KYC' procedure for opening accounts for those persons who intend to keep balances not exceeding rupees fifty thousand (Rs. 50,000/-) in all their accounts taken together and the total credit in all the accounts taken together is not expected to exceed rupees one lakh (Rs. 1,00,000/-) in a year has been simplified to enable those belonging to low income groups without documents of identity and proof of residence to open banks accounts.

- **Ensuring reasonableness of bank charges:**

In order to ensure fair practices in banking services, the RBI has issued instructions to banks making it obligatory for them to display and continue to keep updated, in their offices/branches as also in their website, the details of various services charges in a format prescribed by it. The Reserve Bank has also decided to place details relating to service charges of individual banks for the most common services in its website.

Thus, the objective of Financial Inclusion is to extend financial services to the large hitherto un-served population of the country to unlock its growth potential. The Indian households can be broadly divided in to two main groups, rural and urban. To have effective financial inclusion, the banks have to always keep in mind these target group and bring them to banking fold in such a way that it is a win- win situation for both. Banks can step in to augment financial inclusion in two ways (i) providing banking and other related services and (ii) providing non-banking services and support.

Financial inclusion promotes thrift and develops culture of saving, improves access to credit both entrepreneurial and personal emergency and also enables efficient payment mechanism. The banks have to take on the role of an advisor for poor and disadvantaged as the right advice at a difficult time can go a long way. This approach recognizes the close two-way links between poverty and deprivation on the one hand and being unable to find and use appropriate financial products and services on the other. In addition, it strives towards a development of banking sector in general and more inclusive growth by making financing available to the poor in particular.

Conclusion :

Financial inclusion is the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost in a fair and transparent manner by mainstream institutional players. The banks have to take on the role of an advisor for poor and disadvantaged as the right advice at

a difficult time can go a long way. From the above study, it can be concluded that the contribution of Public sector banks in financial inclusion is consistently growing more specific in rural & semi urban area to utilize financial services of formal financial system. The study exhibit that the number of branches opened in rural area is more compared with other areas, while expansion of branches of scheduled commercial bank in metropolitan cities is comparatively less. Thus, it explains the role played by banking industry in financial inclusion in India which commensurate with the growth of banking sector in the country.

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Geographical Study of Agricultural Labour Migration in India

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The agricultural laborers are socially and economically poorest section of the society. Agricultural laborer households constitute the historically deprived social groups, displaced handicraftsmen and dispossessed peasantry. They are the poorest of the poor in rural India. It has been observed that the human factor is of supreme importance in any pattern of economic development. More so are the agricultural laborers of India, the country's largest unorganized section comprising the poorest workers, toiling on the sunny fields of India. Agricultural laborers who are mostly landless and form a significant section of rural society mainly depend on wage employment in agriculture. Majority of them belong to the category of Scheduled Castes and Scheduled Tribes are among the worst exploited section of the society. Their income has always been meagre, resulting in poor living and heavy indebtedness. Migration means people move from one place to another place or one country to another country for better livelihood. Unemployment is a major problem of rural area. The rural people migrate rural to urban areas for purpose of better job opportunity. India has migrated from rural to urban areas for a variety of reasons. The lack of employment opportunities in rural areas to migrate to urban areas is one of the main reasons. The government of India has introduced many programs with the aim of avoiding migration from rural areas to urban areas generating job opportunity in rural areas.

Keyword : Agriculture, Migration, Labour, Unemployment, Wages.

Introduction

Migration is caused by negative factors (push factors) in the place of origin as well as positive factors in that place of destination. An analysis of the determinants of migration would therefore, be incomplete. If it was to factors at the place of origin or at place of destination migration as it is often restated visa and work permit requirements. Quotas political considerations that moved to other states in India. In the case negative factor at destinations. It is in constructive to note that rural and urban was net in migration with the 1950s which determined the migration trend. Migration in India is mostly influenced by Social Structures and patterns of development. The development policies by all the governments since Independence have accelerated the process of migration. Uneven development is the main cause of migration. Added to it, are the disparities, inter-regional and amongst different socio-economic classes. There are two important reasons for rural labour migration: (1) migration for survival and (2) migration for subsistence. The first indicates the severe social and economic hardships faced by rural labourers, a situation where migration becomes necessary to stay alive. These communities are generally landless, illiterate and drawn largely from scheduled castes, scheduled tribes and other depressed castes. The second reason for migration is also rooted in subsistence and arises because of the need to supplement income in order to fill the gaps of seasonal employment. Such communities often migrate for shorter periods and do not ordinarily travel very far from their homes. Migration is an expensive and risky process and this occurs mainly due to a combination of migrants being unaware of their rights; poor education and skills; a negative policy environment that aims to keep rural people in rural areas and actively discourages migration; monopolistic

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behavior among employers, contractors and labour market intermediaries whereby they play the labour market to their own advantage and discrimination based on caste and gender.

The most serious problem encountered by migrants is a lack of access to basic services such as the public food distribution system which provides subsidized food; health and education. Children who accompany their parents for several months at a time are often not sent to school in the destination either because the schools there cannot accept them or because there is a language problem. Not having enough money to pay for school fees may also be a problem. This perpetuates the inter-generational transmission of poverty: uneducated parents who have to depend on laboring-cannot offer their children a better future. Given the enormous magnitude of migration, such deprivation faced by migrants seriously compromises the prospects of such regions and populations meeting the millennium development goals. The labour migration in the context of economic development has emerged as a prominent field of enquiry and investigation. Both causes and consequences of labour migration have enormous and in fact overwhelming economic importance. The broad patterns of migration have much to do with decision making process of the migrant's themselves. This decision making process is in turn influenced by 'push' and 'pull' factors, which are basically economic phenomena. It was also observed that the influence of 'push' and 'pull' factors on the migrants was determined by the socio- economic conditions of the household of origin. The migrants who were 'pushed' came from poorer households with low income and low landholding status, tended to be less educated and unskilled. Better employment and higher wages as the crucial variables in attracting rural people to the place of destination. This rural out- migration brought out significant changes in the economic status of the migrants in terms of higher income and savings.

Migration means people move from one place to another place or one country to another country for better livelihood. Unemployment is a major problem of rural area. The rural people migrate rural to urban areas for purpose of better job opportunity. India has migrated from rural to urban areas for a variety of reasons. The lack of employment opportunities in rural areas to migrate to urban areas is one of the main reasons. The government of India has introduced many programs with the aim of avoiding migration from rural areas to urban areas generating job opportunity in rural areas. Migration can benefit poor people in developing countries. For individual and families, migration can increase income, lead to new skills, improve social status, build assets and improve quality of life. For a country, migration can relieve labour market and political pressures, result in increased trade and direct investment from abroad, lead to positive activity such as remittances, promote social and political change and lead to the eventual return by successful migrants who invest in their country of origin.

Migration is universal since the state attracting migrants also ejects their people to other states. Thus, shortages and surpluses of labour and the phenomenon of migration are sector/occupation rather than state/region specific. Regional inequalities in India have more so arisen from the path of development of the country. It has created a gap between agriculturally and industrially developed areas which create demand for labour and agriculturally and industrially backward areas which act as sources of supply of labour. A proper study of the reasons for migration as well as consequences is required in order to frame policy decisions. Like the other developing countries, the principal source of national income of India is land and agriculture. Availability of good cultivable land is one of the factors responsible for rural-urban migration; thus, cities act as host of attractions which in return act as a pulling force for the migrants. Migration for employment might be rural to rural, rural to

urban, urban to rural or urban to urban. Balanced growth both over time and space may cause all the aforesaid migration. However, in the case of spatial or sectoral unbalanced growth, one of these types might dominate the other. Factors responsible for unbalanced growth could be availability of more jobs, higher income and greater vertical occupational mobility in one sector. Status of the state/region either agriculturally or industrially and distance to the state/region are some of the factors affecting decision to migrate.

The factors influencing the decision of an individual to migrate or not are various and complex at the same time. The relative influence of economic and non-economic factors may vary not only from nations and regions but also within geographical areas and populations because migration is a selective process which affects individuals with certain economic, social, educational and demographic characteristics. The social factors are the ones which determine the desire of the migrants to break away from traditional and social constraints. Physical factors include climate, meteorological disasters like floods, draughts and famines. Demographical factors include reduction of death rates and concomitant high rates of rural population growth. Communicational factors include improved transportation, urban-oriented educational system and modernizing impact of radio, T.V. and cinemas. According to economists rural-urban migration is also influenced by economic factors which included 'push' from subsistence agricultural sector, 'pull' from high urban wage and potential 'push-back' of high urban unemployment.

Among the factors influencing women to migrate, reducing poverty and higher welfare benefits available in urban areas were the most common factors. On the other hand, non-economic factors were access to informal resources like child care and care from family and friends. Propensity to migrate depends upon economic condition and level of education. In the case of poor households, men migrate at an early age leaving their family members behind. So far, many factors have been identified as the determinants of migration by different researchers which have been broadly classified as the push and the pull factors. Some of the push factors were identified as economic pressure due to lesser employment opportunities, low level of productivity and income, excessive pressure on land, family feuds, search for jobs, lesser rural incomes, marriage or accompanying parent or partner and natural calamities. The pull factors were identified as pursuing higher studies, better educational, medical and health facilities, political factors and social security, infrastructural facilities and public services, opportunities for employment and business, life style of the city, modern amenities, recreational facilities and better social status. Not only economic conditions and motivation exert an influence on the decision to migrate but also psychological and institutional factors. Over and above these, the important reason which motivates an individual to leave his/her home town and migrate to a new place is to achieve maximum individual satisfaction which indirectly depends upon economic and social factors. The maximum indirect satisfaction is not achieved immediately by migrating from one place to another but by continuous and productive actions of the migrants. Migration is a result of uneven distribution of opportunities. People migrate from areas with less opportunities and safety to areas with more opportunities and safety. Migration of individuals has both pros and cons for both the areas, before and after migration. Consequences can be accounted in social, economic, cultural, political and demographic terms.

Migration is an important symptom of social change. The social benefits of migration can be described as innovation and sharing of new ideas and technology, widespread interaction of individuals, better access to social amenities like schools, hospitals and recreational facilities. On the other hand, migration can also have detrimental social effects

like: the migrants are forced to sub standard living, stagnant living, get work below their dignity, social inequality and discrimination, widespread violence and civil war, poor conditions of education and development of slums. The migrants act as a source of labour supply. On one hand, migration of labourers leads to increase in productivity and efficiency, migrants get better economic security, improvement in the economic status of the migrant and his family, benefit from the facilities of different kinds of allowances, provident fund and medical security, while on the other, migration also leads to economic discrimination in terms of payment of wages and getting a job. Unemployment of migrants in the informal sector where they are paid less does not lead to economic betterment of these migrants but leads to colossal waste of human resources and national potential.

Migration leads to intermingling of people from diverse cultures. It widens up the narrow thinking of the individuals and leads to composition of cultures. However, it might also have negative consequence like anonymity, sense of dejection and discrimination which further creates a social vacuum. Also, unwelcomed and unrespected migration leads to anti-social activities like group crimes and drug abuse. Non-cordial relations amongst the migrants and the locals lead to political unrest and formation of labour unions categorized by their place of origin.

Conclusion

Migration is an emerging global issue affecting most of the nation particularly developing ones. Since it is linked to employment and income generation it has developed a bond to an overall development to the economy. The contribution of the migrants in terms of remittance to their home countries is not only significant but is also rising. The labour migration not only bringing economic benefits to the developing countries, productive labour to the ageing developed countries but also leading to socio cultural interrelations. Many factors are influencing globalized international migration and significance of these factors is also changing over the period.

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Parent Child Relation of Socially Advantaged and Disadvantaged Children

*Dr. Anisha Kumari**

The present study is devoted to high lighting the findings of the present research. The two aspects, namely, methodology and the findings of any research are interlocked. It may be recalled that parent-child relation with social advantage and social disadvantage have been studied. The test of normalcy was primarily performed to provide some tangible information with regard to the nature of the distribution of scores (the magnitude of departure from normality) for examining the suitability and applicability of parametric tests. In general, parametric tests have been preferred, because the distribution of scores for the variables do not departed significantly from normality. Hence 't' test and product moment Co-efficient correlation (r) have been employed. The assumption of normality has been accepted in the present study and the distributions of scores on the variables for the purpose of statistical treatment have been found to be normal. Keeping these considerations in view 't' test and product moment correlation (r) have been employed for the purpose of treating the data (scores) statistically.

For the present research two groups of subjects namely, socially advantaged and socially disadvantaged literate parents 100, in each group were drawn randomly from population comprising socially advantaged and socially disadvantaged families from Muzaffarpur districts. The nature of distribution of parent-child relation scores for our sample is higher than reported by Leland, H. Stott and Rechel. S. Ball, Murphy, G. Kagan, J. and Havemann. E. for their samples. The mean (24.12) of parent-child relation scores for socially advantages literate parents obtained for our sample is higher than the mean scores of others (18.22) for college students (Havemann E, 1982). However, the mean scores (21-11) of parent child relation for socially disadvantaged literate parents obtained for our sample is also higher than the mean score (18.22) for college students (Havemann) 1982.

Scores for socially advantaged literate parents are indicative of high parent child related pre-disposition and similarly, scores for socially disadvantaged literate parents are also indicative of high parent-child related pre-disposition than those of the subjects college students (Havemann E, 1982) sample.

The findings in general have shown that due to the differences in nature of socio-cultural background, parent-child relation has differed, Thus, following this we expected that socially advantaged and socially disadvantaged literate parents will differ on parent-child relation. Both the groups have shows better parent-child relation than the Foreign subjects of Have mann E.

It shows that other things being equal, parent-child relationship may differ due to difference in socio-cultural backgrounds. In the light of socio-cultural roles we expected that a significant difference will be found and between socially advantaged and socially disadvantaged literate parents and socially advantaged literate parents will show better parent-child relationship than socially disadvantaged literate parents. The finding is also in support of our expectation.

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Another probable explanation may be sought through the analysis of situation available in the society. In our society socially advantaged parents have much time along with other facilities to enjoy with their children inside and outside the house, which facilitates the all round development of children's personality and parent-child relation.

Conterarily, socially disadvantaged parents have less time along with other facilities to enjoy with their children inside and outside the house, which hamper the all round growth and development of children's personality, which cause the better parent-child relationship. Hence, it is natural, that socially advantaged parents will show better parent-child relationship that socially disadvantaged parents. This findings of this study is also in this light, that socially advantaged parents have better parent-child relationship in course of the growth and development in the family because they have much time to stay in the family along with their children. On the other hand socially disadvantaged parents are not like those of socially advantaged parents because they had to perform duties inside and outside the house.

On the basis of overall findings it may be concluded that social background (Social advantage and social disadvantaged) has proved as meaningful factor in relation to parent-child relation. The present study is devoted to high lighting the findings of the present research. This research was undertaken to investigate the social advantage and social disadvantage on parent-child relation and its impact on the development of children's personality. The following hypotheses were proposed for verification.

- (i) Parent-child relationship will differ significantly in respect of family background and parent-child relationship in socially advantaged family will be better than in socially disadvantaged family.
- (ii) Parent-child relationship will be significantly related to family background.

The present study was conducted on a sample of 200 literate parents of Muzaffarpur district, out of which 100 were drawn from socially advantaged family and 100 were drawn from socially disadvantaged family. Since, by definition, the disadvantaged or deprived parents are to be found in lowest socio-economic strata of the society, the two groups were obtained, socially advantaged and socially disadvantaged. Both groups were administered the following tests:

- (i) Personal Data Blank-Sheet.
- (ii) Social Deprivation Scale.
- (iii) Parent-child Relation Scale.

The analysis of data was done by means of 't' test. The findings in terms of hypotheses are as follows:

- (i) Socially advantaged parents have differed significantly in terms of parent-child relation to socially disadvantaged parents and socially advantaged parent have shown better parent-child relation than socially disadvantaged parents.
- (ii) It has been found that parent-child relation and social advantaged have exhibited higher positive relation than social disadvantage. It has also been found that socially advantaged parents have better parent-child relation than socially disadvantaged parents.

In summary, socially disadvantaged parents were found to be somewhat inferior parent-child relation than socially advantaged parents. From the findings of this research it may be concluded that social disadvantage affects adversely the parent-child relation and unfavorable effects of social disadvantage persist even at the old age if the subjects are continued to be exposed to the disadvantaged conditions. The parent-child relationship

consists of a combination of behaviors, feelings, and expectations that are unique to a particular parent and a particular child. The relationship involves the full extent of a child's development.

Of the many different relationships people form over the course of the life span, the relationship between parent and child is among the most important. The quality of the parent-child relationship is affected by the parent's age, experience, and self-confidence; the stability of the parents' marriage; and the unique characteristics of the child compared with those of the parent. Parental self-confidence is an important indicator of parental competence. Mothers who believe that they are effective parents are more competent than mothers who feel incompetent. Also, mothers who see themselves as effective also tend to believe their infants as less difficult to handle. Parental age and previous experience are also important. Older mothers tend to be more responsive to their infants than younger mothers. In addition, parents who have had previous experience with children, whether through younger siblings, career paths, or previous children, are often times better able to cope with parenthood.

One of the most important aspects of infant psychosocial development is the infant's attachment to parents. Attachment is a sense of belonging to or connection with a particular other. This significant bond between infant and parent is critical to the infant's survival and development. Started immediately after birth, attachment is strengthened by mutually satisfying interaction between the parents and the infant throughout the first months of life, called bonding. By the end of the first year, most infants have formed an attachment relationship, usually with the primary caretaker. If parents can adapt to their babies, meet their needs, and provide nurturance, the attachment is secure. Psychosocial development can continue based on a strong foundation of attachment. On the other hand, if a parent's personality and ability to cope with the infant's needs for care are minimal, the relationship is at risk and so is the infant's development.

By six to seven months, strong feelings of attachment enable the infant to distinguish between caregivers and strangers. The infant displays an obvious preference for parents over other caregivers and other unfamiliar people. Anxiety, demonstrated by crying, clinging, and turning away from the stranger, is revealed when separation occurs. This behavior peaks between seven and nine months and again during toddlerhood, when separation may be difficult. Although possibly stressful for the parents, stranger anxiety is a normal sign of healthy child attachment and occurs because of cognitive development. Most children develop a secure attachment when reunited with their caregiver after a temporary absence. In contrast, some children with an insecure attachment want to be held, but they are not comfortable; they kick or push away. Others seem indifferent to the parent's return and ignore them when they return. The quality of the infant's attachment predicts later development. Youngsters who emerge from infancy with a secure attachment stand a better chance of developing happy and healthy relationships with others. The attachment relationship not only forms the emotional basis for the continued development of the parent-child relationship, but can serve as a foundation for future social connections. Secure infants have parents who sensitively read their infant's cues and respond properly to their needs.

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Adoption of Modern Agricultural Technologies: A Micro Analysis at Farm Level in Bihar

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Technology adoption has been the main obstacle in realizing agricultural potential in the country in general and Bihar in particular. The present study focuses on level of adoption, access of farmers to farm technology, quality of modern technology, access to agricultural extension institutions and problems faced by extension officials in transfer of farm technology. It has been observed that the coverage of agricultural development programme is limited to few villages; however, line department still dominates in spreading of modern agricultural technology. Small size of land holding and fragmented land emerged as main constraint to adoption of modern horticultural technology in Bihar. While analyzing use of modern varieties of principal crops, a comparatively high level of adoption on small and medium farms was observed. Hence, there is no relationship between size of farm and adoption of modern varieties of seeds in Bihar. Inadequate staff, infrequent supervision and lack of conveyance facility are some other factors responsible for poor transfer of technologies in Bihar.

Key words : *Transfer of technology, Adoption of technology, Modern agricultural technology, Bihar*

Introduction

Presently, there are a large number of agricultural development programme in Bihar. There are some other programme/schemes recently launched by the Government of Bihar as per Road Map prepared and finalized by the State Government with effect from the year 2008-09. There are several other schemes/programme launched recently which have been indicated and detailed in the Road Map prepared by the State Government and put to implementation. Despite implementation of these agricultural development projects, there is a paradoxical situation of agricultural performance in Bihar, particularly with respect to input use and realization of yield of principal crops. Per hectare higher fertilizer consumption (170 kg/ha), higher irrigated area (62%) and larger coverage under HYV of seeds (rice 74%, wheat 92% and maize 77%) as compared to corresponding national averages per hectare productivity of principal crops (rice and wheat) are about 30 to 40 per cent lower than the corresponding national average during last five years. Among various socio-economic, technological and managerial reasons, ineffective transfer of farm technology might be an important causal factor for poor performance of agriculture in Bihar. As per NSS survey, only 0.4 per cent farmers had access to extension workers for information on modern farm technology in Bihar against 5.7 per cent at national level and 22 per cent in Gujarat. As far as quality of information received by farmers through different sources is concerned, about 10.4 per cent of farmers received quality information from extension workers in Bihar against 51.5 per cent at national level. It clearly indicates inadequate and poor quality of information passed on through extension workers to farmers in Bihar (NSS 2005).

Bihar aims to achieve 5-7 percent agricultural growth rate in XI Five Year Plan. Transfer of technology has been among the major obstacles in achieving the targets set in the

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past. There is a wide gap between the potential yield and the actual yield. This is a country-wide phenomenon. A large number of agro-economic and socio political factors are responsible for this yield gap but the weak and ineffective agricultural technology transfer has been one of the important factors for the higher yield gap in Bihar. However the detailed study based on primary data on transfer of agricultural technology is not available with respect to Bihar. The Planning Commission constituted the working group on Agricultural Extension for formulation of Eleventh Five Year Plan (2007-12). The recommendations of the Working Group are quite useful but almost all the recommendations are based either on secondary information or observations/experiences of the experts. The Steering Committee on agriculture is also engaged in identifying the constraints and opportunities of agricultural development in Bihar but methodology adopted by them has no scope for using ground level information and reality.

Against this background, there is a need to identify the farm technologies adopted by farmers because non-adoption of recently developed modern farm technologies (seed, fertilizer, pesticide, package of practices, irrigation schedule) might be the main reason of poor performance of agriculture in Bihar.

Methodology

Study Location and Respondents

The study is based on primary data obtained through survey of farm households, agricultural scientists and extension officers. The study covers whole state (Bihar) and required information was collected from all the four agro-climatic zones i.e. North-west alluvial plain (zone I), North-east alluvial plain (zone-II), South-east alluvial plain (zone-III A) and North-west alluvial plain (zone-III B). Farmers were randomly selected using stratified sampling approach. At the first level, all the four agro-climatic zones of Bihar are considered as first stratum for selection of sample districts. At the second level, two representative districts from each of the four zones were selected, however, care was taken in selection of districts that these districts are not located adjacent to each other. (Table-1.)

These districts were selected to reflect the range of agro-ecological condition in the zone and to capture the expected variations in technology transfer process, including level of adoption of agricultural technology. At the third level, one block and at fourth level, two villages from each sample block were selected, making sample of 16 villages for selection of farmers.

A sample of 10 farmers representing different class and social groups were selected randomly from each sample village, making total sample size of 160 farmers for obtaining required information. Farm category wise distribution of sample farm households are presented in Table 2. Attempt was made to include representative farmers of the village in the sample through interacting farm households of diverse spectra of class, social and wealth categories and different size of farm holdings.

Data collection

Data were collected through Focused Group Discussion (FGD) and Survey method using pre-tested schedules. Information on profile of farmers, irrigation status, crop production, use of inputs, sources of inputs, sources of knowledge, package of practices, participation in agricultural development schemes, govt. assistance, knowledge about modern agricultural technologies, livestock, fish production and Govt. services in allied agricultural sector. Particular attention was given to the adoption level of modern agricultural technology and the process of flow of related information.

Analysis of data

The primary data from the village survey were summarized using descriptive statistics. These results were complemented by the information gathered through interviewing agricultural scientists and officers. The descriptive statistics not only helped gain a better understanding of the adoption level and process of technology transfer to the field but also showed extent of variation in the four agro-climatic zones of Bihar. The descriptive statistics were also useful in examining informal hypotheses about the concentration of technology transfer efforts in few villages of Bihar.

It is important to remember that the present study, by its very nature, is not designed to provide definitive answers but rather to flag issues for subsequent in-depth research. Therefore, the emphasis of the study method was learning through drawing on available information and current knowledge from feed back from agricultural scientists and extension officers, interpreting and synthesizing the data from these sources and finally identifying gaps both in the information and our knowledge about adoption level process of agricultural technology transfer and monitoring of different agricultural development schemes in Bihar.

Results and Discussion Profile of farm households:

Farm household respondents constituted 72 marginal (<1 ha), 57 small (1-2 ha), 15 medium (2-4 ha) and 16 large farm households (4 ha and above). Average age of respondent is worked out at 44 years and there was no much variation in respondent's age belonging to different categories of farm households. In marginal and small farm categories, more than two-thirds of respondents belonged to younger age group of 20-40 years whereas about 44 percent respondents of large farm size group belonged to younger age group of 20-40 years (Table 5.1). None of respondents (except one in marginal farm category) belonged to age group of less than 20 years. It was mainly due to fact that the younger generation does not have interest in farming activities, probably due to low profit (NSS 2005). Moreover, farm households are generally headed by older family members and younger members are not allowed to interact with outsiders on agricultural, economic and social problems.

Analysis of educational information revealed that about 90 percent of respondent farmers were literate but the higher rate of literacy was observed on small farm households and the least on medium farm households. But about 81.25 percent of respondents of large farm category were educated above secondary level, indicating higher level of education in family members of large category of farm households in study villages (Table-3).

Agriculture was the main occupation of households under study. Out of 160, 157 households had agriculture as main occupation and only 3 households had service as main occupation. Farm category-wise analysis revealed that all the large and medium categories farm households under study had agriculture as main occupation whereas one marginal farm households and 2 small farm households had service as main occupation (Table-4). Animal husbandry was secondary occupation for 76.25 percent of surveyed farm households. Service and agriculture were not important secondary occupation in surveyed villages.

However, petty business, casual wage earning and out-migration were important secondary occupations, particularly on marginal farm households in villages under study. None of the household under study had animal husbandry as main occupation whereas the majority of them had animal husbandry as secondary occupation. It clearly indicates importance of agriculture (crop production) and animal husbandry (dairy) in the rural economy of Bihar.

Analysis of occupational data of farm households under study revealed that all the surveyed households had agriculture as main occupation but the occupational diversification was more on smaller size of farm households than large categories of farm households.

In a developing economy, the exposure of farmers is an important for adoption of modern agricultural technologies as it increases awareness and knowledge of farmers. It was assumed that farmers who are member and/or officials of rural institutions would be more exposed and aware in uses of modern agricultural technology. A rural institution connotes Primary Agricultural Co-operative Credit Societies, Panchayat, Dairy Co- operatives, School Management Committee, Water Users Associations and ATMA, etc. (Table 5).

It was observed that 37.50 percent of farm households were either member or officials of rural institutions. The membership was higher on large farms (43.75%) and lowest on marginal farms (12.50%). Higher proportion of small farmers (14.03%) occupied official positions in rural institutions compared to medium (6.66%), marginal (9.72%) and large farmers (12.50%). It shows that though small farmers did not have much access to rural institutions, they still got opportunity to occupy official positions in rural institutions, mainly due to caste based reservation policy of Government.

Irrigation Status

Water is one of the most critical inputs for increasing agricultural production. The proportionate irrigated area is much higher in Bihar (62%) than at national level (41%) but the irrigation intensity is one of the lowest in Bihar (132) than other states. In sample villages, 67.39 percent area in *Kharif*, 63.75 percent area in *Rabi* and 27.52 percent area in summer were irrigated. Sources of irrigation were categorized in three groups that is; canal, private tube wells and other sources (well, *ahar*, *pyne*, ponds etc). Government tube well was not operational in any of the surveyed villages (Table.6).

Among the sources of irrigation, private tube well emerged as the most important source of irrigation providing irrigation to 64 percent area in *Rabi*, 67 percent area in *Kharif* and 28 percent area. Canal was the second important source but this source is not a reliable source of irrigation due to irregular and inadequate supply of water, particularly in tail-end area. Other irrigation sources include traditional sources of irrigation like, wells, *ahar*, *pyne*, ponds etc, providing irrigation to about 5 percent of cultivated land.

Adoption of modern agricultural technology

Adoption of modern agricultural technology by farmers is necessary factor for faster agricultural development. Adoption of modern technologies has helped farmers increase productivity by more than three fold, particularly in field crops. In study villages only 22.8 percent farmers used modern seeds. Among different size groups, the higher proportion of medium farmers (46.67%) used modern seeds while only 13.89 percent marginal farmers used modern seeds (Table-7). Despite resources available at large farms, only 18.75 percent used modern seeds. Implying thereby that size of holding did not have association with adoption of modern seeds in sample villages. Medium and small farms emerged as better adopters of modern seeds as they try to realize higher yield by using modern seeds and scientific crop production from their small size of land holdings. However, the adoption level of modern varieties of seeds was much higher in agro-climatic zone IIIA (South-west alluvial plains) than Agro-climatic Zone I, II and IIIB in Bihar. It was mainly due to assured irrigation facilities through Sone Canal and relatively risk free agriculture in the zone IIIA.

On the other hand, the comparatively high proportion of large farmers (50%) adopted scientific method of production of horticultural crops including medicinal and aromatic plants in surveyed villages. The comparatively low proportion of (less than one- fourth) marginal, small and medium farmers adopted scientific method of horticultural crop production technology in surveyed villages because these farmers had smaller size of landholding and they did not afford to put their land in horticultural crops and preferred to produce food grains for meeting their household consumption need. Financial and technical assistance under

National Horticulture Mission was also available to farmers for cultivation of horticultural crops but only 2.50 percent of farmers in surveyed villages could avail assistance for production of horticultural crops. Farmers reported that the assistance in National Horticulture Mission is available for cultivation of horticultural crops in large area (i.e. one acre and above) but the majority of them do not own area of one hectare at one place. While interviewing agricultural officers they reported that assistance of National Horticulture Mission is available to a group of farmers who like to work together on consolidated piece of land but neither of the surveyed village had this type of group nor any official claimed to make effort to encourage farmers for forming group under National Horticulture Mission for the purpose.

In Bihar the level of insecticide/pesticide use in crop production, particularly in food grain production is very low. In surveyed villages, 6.25 percent farmers used pesticide in crop production however 12.50 percent large farmers used pesticide but none of the medium farmers used pesticide in the surveyed year; however about 8 percent marginal farmers used pesticide in crop production, mainly in cultivation of vegetable crops. Farmers using pesticide reported about availability of poor quality pesticide. Besides, they do not get reliable information about formulation, quality and appropriate type of pesticide to be used for controlling insects/pests in a particular crop.

Hence, there is a need to improve the knowledge of farmers about use of appropriate pesticide of recommended doze for controlling insects/pests through strengthening the system of transfer of technology. In addition to this, a system needs to be developed for ensuring availability of quality insecticides'/pesticides in rural area. In Bihar, a centre of plant protection was established in Third Five Year Plan in each block headquarters which were operational for few years and helped farmers but these centres are now abandoned. The mere revival of the centre at block level would help farmers in solving their plant protection problems of crop production.

As discussed earlier, animal production is the most important secondary occupation in rural area. About three-fourth of farm households have animal husbandry as secondary occupation in surveyed villages. Artificial insemination is only practicable and economically feasible method to improve breed of livestock for increasing livestock production. Artificial insemination is now common practice in Bihar since about three- fourth farm households adopted this method for their dairy animals. But farmers are dependent on co-operative or private sources because a few Government Centres (450) are operational in Bihar, not even one in each block.

Conclusions

Technology adoption has been the main obstacle in realizing agricultural potential in the country in general and Bihar in particular. The present study focuses on level of adoption, access of farmers to farm technology, quality of modern technology, access to agricultural extension institutions and problems faced by extension officials in transfer of farm technology. It has been observed that the coverage of agricultural development programme is limited to few villages; however, line department still dominates in spreading of modern agricultural technology. Small size of land holding and fragmented land emerged as main constraint to adoption of modern horticultural technology in Bihar. While analyzing use of modern varieties of principal crops, a comparatively high level of adoption on small and medium farms was observed. Hence, there is no relationship between size of farm and adoption of modern varieties of seeds in Bihar. Inadequate staff, infrequent supervision and

lack of conveyance facility are some other factors responsible for poor transfer of technologies in Bihar.

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The International Finance Corporation: Origin and Initial Roles and Functions

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The 1944 Bretton Woods Conference created the World Bank as well as the International Monetary Fund (IMF) to promote trade and give financial assistance. The World Bank was a multilateral institution. It was owned and governed by national governments, although many countries represented at the Bretton Woods Conference, the United States and the United Kingdom dominated the negotiations. Its official objective was to reduce poverty and promote prosperity in the world. To achieve this objective, the World Bank meant to provide a long-term loan at the minimum rate for infrastructure development on a government guarantee. It was expected that through this kind of loan would ultimately lead to open the door to trade and generate employment. It is based on the trickle-down method that would benefit all (Marshall, 1958:13). The World Bank's initial aim was to help rebuild European countries devastated by World War II. The immediate priority was to recover Europe. The devastation was so entrenched that it required a huge amount of capital investment. Interestingly the world that was 'islands of prosperity' turned into ruin by the World War (Fussell, 1960:13). France was the first country to receive a World Bank loan. Another reason of the World Bank's concentration in Europe was that as the World Bank initially insisted on the creditworthiness of the recipient of their loans and this led to giving loans to the developed countries (Chirtoc and Lucian-ion, 2016: 26-30). When the USA initiated the Marshall Plan to give economic assistance to help rebuild war-torn Western Europe, many European countries began receiving aid from other sources. Faced with this competition, the World Bank shifted its focus to non-European countries such as countries in Latin America, Africa, and Asia. As the Western countries recovered from the devastation of the Second World War and made rapid progress in their economy, they could accumulate surplus capital and were searching for an investment opportunity. They found the developing countries were the places to invest their surplus capital as these countries were aspiring for rapid economic growth. However, due to their colonial experience of exploitative relationship, they were not ready to engage an economic relationship with the West. The Western countries found the World Bank as a convenient contour to invest in the developing countries projecting it as a multilateral public institution with the goal of alleviation of poverty in the world. The industrialised countries dominated the World Bank and IMF, and through loans and assistance, these institutions try to influence the philosophy and priorities of economic and finance of the developing countries (Bhambhri, 1889: 1). One of the major objectives of these institutions had been to bring about the structural integration of developing countries with the world economic and financial system. In the 1950s and 60s, the funding of large infrastructure projects, such as dams, electrical grids, irrigation systems, and roads was the Bank's primary focus. This is because it is easy for the World Bank to convince the investors that they were sound investments as they would generate enough income to enable a borrower country to repay the loan (Cheryl, 1982). The lending money was the main task of the World Bank until 1968. Every application of loan was checked and screened very detail to see whether they meet its criteria. Through, in theory, world Bank seemed as public institutions, but in practice,

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it worked in a thebest way to secure the return of the investment and thus serving the interest of the industrialised countries (Bhambhri, 1989:1).

Usually, the banks assisted with the projects on government guarantees. In some cases, the borrowers' countries accused the World Bank of supporting private corporate and business. Further, Banks followed the rigid terms and conditions which created huge political issues in the host countries. The first loan was provided to France. One of the terms of this investment was to remove the communist leader from the government. It led to a political cry in France. (Matecki 71-74) In addition to this, strict terms on spending created a less space to spend on social sectors that werein dire need of investments to take the countries on the path of development. Under these contexts, the banks felt more comfortable to lend to the private sector. The private sector would be easily and efficiently handled without any political uncertainty.

Status of Private Sector in the of Developing Countries

It was the decade of the 1950s when many countries in Asia and Africa got independence. They had already experienced the perils of colonialism and imperialism. They were also conscious of the link between colonialism and imperialism with capitalism. Although these newly independent countries aspired for economic growth, they adopted the mixed economic policy. Industrialization and socio-economic development both were in the domain of government and the mixed economic policy public sector was given major role.(Matecki, 1958:89)

The IFC: Organization Structure

The IFC is a multilateral institution that furthers the economic development of its member countries through the promotion of private investment. The IFC is a member of the World Bank Group, and its headquarter situated in Washington D.C. It was established in 1956, as the private-sector arm of the World Bank Group. Although part of the Bank Group, IFC is a separate legal entity with separate Articles of Agreement, share capital, financial structure, management, and staff. Membership in IFC is open only to member countries of the World Bank (IFC, n.d.).

During its first decade of operations, IFC relied on capital subscriptions, net earnings and its ability to revolve its portfolio by sales of securities for its resources. However, in next decade, the corporation's resources were boosted by a \$100 million line of credit from the World Bank. Thus, by the end of 1967, the total funds available for use in its operations was \$310.4 million (World Bank, 1968:92)

Its objective is to advance economic development by investing in for-profit a commercial projects for poverty reduction and promoting development. The IFC's stated aim is to create opportunities for people to escape poverty and achieve better living standards by mobilising financial resources for private enterprise, promoting accessible and competitive markets, supporting businesses and other private-sector entities, and creating jobs and delivering necessary services to those who are poverty-stricken or otherwise vulnerable. The main purpose of the IFC is to: 1) Promote open and competitive markets in developing countries, 2) Support companies and other private sector partners where there is a gap, 3) Help to generate productive jobs and deliver essential services to the underserved (IFC, 2009). In order to achieve its purpose, IFC offers development impact solutions through firm-level interventions (direct investments and advisory services), standard-setting, and business enabling environment work.

As per the Articles of Agreement, countries that are members of the Bank are eligible for membership in the IFC. Voting rights in the corporation are dependent on the member

countries' capital subscription, and with certain exceptions, all matters are decided by a majority of votes cast. Each member has 250 votes, plus one for each \$1000 of capital stock subscribed. At present, there are 184 countries as members of IFC. A government may be withdrawn or suspended at any time if it fails to fulfil any of the obligations of membership. Also, if a government belonging to IFC ceases to be a member of the World Bank or if its membership is suspended, its membership in IFC is also automatically terminated. If the government ceases to be a member, the corporation will arrange repurchase of capital stock of the government relinquishing membership (IFC, 2012).

The IFC is governed by its Board of Governors which meets annually and consists of one governor per member country (most often the country's finance minister or treasury secretary). Each member typically appoints one governor and also one alternate. Although corporate authority rests with the Board of Governors, the governors delegate most of their corporate powers and their authority over daily matters such as lending and business operations to the Board of Directors. The IFC's Board of Directors consists of 25 executive directors who meet regularly and work at the IFC's headquarters. The President of the World Bank Group is also President of IFC. The voting power on issues brought before them are weighted according to the share capital each director represents. The executive directors review and decide on investments and provide overall strategic guidance to IFC management (IFC, n.d.).

The corporation is organised into five departments, two of them operating on a geographical basis and three others on functional lines. Wherever Bank loans are involved, these departments work in close coordination with the Bank. In addition to this, five of the Bank's functional departments- administration, Information, the Secretary's and Treasurer's Departments, and the Department of Program Evaluation and Control also serve IFC.

The Development Finance Companies Department of IFC is the focal point of work on the development of finance companies in the World Bank Group. They arrange for necessary studies and recommends action to assist in the establishments, reorganisation, reconstruction or expansion of these companies.

The Legal Department advises the corporation on legal questions relating to the organisation, structure, administration, policies and operations of the corporation. It prepares or reviews documents which create, define or limit the legal rights or obligations of the corporation. It also prepares or reviews documents relating to corporate meetings or actions and arranges for counsel to represent the corporation in any legal proceedings, in consultation with the Secretary's Department.

The Engineering Department assists the Departments of Investments in the appraisal and supervision of investment enquiries of industrial and related projects for the Bank financing. It recommends contractual arrangements designed to assure successful construction and operation of projects, follow up on project progress, advises on the selection of consultant and contractor services to borrowers.

The IFC: Roles and Functions

The IFC as an institution helped several private companies to gain access to capital and improve their operations. To understand the initial roles and functions of the IFC, it is very important to analyse how the institution dealt with the investment proposals and took the final decision about the financing of the project. According to 1957-58 IFC Annual Report, it considered following factors for a project for being eligible for investment proposals:

Investment Criteria

Equity investments provide developmental support and long-term growth capital that private enterprises need. The IFC invest directly in companies' equity, and also through private-equity funds. The IFC generally invests between 5 percent and 20 percent of a company's equity.

Venture Capital

The IFC provides early-stage and late-stage venture capital financing through direct investments and funds. By investing in promising companies at an earlier stage than the IFC's mainstream business, it provides developmental support for high-impact business opportunities and capital for private enterprises' long-term growth.

How the IFC works with companies

The IFC help companies to enter new markets, attract private investors and how to improve companies' operational performance and sustainability to increase productivity and competitiveness. In addition to this, the institution helps the government to structure public-private partnership to implement reforms that encourage private investment and structure people's access to high-quality infrastructure and basic services (the IFC, n.d.).

The IFC works with the government in the region impacted by its client's projects. It built the partnerships with governments and other agencies to efficiently implement the projects and help the government on various issues working as an advisory body. Typically, IFC works on the following broad areas:

The IFC also work with governments to improve the overall business environment by suggesting various reforms that would promote investment, increase growth rate and create jobs.

Initiating the Innovation

Initially, the IFC started its mission on a transaction-by-transaction basis that would allow the organisation to work at a much large scale. It started with the limited amount of financing. Due to high demand, many proposals were received in the first year. The first few projects were confined to finance industrial projects in Latin America and Asia. By supplementing private sectors through financing, the aim of the corporation was to foresee the global economic development and prosperity which would become a hallmark of the IFC operations.

IFC's first investment came in September 1957. It was a \$2 million investment, 15-year to help the local affiliate of German electrical equipment manufacturer Siemens to build Brazil's first integrated assembly plant to supply local utilities. Other loans which followed in that first year were as follows:

- \$600,000 to help the U.S.-Mexican joint venture company to launch Mexico's first manufacturing plant for specialised automotive parts.
- \$520,000 for Bristol de México, a local company of the UK to build Mexico's first aircraft engine overhaul and repair facility.
- \$2.2 million to develop the Mantos Blancos copper mine in Chile by incorporating new metallurgical ore treatment technologies which were licensed a few years before.

Despite financing many private companies, the loan-only approach was making less of a mark on the world than expected. The Corporation approved just \$44 million in total lending by 1961. In response to flat growth, IFC challenged its status quo (IBRD, 1952).

According to Martin Rosen, the successor of Robert Garner at IFC's helm, IFC would no more pick up fringes of the problems but would look at the issues whose scope can be greatly widened. This new thinking led to dramatic shifts that soon became core aspects of IFC's business model.

Mobilization of Resources

The Articles of Agreement encouraged IFC to focus not just on investing its resources, but on mobilizing additional capital from others. The first step in this key direction was \$2 million raised from commercial banks in 1959 for Brazilian pulp and paper producer Champion Cellulose. The financing for the company was packaged alongside the IFC's loan, and loan rose from the commercial Banks. The financing supported a new bleached sulfate wood pulp mill then being built at Mogi Guacu in the state of Sao Paulo. The mill still operates today, now owned by one of the world's largest pulp and paper companies, International Paper. By putting a trusted stamp of approval on this high-priority start-up, IFC was able to mobilize more capital from other investors than it could provide alone. This idea soon became a critical aspect of IFC's approach to financing development of private firms. Till date, the program has mobilized approximately \$50 billion for more than 1,000 emerging market projects. This change in the financing of the IFC bought a radical shift in supporting private firms which led to the huge mobilization of funds (the

World Bank, 1958:92-94). As discussed beforehand, during the initial years of operations, there were restrictions for the IFC for equity investments which at first had hindered the IFC's ability to be the catalyst of private sector capital flows in emerging economies. As we know equity investments provide critical but scarce long-term growth capital which is essential for the sustainability of financing corporations. Private enterprises need this capital to reach their potential, and economies need this capital to develop. Without the ability to make these investments and become a shareholder of client companies the IFC's role would always be limited. Following the 1961 charter revision that granted this authority, The IFC took up the challenge, actively working as an equity investor to strengthen the capital structure of client firms. It all began in 1962 with the signing of the IFC's first equity investment, in Spanish auto parts manufacturer Fábrica Española Magnetos. IFC bought \$500,000 stakes in Spain's Fábrica Española Magnetos, a manufacturer of automotive electrical components. The company used the money to expand its Madrid factory and build a new one in Treto. At the time, in many ways, Spain was still an emerging market in 1962 and considered fully worthy of IFC support. Building on this initial investment in the Spanish factory (later acquired by Bosch Group of Germany), IFC began using its new equity tool to encourage a widening pool of other investors to share risks and rewards in the developing world. Today, equity investment represents approximately 30 percent of IFC's \$52 billion global portfolio (The World Bank, 1958:97).

Since the establishment of the World Bank, the president of the Bank, Garner envisaged for international financial institutions devoted to supporting the private sector to supplement economic growth. The idea was further supported by the Rockefeller, the chairman of advisory board of USA. The first time, the idea of the IFC came into the public domain through the publication of "Partners in Progress" report in 1951. It explicitly acknowledged the need of exclusive organisation called the IFC, to support the private enterprises without a government guarantee. Nonetheless, In the US, disagreement were prevailing over the structure and mandate of the corporation among departments. The Department of Commerce and the Department of State were in favour of the IFC but they were less active in opposing the views of the opponents. The treasury department, the Federal Reserve System and the Exim bank were strongly opposing the proposal of the IFC. Their opposition was based on the idea that public financial organisation ethically should not have involve in the profit-making domain of the private sector otherwise it would cost on the public welfare by the system. Additionally, It would also led to proliferation of the international bureaucracy that resulted

into lingering of conditions imposed by the WB .A new independent developing countries were aspiring for growth and mounting pressure for greater financial support . The WB annual meeting put forward a plan by Eugene R. Black for establishment of the IFC with capital reduced from \$400 million to \$ 100 million. This time the proposal was accepted by the USA to support \$ 35 million of the total authorized capital of the IFC. Later, on December 4, the 1954 UK was also agreed on the revised draft. In the last, the resolution of the establishment of IFC was passed unanimously adopted by the General Assembly in the same month. The WB was given responsibility to draft charter.

April 1955,the WB board had approved and published the Article of the Agreement of the IFC .Further ,it was forwarded to the member state for the approval of the Charter. The minimum requirement for the enforcement of Charter required \$78 million Of authorized capital subscription. In July 20,the charter was come into force with the signing of France and Germany. Ultimately, the IFC was formally created on July 24, 1956 with Robert B. Garner was appointed as the president of the Corporation.

The IFC Article of Agreement requires the corporation to act as bringing investment opportunities and not sources of private capital but also experienced management. Most important, IFC was also created necessary conditions for the channelisation and mobilisation of private capital not only for foreign investors but also most importantly domestic investors. Primarily, The IFC was designed to promote development by stimulating the private enterprise and private investment in developing countries. The IFC has an initial mandate to involve with venture capital without involving in the equity financing. It had the mandate to issue interest-bearing securities. Further, it would be convertible into stock when it would purchase by the private enterprises. It would advise the government to create a conducive environment for invest of the private enterprises.

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Thyroid disorder among Women: Cause and prevention

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1. Thyroid gland.

The thyroid is a large gland located at the throat of both men and women. It performs an important role in the endocrine system and is governed by the Thyroid Stimulating Hormone (TSH) released by the pituitary gland. The thyroid regulates growth, the release of hormones, and plays a crucial role in the aging process of a human body. The hormones secreted by the thyroid also control the metabolism. It is a fact that women are more prone to malfunction of the thyroid than men. However, the reason why women are more vulnerable is not known. Women experience a high flux of hormones during pregnancy and again at menopause. Genetic predisposition is another crucial factor. Of every 5 women with thyroid dysfunction, 1 would have got it as a result of genetic mutation of the TSHB gene. For the most part, abnormal thyroid function is an autoimmune condition. It is common for thyroid function to be checked at least once in each viable pregnancy, preferably immediately after conception. It also has to be checked at the onset of menopause. The screening involves checks for TSH (Thyroid Stimulating Hormone) and toT4 to ensure levels are at par with the standards suggested by the American Association of Clinical Endocrinologists and the American Thyroid Association (ATA).

2. Thyroid Disease.

According to Unnikrishnan A.G. et.al it has been estimated that about 42 million people in India suffer from thyroid diseases. Thyroid disease is a general term for a medical condition that keeps human thyroid from making the right amount of hormones. Thyroid typically makes hormones that keep human body functioning normally. When the thyroid makes too much thyroid hormone, the human body uses energy too quickly. This is called hyperthyroidism. Using energy too quickly will do more than make a person tired, it can make heart beat faster, cause to lose weight without trying and even make feel nervous. On the flip-side of this, if thyroid will make too little thyroid hormone, this is called hypothyroidism. When a person has too little thyroid hormone in his body, it can make feel tired, person might gain weight and may even be unable to tolerate cold temperatures. These two main disorders can be caused by a variety of conditions. They can also be passed down through families (inherited).

Hypothyroidism is far more rampant than hyperthyroidism, the most common thyroid issue observed in women is hypothyroidism. It affects 15-20% of all women over the age of 50. It results from the deficient production of thyroxine and is characterized by sleepiness, tiredness, cold limbs, and digestive disorders like constipation. If a person has trouble with digestion, unexplained exhaustion, starts losing muscle tone, experiences mood swings, or finds sudden changes in their weight, one of the important checks to be made is the thyroid

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function the condition is not to be confused with hyperthyroidism, which can occur in women of any age.

Hyperthyroidism is the condition observed by the excessive production of thyroxine. Hyperthyroidism is seen in 1% of women and even less in men. The symptoms of hyperthyroidism can range from having trouble falling asleep to sudden weight loss, irregular menstrual cycles, thinning of the skin, nails, and hair. Increased sweating and heart palpitations are also observed. The symptoms are commonly observed between the ages of 20 and 40. Thyroid disease is confusing because the symptoms can appear from a variety of causes. Often it goes undetected and undiagnosed in women. For this reason, the ATA recommends women to Screen TSH levels every 5 years after age 35.

3. Conditions that can cause hypothyroidism include:

- **Thyroiditis:** This condition is an inflammation (swelling) of the thyroid gland. Thyroiditis can lower the amount of hormones your thyroid produces.
- **Hashimoto's thyroiditis:** A painless disease, Hashimoto's thyroiditis is an autoimmune condition where the body's cells attack and damage the thyroid. This is an inherited condition.
- **Postpartum thyroiditis:** This condition occurs in 5% to 9% of women after childbirth. It's usually a temporary condition.
- **Iodine deficiency:** Iodine is used by the thyroid to produce hormones. An iodine deficiency is an issue that affects several million people around the world.
- **A non-functioning thyroid gland:** Sometimes, the thyroid gland doesn't work correctly from birth. This affects about 1 in 4,000 newborns. If left untreated, the child could have both physical and mental issues in the future. All newborns are given a screening blood test in the hospital to check their thyroid function.

Symptoms of an underactive thyroid (hypothyroidism) can include:

- Feeling tired (fatigue).
- Gaining weight.
- Experiencing forgetfulness.
- Having frequent and heavy menstrual periods.
- Having dry and coarse hair.
- Having a hoarse voice.
- Experiencing an intolerance to cold temperatures.

4. Conditions that can cause hyperthyroidism include:

- **Graves' disease:** In this condition the entire thyroid gland might be overactive and produce too much hormone. This problem is also called diffuse toxic goiter (enlarged thyroid gland).
- **Nodules:** Hyperthyroidism can be caused by nodules that are overactive within the thyroid. A single nodule is called toxic autonomously functioning thyroid nodule, while a gland with several nodules is called a toxic multi-nodular goiter.
- **Thyroiditis:** This disorder can be either painful or not felt at all. In thyroiditis, the thyroid releases hormones that were stored there. This can last for a few weeks or months.
- **Excessive iodine:** When you have too much iodine (the mineral that is used to make thyroid hormones) in your body, the thyroid makes more thyroid hormones than it needs. Excessive iodine can be found in some medications.

Symptoms of an overactive thyroid (hyperthyroidism) can include:

- Experiencing anxiety, irritability and nervousness.

- Having trouble sleeping.
- Losing weight.
- Having an enlarged thyroid gland or a goiter.
- Having muscle weakness and tremors.
- Experiencing irregular menstrual periods or having your menstrual cycle stop.
- Feeling sensitive to heat.

5. A Women is at higher risk of developing a thyroid disease whoever

- Have a family history of thyroid disease.
- Have a medical condition (these can include pernicious anemia, type 1 diabetes, primary adrenal insufficiency, lupus, rheumatoid arthritis, Sjogren's syndrome and Turner syndrome).
- Take a medication that's high in iodine (amiodarone).
- Are older than 60, especially in women.
- Have had treatment for a past thyroid condition or cancer (thyroidectomy or radiation).

6. Tips for A Healthy Thyroid

1. Avoid stress as it interferes with the proper functioning of the thyroid. Activities like Yoga, Meditation, Tai Chi, or listening to relaxing can be helpful in reducing stress. In extreme cases medicines can also be taken.
2. Reduce caffeine consumption as caffeine can stress adrenal levels which can negatively affect your thyroid. Keep your consumption down to 1-2 cups per day.
3. Soy is also known to interfere with the proper functioning of thyroid and should be avoided.
4. Exercises is very important to maintain a healthy thyroid. Thyroid can cause laziness and depression and therefore it is important to exercises regularly for at least 20 minutes. A good brisk walk or a jog in your nearby park is important to maintain weight in hypothyroidism. Try to do brisk walking for at least 45 minutes. Before you begin your exercise routine, do a short warm up before you begin.
5. Breathing exercises – try to inhale through the nose and exhale through the mouth. This is very important for the body as it rejuvenates the body.
6. Aerobic exercise is another great way to maintain a healthy thyroid and if possible, it should be done 4-5 days a week. Aerobic exercises including swimming, cycling, hiking and dancing.
7. Avoid Alcohol as it interferes with the function of thyroid as well as it may react with thyroid related medication.
8. Medication taken in a proper manner are absolutely necessary for this condition. Consult a physician and regular take medications. Follow-up with regular check-ups.
9. Positive Outlook is also really vital while dealing with thyroid issues. Try to educate yourself and others. Read literature and watch documentaries that highlight thyroid diseases, so you are educated dealing with this problem.
10. Rest at least 8-9 hours every day, thyroid problems can lead to fatigue, and therefore proper rest is essential to stay healthy. Try to go to bed early and rise early, so you get time for a proper exercise in clean environs.
11. Ergonomics of body is important since thyroid problem might cause calcium deficiency. Additionally, there is a greater risk for muscle weakness and joint pain.

12. Along with regular exercise, diet, supplements, it's also important to focus on posture. Since long working hours in the office can cause muscular problems. This could also lead to muscular spasm, muscle tightness and in worst cases muscle weakness.

If you suffer from prolonged neck pains, do not bend your neck for long periods of time. Try to keep the neck straight while sitting in front of your laptop or computer.

If you suffer from back pain, keep a support at the back of your chair. Don't bend directly while lifting things. Always follow the 20-20-20 rule. Don't exceed sitting from more than 20 minutes. Stand up from the chair after every 20 minutes, look 20 feet far and blink your eyes 20 times.

7. Recommended diet for patients suffering from Hyperthyroidism:

- **Dairy products** – since hyperthyroidism may cause bone weakening therefore, it's important to include dairy products in your diet to build calcium. This includes curd, cheese and milk. Try to include thrice a day.
- **Protein**– rich diet – since there are chances of muscle weakness as there is weight loss in this condition. Hence, try to take protein rich diet. This includes fish, soya, pulses etc.
- **Vegetables**– some important vegetables should be included in this condition like broccoli, cauliflower, kale and cabbage. They belong to goitrogen family and help to decrease the amount of thyroid.
- **Low Glycemic index diet**– since weight loss is the main concern hence, a diet with low glycemic index and more in calorie. Whole grains, beans, cereals could be the choice of food.
- **Zinc** – involve protein and zinc rich foods like almonds, walnuts, flaxseeds etc.
- **Antioxidants** – try to take food that acts as an antioxidant like berries, cranberries, beans, hazelnuts, walnuts etc.

NOTE: Vitamin D – Since there are more chances of osteoporosis, try to take enough sunlight. Along with calcium it is advisable to take vitamin D. Some food like fish, mushrooms and eggs have a smaller amount of vitamin D.

Foods to avoid in Hyperthyroidism:

- High Glycemic index diet- it includes white flour, sugary sweets, rice cakes etc.

8. Recommended diet for patients suffering from Hypothyroidism

- Selenium rich diet- since selenium helps in proper functioning of thyroid therefore, it's important to include in the diet. This includes sunflower seeds.
- Tyrosine, which is a kind of amino acid, helps to produce T3 and T4. This includes cheese, fish, chicken, eggs and nuts.
- High fibre diet- since hypothyroidism can lead to constipation therefore, fibre rich food should be taken like cornflakes, cereal, rice, pulses, nuts etc.
- Fruits – since weight gain is the concern hence low calorie and high-density food should be taken. This includes cherries, sweet potato should be taken.

Foods to Avoid in Hypothyroidism:

- Certain vegetables like cabbage, broccoli, bok choy, kale, turnips, cauliflower should be avoided as they interfere with the production of thyroid.
- Fatty Foods should be cut down as they result in weight gain, which is a primary concern. Consumption of fatty foods and unhealthy junk food should be an absolute no-no. This includes butter, mayonnaise, margarine etc. this also includes high sugary food like donuts, canned foods, sweets etc.

These are all good to know tips for thyroid patients to manage to maintain healthy thyroid. With a healthy and positive approach, anyone can deal with the problem and lead healthy lives.

9. Treatment of Thyroid Disorder:

Treatment of thyroid disorders is often long-term and is simple and inexpensive. Daily supplementation of Thyroxine is usually recommended for a lifetime. The patient must take the thyroxine tablets daily, on an empty stomach, at the same time of the day. Apart from medication, there are few more treatment modalities available for hyperthyroidism, which are radioiodine therapy and surgery. The selection of treatment modality depends on patient age, pregnancy, and nature of the disorder. In some cases, thyroid nodules get swollen up in the thyroid gland. Mostly, these nodules are in benign condition, but sometimes these nodules may be cancer. Hence evaluation of these nodules is important. Investigations like thyroid function test, ultrasound thyroid, and FNAC are recommended. Benign/colloid nodules of small size are monitored for growth and they don't require surgery. If the tests suggestive of cancer, then the patient requires surgery.

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Structure and Prospects of India's Foreign Trade in Agriculture Sector

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The paper focuses to analyze India's trade in agricultural sector during year 2000-01 to 2018-19. The directional analysis also focuses on the trade balance and opportunities of gains from trade in all seventeen categories under agricultural trade of India separately. Objectives of the present research paper are to analyze trade balance and total foreign trade with all seventeen categories directional analysis at sufficient places. It also focuses on the measure of Export-Import Ratio (E-I R) during the study period. Another important objective is to study prospects of export promotion of India in world market and with individual nations. To analyze rate of growth in export and import of India in agricultural sector with all seventeen categories during the referred time period for measuring consistency is also an important objective of the study. In other words, this paper studies pattern of growth analysis on current year basis for all concerned categories separately as one of the hypothesis. Another significant hypothesis of this research paper explores and analyzes trade balance in these categories under agricultural sector of India. The functional relation of export, import, balance of trade, rate of growth in export and import are explained with the help of Ordinary Least Squares (OLS) method. Finally, the paper also measures risks and consistency in India's trade relations with all agricultural categories under foreign trade of India.

Keywords: Export, Import, Trade Balance, Average Trade and Growth Rate

Introduction

The geographical diversity of India is deep rooted in agriculture. Various products under agriculture are included in foreign trade of India according to quality and specific geographical indicators. The international trade in primary sector benefits participating members in a way of improving basic socio-economic parameters like employment opportunities, removing inequalities, improving living standards, utilization of available resources, competitive markets with wide variety of products for consumes and many more. The cursory glance of India's Foreign Trade Policy (FTP) 2015-20 shows that it is based on export earning, improving foreign exchange situation, and improving bilateral agreements in agricultural sector. The role of Export Promotion Councils for tea, coffee, rubber and other products in agricultural products are supportive in agricultural trade in international market. Agriculture continues to be an important sector of Indian economy which shares in gross domestic products about 14 percent in 2011-12. India is next largest net cropped area after USA and in irrigated area India is next to China. India is largest producer of pulses, many fruits and vegetables and milk. Fibrous crops, tubers and castor oil seeds are also at top. In the production of wheat, rice, sugarcane and cotton India stood second. India is also third largest producer of tobacco, several dry fruits, rapeseed, tea and tobacco (Arora 2013). Indian agriculture and allied activities consists of 54.6% of the total population (census 2011) and contributes 17.4% of country's gross value added for the year 2016-17 at current price (Gaikar 2019). The agricultural trade list in foreign trade includes trees products, bulbs, tubers, ornamental flowers and others. Fruits, nuts, tea, coffee, spices, oil seeds, lac, gums, saps and sugar products have special appearance in international trade. Various cereals, pulses,

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vegetables and pastry preparations are also included in sufficient quantity under international trade of India.

Review of Literature

The topic explores the 'Agricultural Policies in India: Retrospects and Prospects' (2013), Pre-Green Revolution Period (1950-65) and Green Revolution Period (1965-80), Post-Green Revolution Period (1980-91) and Economic Reforms Period (1991 onward) separately. The land reforms policies and its implications are also mentioned to increase production and trade of various agricultural products. Education in agriculture, price policy and marketing policies are also explained separately. Paper reaches to conclusion that after attaining self-sufficiency India is becoming export-oriented in agricultural products and cereals.

The linkage of Indian agriculture with international market is explained with effective backward and forward integration which led to global competitive production system in terms of cost and quality (Rahman, Selvaraj and Ibrahim 2012). Paper focuses on agricultural marketing and alignment with other international trade blocks in bilateral and multi-lateral agreements. The paper suggests better management system for trade in agricultural products in international market.

Bhaimali and Chakraborty (June 2018) analysed the agricultural commodities like tea, coffee, rice, tobacco, spices, oil seeds, fruits and vegetables separately in Pre WTO era (1990-1995) and Post WTO era (1996-2014). The paper measured compound annual growth rate of export of few agricultural commodities of India. The paper concludes huge fluctuation in international trade of agricultural commodities in post WTO era.

The impact of foreign investments are studied to in agricultural sector for promotion in trade, marketing and production from period of 2000 to 2019 (Nedumaran and Manida 2019).

Trade in agricultural commodities studied by Gaikar (2019) finds total export of agriculture stood at US \$ 33.86 Billion in year 2017 with total export of 10.5% in the same year. The paper constructs exponential model of growth in agriculture of India since 2012-13 to 2016-17. Paper further measures specialization in agricultural trade and analyses export and import policies of India during the referred period.

Importance of the Topic

The importance of primary sector in development of an economy may affect economic and social parameters in a number of ways. These are:

- Contribution to national income of domestic sector is deep rooted in international trade relation.
- Foreign exchange reserve earning is directly related to trade expansion.
- International trade directly relates to employment generation.
- Expansion of agriculture based industries in the economy.
- Employment generation opportunities in agriculture and allied activities.
- Welfare of Human Resources- International trade fosters exporting agents as recipients of export bill affects wage bill.
- The national income in an open economy is contributed by foreign sector.

Thus, the present study is of vital importance to explore the benefits of growing trade in agricultural sector.

Objectives of the Study

The growth of foreign trade in agricultural sector may be supportive to eradicate deep

rooted socio-economic problems like, poverty, inequality, income generation and utilization of available natural resources. Thus, it may help to ameliorate many international trade and also industrial problems prevalent in economy. Objectives of the study are:

- To analyse trade balance and total foreign trade with all seventeen categories separately. This will explore directional analysis of India with various nations.
- To analyse Balance of Trade (BoT) of India with different categories under foreign trade list as a comparative study during the study period.
- To analyse export and import growth rate of all categories under agriculture during the referred time period.
- To explore prospects of export promotion of India in international market through agricultural sector.

Hypothesis

H0: The trade balance of India under agriculture sector has improved during the referred period.

H1: The growth rate of various categories under agriculture sector has not improved during the referred period.

H2: Export-Import Ratio (E-I R) has not improved during the period of study.

H3: Cash crop and other produced items under agriculture sector have not improved in export side during the study period

Limitations of the Study

This paper is limited to the India's export and import of items included in the foreign trade lists. The study is limited to twenty years i.e. from year 2000-01 to year 2018-19. The study is limited to the analysis of India's trade and excludes other nations trade under agriculture sector. Only two digits **Harmonized System Number (HSN)** has been adopted and excludes four digits to eight digit HSN items classifications. The trade is analysed in US \$ terms only.

Research Methodology and Data Collection

This study paper is empirical research in nature mainly based on secondary time series data. It refers to the process of experimental analysis in which one or more variables are examined under condition which permits the collection of data and showing causes and effect relation.

Sources of data collection is based on primary data as well as secondary data published by various Reports of Ministries of Government of India and other institutions with various Bulletins of Reserve Bank of India, Journals, Articles, published and unpublished sources with various newspapers have been considered throughout the time period. Analysis of data in research keeps a very specific place. Steps under data analysis is mentioned as, Growth Rate (GR hereinafter) is measured of each and every item of export and import in US \$ currencies term. This is calculated on the basis of current year and determined as $GR (t+1) = [\{ X (t+1) - X (t) \} / X (t)] * 100$ where $X (t+1)$ is current year data and $X (t)$ is antecedent year data. Export – Import Ratio analysis is measured to study terms of trade effects with all seventeen categories of agriculture sector separately. Another important time series analysis has been explained as functional relation of various export and import items for all seventeen nations are explained collectively in three equations. Proper regression analysis has also been carried at the same place for study accuracy of time series equations.

Explanation and Findings

Total export and import of agriculture sector in year 2000-01 was US \$ 4164.0 Million and US \$ 772.6 Million respectively. In year 2003-04 US \$ 5568.7 Million and US \$ 1461.7 Million for export and import which increased to US \$ 8505.4 Million and US \$ 3860.3 Million in year 2006-07 respectively. Export and import decreased in both and attained to US \$ 28216.4 Million and US \$ 7008.9 Million respectively in year 2013-14. Export of agricultural commodities increased from US \$ 23455.9 Million in year 2017-18 to US \$ 24371.6 Million in year 2018-19. In the import side, it shows a decreasing trend as US \$ 12979.9 Million in year 2016-17 to US \$ 11346.9 Million in year 2017-18 and finally in year 2018-19 as US \$ 9305.7 Million. The time series analysis of export and import of agricultural commodities during nineteen years represents as,

Agricultural export of India = $0.589t^5 - 29.07t^4 + 497.3t^3 - 3438.0t^2 + 9917.0t - 3937$ with $R^2 = 0.927$; and

Agricultural Import to India = $-0.753t^4 + 27.01t^3 - 289.1t^2 + 1496.0t - 813.8$ with $R^2 = 0.946$

(R^2 is measured from year 2000-01 to year 2018-19)

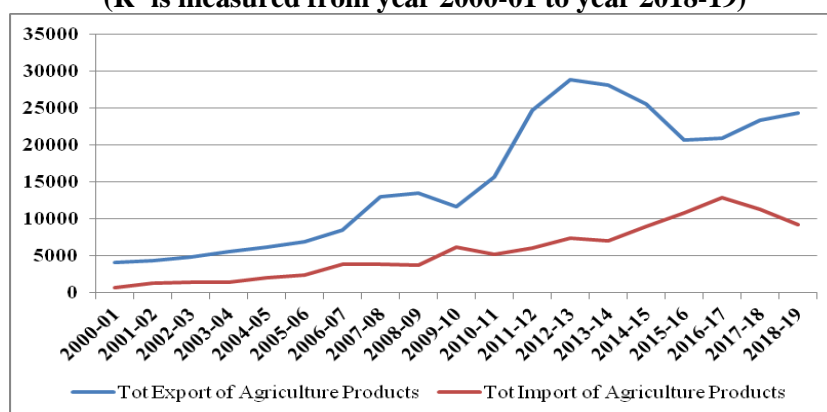


Figure – 1: Export and Import of India in Agriculture Sector
(Sources- Ministry of Commerce, GoI, Various Reports)

In export side average growth rate below ten percents are two categories as Fruits, Nuts and Melons (6.46%), Coffee, Tea and Spices (8.67%) and Vegetables and Products (8.82%) followed by more than ten percents but less than twenty five percents are as Tobacco and Substitutes (10.61%), Trees, Bulbs, Roots and Flowers (10.02%), Vegetables, Roots and Flowers (10.17%), Other Edible Preparations (11.16%), Oil Seeds and Grains (13.27%), Preparations of Other parts of Plants (14.02%), Sprite and Vinegar 15.98%), Residue Wastes from Foods 16.34%), Flour and Pastry cooks Products (16.64%), Malt, Wheat Gluten and Starch (17.81%), Cereals (19.75%) and Lac, Gum, Resins and Saps (23.85%) and more than twenty five percents are Cocoa and Products (29.46%) and Sugar and Products (106.15%).

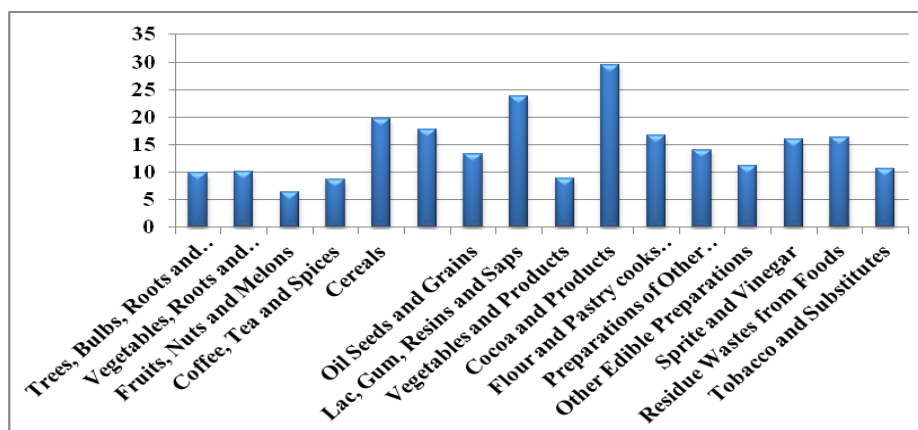


Figure – 2: Average Export Growth Rate of Agriculture Sector Categories
(Sources – Based on Table 1 and Table 2)

The average percentage analysis in growth rate terms in import side are shown as, below twenty percents are Other Edible Preparations (12.94%), Lac, Gum, Resins and Saps (14.32%), Flour and Pastry cooks Products (14.45%), Malt, Wheat Gluten and Starch (14.91%), Fruits, Nuts and Melons (15.21%), Preparations of Other parts of Plants (16.32%), Coffee, Tea and Spices (17.17%) and Tobacco and Substitutes (19.73%). There are eight categories having growth rate in average terms more than twenty percents as Residue Wastes from Foods (20.05%), Oil Seeds and Grains (20.54%), Cocoa and Products (22.87%), Vegetables and Products (24.02%), Vegetables, Roots and Flowers (38.03%), Sprite and Vinegar (42.65%), Sugar and Products (116.44%) and Cereals (1160.9%).

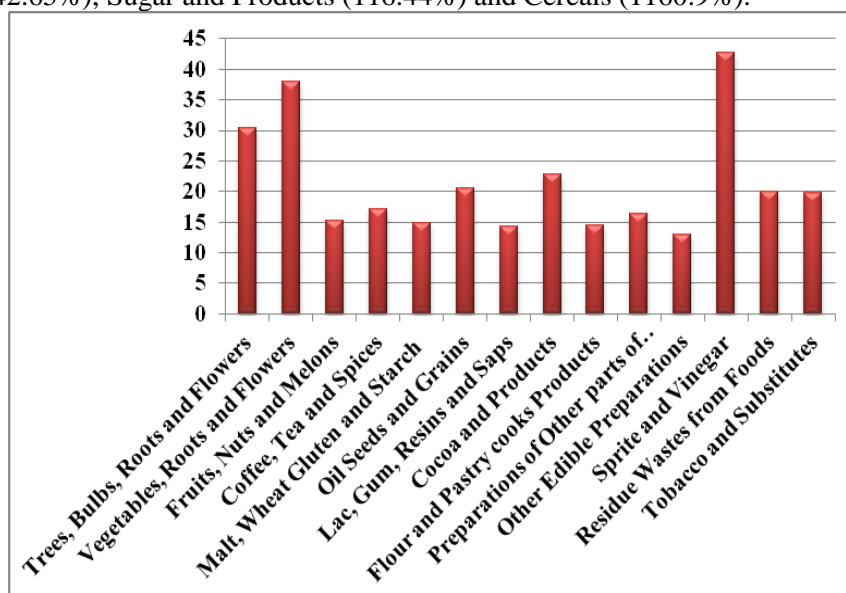


Figure – 3: Average Import Growth Rate of Agriculture Sector Categories
(Sources – Based on Table 1 and Table 2)

The measured value of export to import ratio in agriculture sector international trade shows the categories below one times are registered as Cocoa and Products (0.40 times), Vegetables, Roots and Flowers (0.63 times), Sprite and Vinegar (0.84 times), Fruits, Nuts and Melons (0.96 times). Categories more than one times and below ten times are as Other

Edible Preparations (4.91 times), Malt, Wheat Gluten and Starch (5.46 times), Preparations of Other parts of Plants (5.74 times), Coffee, Tea and Spices (6.00 times), Flour and Pastry cooks Products (6.40 times), Vegetables and Products (6.51 times), Oil Seeds and Grains (6.86 times), Sugar and Products (8.38 times), Lac, Gum, Resins and Saps (9.08 times), Residue Wastes from Foods (9.71 times). Again, E-I R value in the referred time period shows more than ten times as Trees, Bulbs, Roots and Flowers (13.17 times), Tobacco and Substitutes (24.64 times) and Cereals (676.32 times). This E-I R value is mentioned in the following figure.

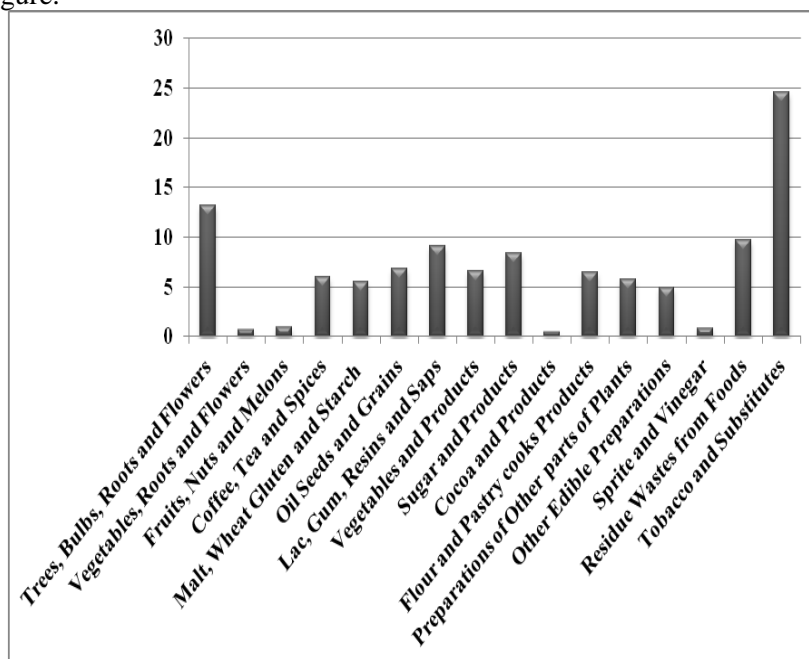


Figure – 4: Export to Import Analysis of Various Categories in Agriculture Sector
(Sources – Based on Estimated Values in Table 1)

Conclusion and Suggestions

The growth rates in export and import side are highly inconsistent in nature in all seventeen categories. Again, in E-I R value analysis fifteen categories are below ten times during the study period. There are some categories in agriculture sector which needs serious foreign trade policy. These categories are Fruits, Nuts and Melons, Coffee, Tea and Spices, Vegetables and Products, Other Edible Preparations, Lac, Gum, Resins and Saps, Flour and Pastry cooks Products, Malt, Wheat Gluten and Starch, Fruits, Nuts and Melons and Preparations of Other parts of Plants. The export amount in excess to import under agriculture sector of India during the referred time period but markets are poorly developed in world trade. The foreign policies of agricultural sector are available but needs to be intensive and more explorative in nature in near future.

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Table 1
Export Import Analysis of Agriculture Sector of India

Sl. No.	Particulars	Average Export (US \$ Million)	Percentage of Total Export under Agriculture Sector	Average Import (US \$ Million)	Percentage of Total Import under Agriculture Sector	Average E-I R
(1)	(2)	(3)	(4)	(5)	(6)	(7)
01.	Trees, Bulbs, Roots and Flowers	69.67	0.45	11.09	0.20	13.17
02.	Vegetables, Roots and Flowers	818.20	5.33	1723.52	30.81	0.63
03.	Fruits, Nuts and Melons	1155.55	7.53	1605.57	28.70	0.96
04.	Coffee, Tea and Spices	1945.99	12.68	387.91	6.93	6.00
05.	Cereals	4640.52	30.24	223.56	4.00	676.32
06.	Malt, Wheat Gluten and Starch	143.08	0.93	32.55	0.58	5.46
07.	Oil Seeds and Grains	1102.63	7.19	197.10	3.52	6.86
08.	Lac, Gum, Resins and Saps	1069.62	6.97	116.46	2.08	9.08
09.	Vegetables and Products	42.58	0.28	13.39	0.24	6.51
10.	Sugar and Products	963.18	6.28	426.92	7.63	8.38
11.	Cocoa and Products	61.05	0.40	115.01	2.06	0.40
12.	Flour and Pastry cooks Products	279.33	1.82	39.49	0.71	6.40
13.	Preparations of Other parts of Plants	296.53	1.93	52.48	0.94	5.74
14.	Other Edible Preparations	365.82	2.38	86.43	1.54	4.91
15.	Sprite and Vinegar	187.19	1.22	306.17	5.47	0.84
16.	Residue Wastes from Foods	1552.82	10.12	227.90	4.07	9.71
17.	Tobacco and Substitutes	651.03	4.24	28.86	0.52	24.64

Sources : Based on Estimated/Calculated values by the Author

Table 2
Important Statistical Analysis (Based on Growth Rate)

Sl. No.	Particulars	Average	Standard Deviation	Skewness	Kurtosis	Coefficient of Variation
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Export Side						
01.	Trees, Bulbs, Roots and Flowers	10.02	33.63	+1.76	+4.80	335.72
02.	Vegetables, Roots and Flowers	10.17	15.04	+0.90	+1.14	147.93
03.	Fruits, Nuts and Melons	6.46	13.61	+0.77	+0.59	210.71
04.	Coffee, Tea and Spices	8.67	16.03	+0.59	-0.18	184.89
05.	Cereals	19.75	39.71	+1.09	+0.77	201.08
06.	Malt, Wheat Gluten and Starch	17.81	32.28	-0.94	+0.18	181.28
07.	Oil Seeds and Grains	13.27	33.01	+1.04	-0.03	248.69
08.	Lac, Gum, Resins and Saps	23.85	84.49	+3.16	+11.30	354.27
09.	Vegetables and Products	8.82	25.12	+0.69	+0.31	284.95
10.	Sugar and Products	106.15	295.05	+3.32	+12.19	277.95
11.	Cocoa and Products	29.46	29.98	-0.05	-1.25	101.77
12.	Flour and Pastry cooks Products	16.64	15.83	+0.20	-1.12	95.14
13.	Preparations of Other parts of Plants	14.02	18.03	+0.92	+0.39	128.60
14.	Other Edible Preparations	11.16	10.56	+0.04	+1.65	94.62
15.	Sprite and Vinegar	15.98	28.91	+0.92	+0.58	180.94
16.	Residue Wastes from Foods	16.34	44.68	+0.77	+1.54	273.36
17.	Tobacco and Substitutes	10.61	16.53	+1.22	+2.10	155.84
Import Side						
01.	Trees, Bulbs, Roots and Flowers	30.47	43.77	1.74	3.72	143.65
02.	Vegetables, Roots and Flowers	38.03	127.99	3.76	15.21	336.56
03.	Fruits, Nuts and Melons	15.21	21.11	-0.06	1.43	138.82
04.	Coffee, Tea and Spices	17.17	22.78	0.51	-0.39	132.62
05.	Cereals	1160.9	4385.5	4.22	17.84	377.78
06.	Malt, Wheat Gluten and Starch	14.91	29.50	-0.21	0.28	197.89
07.	Oil Seeds and Grains	20.54	21.63	0.36	-0.79	105.28
08.	Lac, Gum, Resins and Saps	14.32	11.18	0.32	-0.57	78.07
09.	Vegetables and Products	24.02	22.46	-0.63	-0.72	93.49
10.	Sugar and Products	116.44	267.46	2.03	3.35	229.71
11.	Cocoa and Products	22.87	25.93	0.18	-1.45	113.36
12.	Flour and Pastry cooks Products	14.45	21.86	0.10	-1.07	151.23
13.	Preparations of Other parts of Plants	16.32	13.62	0.36	-0.74	83.44
14.	Other Edible Preparations	12.94	30.08	-0.55	1.16	232.56
15.	Sprite and Vinegar	42.65	107.88	3.86	15.84	252.91
16.	Residue Wastes from Foods	20.05	15.42	-0.21	0.02	76.88
17.	Tobacco and Substitutes	19.73	38.97	1.04	0.71	197.54

***Sources : Based on Estimated/Calculated Values by the Author**

Role of Education In Women Empowerment

*Marzia Mehdi**

Indira Gandhi once said, "To be liberated, women must feel free to be herself, not in rivalry to man but in the context of her own capacity and her personality." She also added, "Satisfaction lies in the effort, not in the attainment. Full effort is full victory."

She also says, "even if I died in the service of the nation, I would be proud of it. Every drop of my blood will contribute to the growth of this nation and to make it strong and dynamic."

Indira Gandhi was known as the 'Iron Lady Of India' during her tenure. She was a brave lady and presented her as a liberated and independent woman. She had the courage as a woman to run our country as the Prime Minister.

In this research paper, the role of education in women empowerment will be highlighted and culminated from different point of views. This research paper will also point out the challenges which become an obstacle and barrier in the way women's success, accomplishment and achievement.

Introduction

In the modern world, education plays a very important and dominant role in the lives of men and women. Education is very powerful weapon because we cannot progress and go forward in our life. Men can educate themselves because they are free to go anywhere. They do not fear the people, the society; they can go out in any time whether it is morning, evening or midnight.

But the difficulty and struggle arises for women because they can not go out all the time. They have to care about the time because in our society, some people will not see him successful and liberated in her lives in jealousy. There are number of rapes and sexual assaults happen due to their going out from various dangerous roads and paths.

We see lots of rape cases which disturbed us mentally and psychologically. "In November 2019, the gang rape and murder of a 26-year-old veterinary doctor in Shamshabad, near Hyderabad, sparked outrage India. Her body was found in Shadnagar on 28 November 2019, the day after she was murdered."

Now tell me, why was she raped? She was a liberated woman with a professional educational degree with her. But still she could not save her life from the culprits. The problem is in the mind of such people who are living in our society.

Women have to take education so that, she can liberate mentally, psychologically, emotionally, financially and physically. In the same way, the men of our society should also understand that they should not harm women through the rapes, dowry and gender discrimination.

They have to educate themselves and change their mind sets, psyche, behaviorism, mentality and attitude. Then they should educate the women in precise, accurate and specific manner.

"Being a girl or woman is not easy. Issues hinder the growth of a country and make the women feel inferior. Gender discrimination is one the issues that women are facing in India. Women are not considered equal to men. Women are discriminated at the work place, society and even at home. In some of the rural areas, girls are still denied to education."

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Therefore, firstly we have to create awareness of education for women so that, they can raise their voices against inequalities, imbalance and disproportion in the society. They can raise their voices against the sexual harassment and assaults and fight for their rights in an error free and faultless manner.

Role of Education In Women Empowerment :

"Education is considered as a basic requirement and a fundamental right for the citizens of any nations. It is a powerful tool for reducing in equality as it can give people the ability to become independent. Women, who come across discrimination in many spheres, have a particular need for this."

"Education is regarded as an important milestone of women empowerment because it enables them to face the challenges, to confront their traditional role and change their life." Without education, we can not change our thoughts, beliefs and ideas which make us specific and different and others.

The growth of economy and social growth depended upon the education which the citizens of a country take. We change our lifestyle also; it gives the equal rights of thinking and "opportunity and freedom" to live. Nowadays, women come ahead and show their talent, aptitude and ability in various fields and streams.

Education makes her powerful, self-sufficient, self-supporting, self-sustaining, self-reliant, self-standing and individualistic in her approaches. And she will not depend on the help of her father, husband and her brother. She can think of her future and career; she can take decision according to her own convenience. Pandit Jawaharlal Nehru says, "if you educate a man you educate an individual, however, if you educate a woman you educate a whole family. Women empowered means mother India empowered."

This is very heart-touching and deep thought expressed by our former Prime Minister of India. He correctly says that we need to educate the women, so that, she educate her family including her children. A mother can be proved as a goddess or she can be a woman who destroys the peace, harmony and happiness of her family.

Therefore, if a mother is ill-literate, then automatically and for sure, her children will be ill-mannered, rude, impolite and discourteous in their attitudes. They will behave like ill-literate people; they cannot differentiate various aspects of good and bad things in their lives; they will not take decisions correctly and "reduce access to lifelong learning and professional development."

There are major problems of illiteracy, such as, there will be "limited ability to obtain and understand essential information; unemployment will be there, the unemployment rate is 2-4 times higher among those with little schooling than among those with Bachelor's Degrees; there will also be low income and lower quality jobs; the financial position will be precarious and low self-esteem, which can lead to isolation."

"Little value is given to education and reading within the family, and this often leads to intergenerational transmission of illiteracy. Impact on health: illiterate individuals have more workplace accidents, take longer to recover and more often misuse medication through ignorance of health care resources and because they have trouble reading and understanding the relevant information (warnings, dosage, contraindication, etc.)."

Therefore, one should always have the spark to get education for changing his/her life. Education gives us the meaning, definition, interpretation and explanation in the field of literacy. Through the literacy, we can change our way of living, thinking and making decisions.

Proposal And Suggestion

"Empowerment enables to acquire knowledge, skills and techniques which will help them in their personal and social growth as well as foster in them sensitivity towards problems in the society. Special efforts are required to be taken for education, health and employment of women. Economic empowerment is essential for improvement of female sex ratio but economic empowerment is possible only when woman are educated."

Violence, gender inequality, family restrictions, early marriages and restrictions of going out are very much condemnable and vicious wrong. These mentalities should be removed from the minds of the people. With the awareness of education, our minds can be developed and progressed. Education creates "more employment opportunities."

It secures a higher income; develops problems solving skills and improve the economy. Education also provides "a prosperous and happy life and creating modern society." Education gives personal development of skills including better communication, critical thinking and greater sense of discipline.

"When an entire society is educated, productivity increases, average income increases, and unemployment decreases. This leads to the economic growth and stability of a society as a whole. It starts with education." Education also plays a major role in environmental benefits because if a person is literate then, he will be understanding the importance of environment in the life. He/she will grow more plants for making the environment sustain and healthy. We also need to change our perception and notions towards the freedom, emancipation and liberation of women.

There is an urgent need for "removal of gender equality." People should "encourage ICT tools and the use of internet, for the study and research by women." There should also be "increasing real representation of women in political bodies and governance institutions in order to move from being objects of legislation to initiators of change."

We should eliminate and abolish all kinds of discrimination in employment as well as in different sectors of political and social activities. Women should energetically participate in social and political issues. Women must be self dependent. "Spread the message that education of women is a pre-condition for fighting against their oppression."

There should be awareness of daughter's education. Mostly the poor parents stop their girl's education very early and this is the biggest mistake they do. They should encourage their daughters for education and should not demotivate them for marriage and other things.

Because of early marriages, girls have to bear children and their education stop completely. Their mental and physical healths also get disturbed. And therefore, the parent must be aware of the importance of education for their daughters. And they should understand the need of education in women's life.

Conclusion :

"Women empowerment is a process of enabling women to have access and make productive contributions to their economic independence, political participation and social development. Empowerment enables the individuals to realize their identity and powers in all spheres of life. It consists of greater access to knowledge and resources, greater autonomy in making decisions or free from the shackles imposed on them by custom, belief and practices in the society."

If a woman is literate, then she can literate her children also. And generation to generation, knowledge will continuously go on. Then people will automatically aware of various characteristics, positions and features of empowerment of women.

According to the country report of Government of India, "empowerment means moving from a weak position to execute a power." Everyone of us should become literate not only because of money and employment but also for 'lifelong learning', 'self-esteem and overall quality of life.'

Literacy ameliorates the economy and it becomes a "powerful tool against poverty." We have seen that the NDA government has launched 'Beti Bachao, Beti Padhao' scheme.

The "scheme aims at making girls independent both socially as well as financially and which will help in generating awareness and improving the efficiency of delivery of welfare services meant for women." One must understand the necessity and obligations of literacy and empowerment. And through this, we can achieve our targets for literating women.

According to Mizzfit, "No matter where you are in life, inspire and empower the women around you. Success is never reached alone. And, wisdom and wealth are sweeter shared."

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An Analysis On Goods And Service Tax (GST)

Saumya Rai*



The Goods and Service Tax Act was passed in the Parliament on 29th March 2017. The Goods and Services Tax (GST) was implemented on July 1, 2017, is regarded as a major taxation reform in India since independence in 1947. GST was planned to be implemented in April 2010. Chairman of 13th Finance Commission Dr. Vijay Kelkar, has suggested to have modern taxation system in tune with developed nations form the base behind the introduction of Goods and Service Tax (GST) in India. The idea of GST was contemplated in 2004 by the Task Force on implementation of the Fiscal Responsibility and Budget Management Act, 2003, named Kelkar Committee. The new tax system was launched at a function in Central Hall of Parliament on 1st July, 2017 (Friday midnight). GST embodies the principle of "one nation, one tax, one market" is aimed at unifying the country's \$2.6 trillion economy and 1.3 billion people into a common market. Under GST, goods and services fall under five tax categories: 0 per cent, 5 per cent, 12 per cent, 18 per cent and 28 per cent. GST is an Indirect Tax which has replaced many Indirect Taxes in India. Goods & Services Tax Law in India is a comprehensive, multi-stage, destination-based tax that is levied on every value addition.

Keywords: GST, Indian Economy, Tax Reform, Indirect Tax

Introduction:

Tax policies play an important role on the economy. The main source of revenue for government of India is from tax. Direct and indirect taxes are the two main source of tax revenue. When the impact and incidence fall on same person it is called direct tax. When the impact and incidence fall on different person that is when burden can be shifted to other person it is called indirect tax. Goods and Services Tax (GST) is most ambitious and biggest tax reform plan, which aims to stitch together a common market by dismantling fiscal barriers between states. It is a single national uniform tax levied across India on all goods and services. In GST, all the indirect taxes will be subsumed under a single regime. The GST taxation laws will put an end to multiple taxes which are levied on different products, starting from the source of manufacturing to reaching the end consumer. France was the first country to implement GST to reduce tax- evasion. Since then, more than 160 countries have implemented GST with some countries having Dual-GST (e.g., Brazil, Canada etc.) model. India has chosen the Canadian model of dual GST. New Article 366 (12A) of the Indian Constitution defined Goods and Services Tax (GST) to mean any tax on supply of goods or services or both except taxes on the supply of alcoholic liquor for human consumption. New Article 366(26A) defines service to mean anything other than goods. As per the government, the Goods and Services Tax (GST) is regarded as a 'Reform' rather than amendment in the

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existing Indian taxation system to sort out all backdoors and cons of the indirect taxation system. India was one of the 123 countries in the world following the VAT taxation system. VAT was designed and introduced on January 17, 2005 at the Centre and State levels by finance minister P. Chidambaram. Goods and Services Tax (GST) was proposed in 2014 to be implemented with effect from (w.e.f) June 2016. The GST implementation is “dual” in nature - one component is implemented by Centre (CGST) and another component by State (SGST). The base of tax would be the same by Centre and State governments.

GST bill passed had various types of indirect taxes replaced by GST and is categorized under four categories. The four types are

- CGST - CGST is a central goods and services tax. It is applicable on suppliers dealing within the state. Taxes which are collected will be shared with the central authority body.
- SGST - SGST is a state goods and services tax. It is applicable to suppliers who dealing within the state. Taxes which are collected will be shared to state authority body.
- IGST - IGST stands for an integrated goods and services tax. It is applicable to suppliers who dealing interstate business and import transaction. Taxes which are collected will be shared to central and state authority body.
- UTGST - if the transaction is related to any union territory.

Government	List of Taxes
Central Government Taxes	Central Excise Duty Service Tax Additional Custom Duty Surcharges and all Cess
State Government Taxes	VAT/Sales Tax Entertainment Tax Entry tax not in lieu of Octroi Other taxes and Duties (Luxury Tax, Taxes on Lottery etc)
Taxes imposed by State Governments on Goods on Services	Stamp Duty Vehicle Tax Tax on Goods and Passengers Taxes and duties on Electricity

Figure 1 List of Taxes Abolished After GST implementation

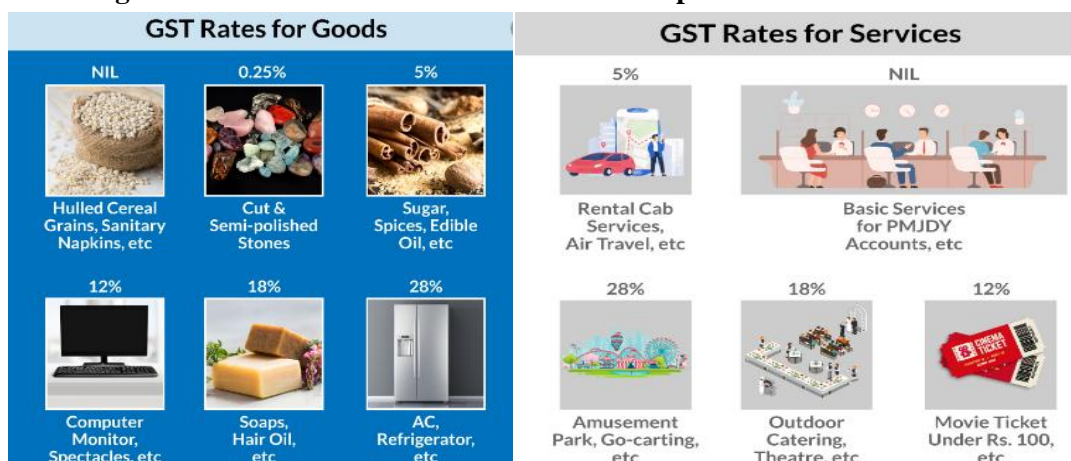


Figure 2

Research methodology:

The study focuses on extensive study of secondary data collected from various books, journals, government reports publication from various websites which focused on Goods and Services Tax.

Objectives of the study:

- To gain an in-depth understanding of GST taxation system evaluation in India.
- To understand a feature working and differentiating existing tax system (VAT and others VS GST).
- To find out the construction level in GST collection from each state.
- To gain an in-depth understanding of GST taxation system evolution.
- Understanding in - depth the concept of new taxation system introduced - Goods and Services Tax (GST) in India.
- To evaluate the prospects of taxation position of various goods and services in India.

Scope of the study:

This paper provides a detailed insight regarding implementation of GST tax of the country. GST after implementation has brought uniformity with tax rates and has also overcome lots of shortcomings in the Indian taxation system with regard to indirect taxation. The Good and Services Tax would surely be highly advantageous for major areas of the India economy.

Limitations of the study:

- Due to changes in other factors GST percentage and other economic factors involved in country GST collection may reduce.
- Data collection method is secondary data. The main sources of data are from press information bureau of India.

Overview and impact on indian economy:

The implementation of GST with a digitized economy will make India's economy look much cleaner and bigger, said Union Finance Minister Arun Jaitley at the vibrant Gujarat global Summit. It is a major step towards the integration of informal economy. He said "A new India Has Emerged". It is inevitable that with the increase in level of demand, the level of supply would respond likewise. The GST council is being asked by the ministry of Commerce to keep exporters of the plantation, leather and cement out of its framework and suggested to impose lower tax on them to boost output and increase employment generation. With this the producers increase productivity and perform better in global market's council retained its proposed definition of Agriculturist to allow a land to have been personally cultivated only if it's farmed by individuals and family members of HUF and it is exempted under GST. Manufacturers and traders would benefit from fewer tax filings, transparent rules and overall a sound book keeping system. Consumers would be paying less for the goods and services and lead to change their expenditure pattern and livelihood. The government would generate more revenues as revenue leaks would be plugged by GST implementation.

How has GST really impacted India in current economy situation and in future.

Firstly: From the viewpoint of the consumer, the consumers have to pay more tax for most of the goods and services they consume. The GST implementation has a cost of compliance and tax on most of the goods attached to it. It examines that this cost of compliance will be prohibitive and slightly high for the small-scale manufacturers and traders.

Resulted to this pricing of goods will go high and has direct impact on cost of living of the society.

Secondly: If long term effect of GST analyses it is expected that GST would not just mean a lower rate of taxes, but also minimum tax slabs imposed on. In many Countries where the Goods and Service Tax has helped in reforming the economy, apply only 2 or 3 rates. GST is designed to minimize the rate with a lower rate for essential commodities, and a higher tax rate for the luxurious commodities. Currently, in India, there are 5 slabs, but there will be a shift soon.

Thirdly: Impact of GST on macroeconomic indicators is likely to be very positive in the medium-term. Inflation would be reduced as the cascading (tax on tax) effect of taxes would be eliminated in the country and at the same time revenue from the taxes for the government is very likely to increase with an extended tax net, and the fiscal deficit is expected to remain under the checks and GST would be a change maker on this. Moreover, exports would grow, while FDI (Foreign Direct Investment) would also increase. The experts believe that the country would grow economically in the ease of doing business with the implementation of the most important tax reform ever in the history of the country.

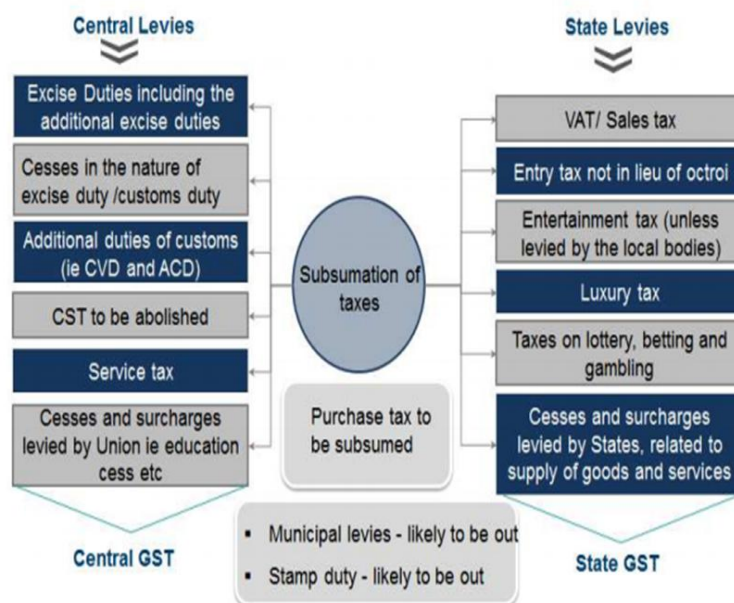


Figure-3 (Source: www.taxguru.in)

Benefits of GST:

With the introduction of GST, there are various benefits globally. The main motive is to maintain a uniform tax and develop the country's products and introduce it globally. Some of the benefits of GST are listed below.

- GST creates common market nationally.
- Attracts foreign investment.
- Helps to have uniform taxation.
- Helps improve production and encourage to enter international market.
- Small retailers have nil tax or low tax.
- Consumers are benefited by purchasing from the small retailers.

List of some items exempted from the gst regime:

- The unprocessed cereals, rice & wheat etc.
- The unprocessed milk, vegetables (fresh), fish, meat, etc.
- Unbranded Atta, Besan or Maida.
- Kid's coloring book/drawing books.
- Sindoor/Bindis, bangles, etc.

Findings:

- Different Indirect taxes will reduce by GST Since there will be no hidden taxes it brings about Transparency.
- Due to one type of Tax i.e., GST It will remove economic distortions and contribute towards the development of a common national market.

Suggestions:

- It is suggested that government should opt plans and policies in this regard for positive implementation and their result.
- The GST Council should bring the four tire taxes under the net to prevent states from raising tax rates.
- For the purpose digitization of GST system, a proper and efficient network system has to be established and maintained to manage.
- Special programs may be implemented to familiarize businesses and consumers with the functioning of GST.

Conclusion:

Tax policies play an important role on the economy as it is the revenue source, it has a positive impact on both efficiency and equity. Due to unstable environment of Indian economy, it was the demand of time to implement GST. Consumption and productions of goods and services was undoubtedly increasing and because of multiplicity of taxes in the earlier tax regime administration complexities and compliance cost was also accelerating. Thus, a simplify user -friendly and transparent tax system was required which can be fulfilled by implementation of GST. In view of issues of income distribution, a good tax system should keep pace with it and at the same time it should also endeavor to generate tax revenues to support government outflows on public services and infrastructure development. At the end we can say clearly with no doubt that it is the biggest ever change in tax structure of India. There is a fall in prices of Auto Commercial Vehicle, two wheelers, Small cars, Midsized cars and SUV, essential items, Footwear, Building Materials etc. and education, healthcare are going to be exempted from GST but on the other hand, price of some other goods and services increased after GST like Hotel room rental, Restaurants & fine dining and Branded Apparels. There was threat of inflation before GST rolled out. It is concluded that GST has been going to be an historical record for its full fledge implementation and hopefully this biggest historical reform has resulted in ease of doing business in India. It would encourage new businesses and entrepreneurs to engage in service and manufacturing sector. GST levied only on consumption of goods or services. This leads to eliminate economic distortions in taxation amongst states and also helps in free movement of goods, further it also minimizes the complexity of taxation. It will also beneficial to individuals as the prices will go down due to GST and decrease in price leads to increase in consumption and directly increase the GDP. As GST implementation applied at a time for all states lack of policy barrier will removed. Directly GST will increase the investment in FDIs which increase the foreign exchequer of

the country and indirectly increase the employment opportunities. It will promote new startups in India for its business-friendly tax structure.

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Moving Towards Digital Economy: Evidence from India During Covid 19

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The world is changing rapidly due to the spread and after effects of novel Coronavirus pandemic. It has many notable impacts on the global economy. Maintaining physical as well as social distancing has become important these days due to the spread of the disease. Digital payment contributes to our life to save us from coronavirus. This paper focused on the impact of coronavirus on the digital economy, Independent variables include customer transaction, mobile payments, card payments, UPI, wallets, NEFT, IMPS, and RTGS. Dependent variables are Corona cases and Corona deaths. For the purpose of the study data from Jan 2020 to August 2020 has been analysed to run the multiple regression to find out whether the result of coronavirus new cases has a significant impact on mobile payment and UPI, the other variables are insignificant. The outcome of death cases has a significant impact on mobile payment and UPI. The digital economy is the centre of today's economic development. This paper amplifying the adoption of a new technology of digital payment to overcome the impact of covid-19 throughout the world.

EL Classifications: D24, E22, E42, F38, L86

Key Words: COVID-19, Digital System, Indian Economy.

I. Introduction

The COVID 19 pandemic is an unexpected crisis in the history of human life. It has a significant impact on economic activities. It made human life at risk. It is one of the biggest crises even compare to the 2008 global financial crisis. The virus firstly noted in Wuhan the city of China in December 2019 (Wójcik &Ioannou, 2020). The global economic activity disrupts due to this epidemic. The recent crisis is making unprecedented stress on individuals, governments, markets, and businesses (Economic Times, 2020). Looking at the starting scenario of this pandemic all the nations implemented lockdowns and close the activities, which enable large human interaction and gatherings (Lai et al., 2020). The pandemic lead world as a catalyst for change on social, economic, corporate as well as personal level. At the disruption from novel coronavirus, it is clear that peoples do not have any option excepting digitalization (McKinsey, 2020). The covid-19 impact on digital payment, it has declined in the business of airlines, tourism, hospitality, hotels, entertainment, e-commerce (non-essentials) and restaurants(PwC, 2020). As we witnessed that coronavirus is a bitter toll of world economy. Even though it has untapped the opportunities in the different sectors of the economy. Globally, the work from home (WFH), online teaching, online shopping, and online meetings have developed in the short scan of time. Covid-19 has accelerated the digital financial services not only in India but also in world. National Payments Corporation of India (NPCI) has played important role in the emergence of digital payment ecosystem in India. To launching the digital platform like, UPI, Bharat bills pay, IMPS, ETC (Electronic Toll collection, and Fastags (Sanjay Joshi, KPMG, 2020).Many people around the globe are being forced to adopt digital things to deal with this situation. Based on Prime Minister Narendra

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Modi, 'Atmanirbhar Bharat' Yojana government promotes the country to build technology-driven systems (Money control, 2020). The crisis has made it very clear that social distancing and work from home turn out to be today's realities (Deloitte, 2020). The statement given by Harshil Mathur, the CEO of a payment gateway, "The lockdown brought upon digital awareness in Tier 2 and 3 geographies as well, with bill payments through digital channels seeing a 93% increase overall. This is in spite of Tier 2 and 3 customers preferring to pay bills offline through Kirana shops etc. which have now moved to digital methods of payments," (Pwc, 2020a). Ambarish Kenghe, Managing Director of Google Pay stated, "The pandemic has done more to digitizing payments in India. Because of COVID, we have seen five years of progress happen in just five months" (Business Standard, 2020). The coronavirus pandemic confirmed that businesses have to continue their operations in a challenging situation and adapting to this new digital world. India supplements twelve new online education channel Direct to Home. The government of India also established many programs to boost the progress of new solutions for collaboration, video conferencing, telework, etc (Digitalization, 2020). "The Reserve Bank of India will soon treat all payment aggregators as regulated entities under the Payment and Settlement Systems Act 2007 under its direct supervision, bringing in tighter regulations for the country's digital payment industry. The central bank has also demanded mandatory compliance on technology and cyber-security requirements" (Pwc, 2020b). It is true that digitalization will highly contribute to the development of the economy. In this paper, we focused on the effect of the COVID-19 pandemic and digital economy evidence from India.

II. Literature Review

Digital finance positively significant affected by the coronavirus crisis, people are ready to do the payment digitally to avoid go to the mass places (Agosto & Giudici, 2020). Digital payment is accessed and utilised make it possible by the through of mobile. People are ready to use the digital platform for the payment (Agur et al., 2020). In recent years, many customers already adopted payments online or through mobile applications. Still, there are customers, those who do not want to do the digital payment, due to lack knowledge, and awareness of digital usage they denied to go digital. The situation of COVID 19 willingly/unwillingly forced them to move towards digital payments (Reserve et al., 2020). In the lockdown period, the proportion of internet users increased from 40% to 100% compared to pre-lockdown levels. Almost all people using online-based services to interact and communicate. The usage of services like Zoom, Google Meet is tremendously increased (Lai et al., 2020). The new digitalize world force people to work from home (Fahey & Hino, 2020). The lockdown period records 95% of total UPI transactions, which includes convenience stores, supermarket, groceries, etc. Further the 95 Banks actively participating in AePS. The application of Bhim app downloads is 1, 25,274. E-commerce also notices high positive trends (Khan, 2020). The word digital money gain popularity in this new normal world. The bank currency and paper notes term as dirty money because of virus spread assumption. That's why digital payment gained huge popularity (Gardner, 2020). "The payment and settlement systems recorded robust growth during 2019-20, growing by 44.1 percent in terms of volume on top of the expansion by 55.8 percent in the previous year. In terms of value, it increased by 5.4 percent on top of 14.2 percent in the previous year, mainly due to lower growth observed in the large value system, viz., Real Time Gross Settlement (RTGS) system. The share of digital transactions in the total volume of non-cash retail payments increased to 97.0 percent during 2019-20, up from 95.4 percent in the previous

year. However, the extended period of lockdown arising on account of the COVID19 pandemic resulted in subdued economic activity and lower discretionary payments, thereby leading to a fall in digital transactions” (RBI Report, 2020). In India, government promote digital payment services and encourage the customer to make digital payments (Kapoor, 2020). “Dilip Asbe, Managing director and CEO of the National Payments Corporation of India (NPCI) has also urged people to increase the use of digital payments in order to make payments contactless” (Pwc, 2020b). The government support on digital payments system increases contactless payments. Further, it shows that the perceived risk from coronavirus spread and perceived usefulness of using digital payment methods are related to each other (Aji et al., 2020). Most of the countries flattened their COVID-19 cases curve by adopting a digital platform. It noted that it reduces the mortality rates across the globe (Ramanathan et al., 2020). Moreover, digital methods are becoming the backbone of public-health response to coronavirus crises around the globe. The digital response of millions of people advantages large online datasets, billions of mobile phones, connected devices, relatively low-cost computing resources, and advances in machine learning and natural language processing. These all ultimately contribute to economic development (Budd et al., 2020). Further, the digital platform can also improve human health education and communication. In many countries, the government has collaborated with a social media platform like WhatsApp, Facebook, and Twitter. These applications inform people and give accurate information about the coronavirus crisis (Wang & Tang, 2020). The digital payment system help world to reduce human touch, which ultimately decreases the spread of coronavirus (De’ et al., 2020). Data protection and security became key concerns for everyone in this crisis. The digital divide is more useful in developing countries because of cultural and social issues (Dwivedi et al., 2020). The use of digital payment methods helps in the development of the country as well as fruitful in COVID 19 situation but at the same time assures the protection of the consumer is also became necessary (Boakye-Adjei, 2020). The government also monitors infected people and traces their contacts using mobile apps, which also raised the concern of people's privacy (Affairs et al., 2020).

III. Research Methodology

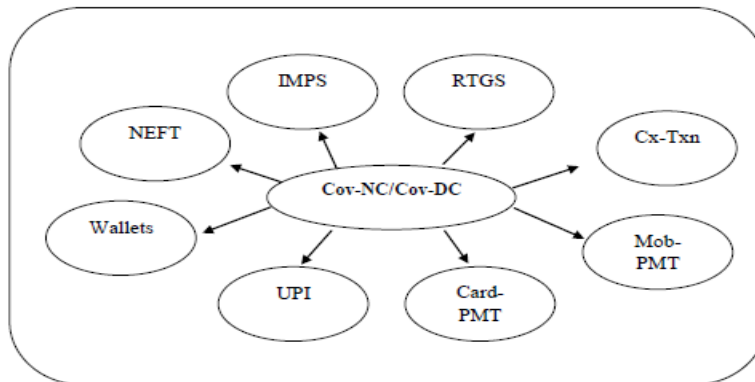
3.1. Data

A strong methodology is the backbone of the research. The research methodology includes the way the researcher gathers, evaluates, and interprets the data in the study. The variable taken in the study are Covid new cases, Covid death cases, Customer Transaction, Mobile Payments, Card Payments, UPI, wallets, NEFT, IMPS, and RTGS. The study is secondary in nature. The data of Covid new cases and Covid death cases obtained from India data were collected from the Oxford Martin Programme on Global Development, which is a collaborative database of the University of Oxford researchers and Global Change Data Lab (Our World in Data Organisation, 2020). The monthly data of selected digital payment gateways were collected from the RBI website (RBI Bulletin, 2020). The period of gathered data is from Jan 2020 to August 2020. The collected data analyzed with multiple regression analyses.

3.2. Model Development

The below-mentioned picture gives a more clear idea about the independent and dependent variable used in the study. The dependent variable consists of Covid new cases and Covid death cases. The independent variable includes customer transactions, mobile payments, card payments, UPI, wallets, NEFT, IMPS, and RTGS.

Figure 1, Model of Digital Economic and Coronavirus Indicators



Sources: Authors estimated

Table 1, Indicators of Digital Economics and Coronavirus

Variable Symbol	Variables	Attribute of Variables	Theory Judgment
Y ₁	Corona New cases	Cov-NC	Positive correlation
Y ₂	Corona Death case	Cov-DC	Positive correlation
X ₁	Customer Transactions	Cx-Txn	Negative correlation
X ₂	Mobile Payments	Mob-PMT	Positive correlation
X ₃	Card Payments	Card-PMT	Negative correlation
X ₄	Unified Payments Interface	UPI	Positive correlation
X ₅	Wallets	Wallets	Negative correlation
X ₆	National Electronic Funds Transfer	NEFT	Positive correlation
X ₇	Immediate Payment Service	IMPS	Positive correlation
X ₈	Real-time gross settlement systems	RTGS	Negative correlation

Sources: Authors estimated

The table 1, shows all the variables taken in the study. The attributes of variables are also given which help in the customization of writing variables. The last column in the table also gives theory judgement of correlation of various selected variables. It is drawn from the table that Corona New cases, Corona Death case, Mobile Payments, Unified Payments Interface, National Electronic Funds Transfer, Immediate Payment Service has shown a positive correlation. The Customer Transactions, Card Payments, Wallets, Real-time gross settlement systems have shown negative correlation.

3.3. Methods

The multiple linear regression equation used in this study is as follows:

$$Y_1 = \alpha + \beta_1 * Cx-Txn + \beta_2 * Mob-PMT + \beta_3 * Card-PMT + \beta_4 * UPI + \beta_5 * Wallets + \beta_6 * NEFT + \beta_7 * IMPS + \beta_8 * RTGS + \epsilon \text{-----1}$$

$$Y_2 = \alpha + \beta_1 * Cx-Txn + \beta_2 * Mob-PMT + \beta_3 * Card-PMT + \beta_4 * UPI + \beta_5 * Wallets + \beta_6 * NEFT + \beta_7 * IMPS + \beta_8 * RTGS + \epsilon \text{-----2}$$

Model Fit: Variables are set

$$Y_1 = \alpha + \beta_1 * Mob-PMT + \beta_2 * UPI + \epsilon \text{-----3}$$

$$Y_2 = \alpha + \beta_1 * Mob-PMT + \beta_2 * UPI + \epsilon \text{-----4}$$

For accomplishment of the objectives of the study, the following null hypotheses are set:

- ✓ H₀₁ = Customer Transaction has no positive effect on Cov-NC/Cov-DC.
- ✓ H₀₂ = Mobile Payment has no positive effect on Cov-NC/Cov-DC
- ✓ H₀₃ = Card Payment has no positive effect on Cov-NC/Cov-DC
- ✓ H₀₄ = UPI has no positive effect on Cov-NC/Cov-DC
- ✓ H₀₅ = Wallet has no positive effect on Cov-NC/Cov-DC

- ✓ H_{06} = NEFT has no positive effect on Cov-NC/Cov-DC
- ✓ H_{07} = IMPS has no positive effect on Cov-NC/Cov-DC
- ✓ H_{08} = RTGS has no positive effect on Cov-NC/Cov-DC

IV. Data Analysis and Interpretation

This part of the research shows the analysis of the research. The tables reflect on the results of the study. This section lays down the major results and analysis whether Covid new cases and Covid death cases in India has a significant relation with customer transaction, mobile payments, card payments, UPI, wallets, NEFT, IMPS and RTGS.

Table 2, Correlation of Digital Economic and Coronavirus Indicators

Variables	Cov-NC	Cov-DC	Cx-Txn	Mob-PMT	Card-PMT	UPI	Wallets	NEFT	IMPS	RTGS
Cov-NC	1									
Cov-DC	0.97	1								
Cx-Txn	-0.20	-0.23	1							
Mob-PMT	0.69	0.72	0.38	1						
Card-PMT	-0.03	-0.09	0.67	0.58	1					
UPI	0.80	0.82	0.16	0.97	0.44	1				
Wallets	-0.02	-0.08	0.68	0.58	1.00	0.45	1			
NEFT	0.16	0.12	0.92	0.68	0.73	0.50	0.73	1		
IMPS	0.38	0.36	0.61	0.89	0.88	0.80	0.88	0.82	1	
RTGS	-0.19	-0.23	1.00	0.38	0.68	0.16	0.68	0.93	0.62	1

Sources: Authors estimated

Table 2, revealed that the correlation between coronavirus indicators and digital payment gateways. It signifies that the perfect positive correlation relationship between variables like wallets, card payments, RTGC, and customer transaction. The strongly positive relationship depicts between coronavirus death cases, coronavirus new cases along with mobile payments, UPI, NEFT, and IMPS. UPI stated that positive relationship with coronavirus new cases- coronavirus death cases-mobile payments, wallets with customer transaction, NEFT shows that positive relation with customer transaction, mobile payments, card payments, wallets. IMPS stated that positive relationship with customer transaction, mobile payments, card payments, UPI, Wallets, NEFT. The moderate positive relationship identified between variables are mobile payments with customer transaction, card payments with mobile payments, UPI with card payments, wallets with mobile payments, UPI, NEFT with UPI, IMPS with coronavirus new cases- coronavirus death cases, RTGS with mobile payments. The weak positive relationship explained between the variables of UPI with customer, NEFT with coronavirus new cases and coronavirus death cases, RTGS with UPI. Further, the coronavirus new cases, coronavirus death cases show a weak negative relationship with the customer transaction, card payments, wallets, and RTGS.

Table 3, Covid19 New Cases and Digital Economics Indicators

Dependent Variable	Independent Variable	Beta	T-Count	Sign	Explanation
Covid-NC	Constant	2342389	2.4068		
	CT	-0.327	-1.493	.196	NS
	Mob-PMT	5.70	2.86	0.029	S
	CP	-0.311	-1.197	.285	NS
	UPI	11.99	3.5659	0.015	S
	Wallets	-0.34	-1.379	.226	NS
	NEFT	-0.269	-.973	.375	NS
	IMPS	-0.479	-1.145	.304	NS
	RTGS	-0.321	-1.456	.205	NS
F-Count		11.30		0.015	S
R Square		0.65			
Durbin Watson		1.94			

Sources: Authors estimated

Table 3, declared the relationship between dependent and independent variable. The dependent variable is coronavirus new cases and independent variables are customer transaction, mobile payments, card payments, UPI, wallets, NEFT, IMPS and RTGS. The table 3, declared the value of F-count, R square, Durbin Watson statistic, Beta, T-count and significant value. R squared (r^2), the Coefficient of Determination. It provides the proportion of the total variation in y explained by the regression model. The value of r^2 is 0.65 means that 65% of the variation of y-values around the mean are explained by the x-values. Additionally, it also shows the Durbin Watson statistic. The DW test is the autocorrelation test in regression analysis. Here, James Durbin and Geoffrey Watson (Durbin-Watson Statistic) value is 1.94 suggest that there is no autocorrelation exist between the variables. The variable mobile payments and UPI have a significant value of 0.029, 0.015 respectively. This value is less than the significant level of 0.05, which indicates that the author rejects the null hypothesis for mobile payments and UPI. The other variable customer transaction, card payments, wallets, NEFT, IMPS, RTGS have insignificant values which are greater than 5% ($H1 >.196$), ($H3 >.285$), ($H5 >.226$), ($H6 >.375$), ($H7 >.304$), ($H8 >.205$). This variable has values more than 0.05 significance level that revealed that authors reject the null hypothesis and accept the alternative hypothesis. It would conclude that there is a significant relationship between Covid-NC with mobile payments and UPI and there is insignificant relationship between Covid-NC with variable includes customer transaction, card payments, wallets, NEFT, IMPS and RTGS.

Table 4, Significant Results of Covid19 New Cases and Digital Economics Indicators

Dependent Variable	Independent Variable	Beta	T-Count	Sign	Explanation
Covid-NC	Constant	2342389	2.40677	0.053	Significant
	Mob-PMT	5.70	2.86005	0.029	Significant
	UPI	11.99	3.56587	0.015	Significant
F-Count		11.30		0.015	Significant
R Square		0.65			
Durbin Watson		1.94			

Sources: Authors estimated

Table 4, the value of r^2 is 0.65 means that 65% of the variation of y-values around the mean are explained by the x-values. The value of Durbin Watson statistic is 1.94, which shows the positive autocorrelation between a dependent variable and independent variable. Further, the data declared the significant P-value of the relation between Covid-NC with the

Mobile Payments and UPI. The significant value for Mobile Payments and UPI is ($H_1 < 0.029$), ($H_1 < 0.015$) respectively. In table p-value, it is less than 0.05 indicates that the author rejects the null hypothesis. This means there is a significant relationship between Covid-NC with Mobile Payments and UPI.

Table 5, Covid19 Death Cases and Digital Economics Indicators

Dependent Variable	Independent Variable	Beta	T-Count	Sign	Explanation
Covid-DC	Constant	1366702	2.78	0.03	
	Cx-Txn	-0.30	-1.71	0.15	NS
	Mob-PMT	3.00	3.35	0.02	S
	Card-PMT	-0.38	-2.20	0.08	NS
	UPI	6.41	4.37	0.00	S
	Wallets	-0.39	-2.33	0.07	NS
	NEFT	-0.27	-1.24	0.27	NS
	IMPS	-0.59	-2.05	0.10	NS
	RTGS	-0.29	-1.63	0.16	NS
F-Count		19.10		0.00	S
R Square		0.76			
Durbin Watson		1.98			

Sources Authors estimated

Table 5, explore the association between Coronavirus and digital indicators in regression analyses. The dependent variable is coronavirus death cases and independent variable consist of the customer transaction, mobile payments, card payments, UPI, wallets, NEFT, IMPS and RTGS. The table 5, shows that the value of F-count, R square, Durbin Watson statistic, Beta, T-count and significant value. The Coefficient of Determination (R^2) give the proportion of the total variation in y explained by the regression model. The value of R^2 is 0.76. This value confirms that 76% of the variation of y-values around the mean is explained by the x-values. Further, Durbin-Watson statistic used to find out, there is no autocorrelation between variables. The value of DW is 1.98 to recommend. It is revealed that variable mobile payments and UPI have a significant value 0.02, 0.00 respectively. In this case, rejects the null hypothesis for mobile payments (H_2) and UPI (H_4) because the p-value is less than the significant level of 0.05. The variable customer transaction, card payments, wallets, NEFT, IMPS, RTGS have significant values greater than 5% ($H_1 > 0.15$), ($H_3 > 0.08$), ($H_5 > 0.07$), ($H_6 > 0.27$), ($H_7 > 0.10$), ($H_8 > 0.16$). This value declared that the author fails to reject the null hypothesis because variables have values more than 0.05 significant level. The analyses conclude that Covid-DC with mobile payments and UPI has shown a significant relationship with each other. The variables customer transaction, mobile payments, card payments, UPI, wallets, NEFT, IMPS and RTGS gave a result that there is no significant relationship with Covid-DC.

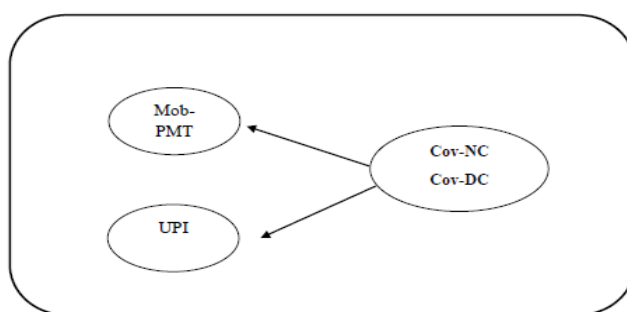
Table 6, Significant Results of Covid19 Death Cases and Digital Economics Indicators

Dependent Variable	Independent Variable	Beta	T-Count	Sign	Explanation
Covid-DC	Constant	1366702	2.784718	0.031798	Significant
	Mob-PMT	2.999807	3.346484	0.015487	Significant
	UPI	6.408082	4.36986	0.00472	Significant
F-Count		19.09567		0.00472	Significant
R Square		0.760915			
Durbin Watson		1.98			

Sources Authors estimated

Table 6, The r^2 value is 0.76 which tell that 76% of the variation of y-values around the mean is explained by the x-values. The Durbin-Watson autocorrelation regression model has the value of 1.98, which is called no-autocorrelation between variables. Additionally, the table 6 gives the significant P-value of the relationship between dependent and independent variables. The Mobile Payments and UPI has significant value($H1 <0.015$), ($H1 <0.004$) respectively. The value is less than 0.05 declared the rejection of the null hypothesis. It concludes that Mobile Payments and UPI has a significant relationship with Covid death cases.

Figure 2, Model-Fit of Corona virus and Digital Economics



Sources : Authors estimated

The charts give the result of the multiple regression model. the study covered the variables Covid new cases, Covid death cases, customer transaction, mobile payments, card payments, UPI, wallets, NEFT, IMPS and RTGS. This chart visualized that only two variable shows a significant relation with Covid-NC and Covid-DC.

V. Conclusion

The paper focuses on the Covid-19 outbreak impact on the digital economy of India. The variables covered for this research are customer transactions, mobile payments, card payments, UPI, wallets, NEFT, IMPS, and RTGS. The impact of Covid-19 on variables identified by applying the statistical model of multiple regression. According to data, it reveals that only two variables Mobile Payments and UPI have a significant relationship with Covid-NC and Covid-DC. It concludes that usage of mobile payments and UPI increased with increment in the Covid-19 new case as well as death cases. The research clear on the point that the digital economy gives positive response during Covid-19. Yes, the impact is minimal in a few digital payments gateway, but it is positive. Finally, the result has shown the positive regression line from mobile payments & UPI with Covid-19 new & death cases tell that due to the spread of coronavirus, people strongly follows government rule of social distancing. They have done all the possible work from their home through a mobile application or with digital gadgets. At last, just like every coin has two sides, does Covid 19. On the one side, Covid-19 pandemic disrupts the whole economy another side, it is also true that it will lead our country people towards digital management. It would recommend that in further study if long-term analyses of the Covid-19 pandemic with digital economic indicators give a more adequate result. In addition, the daily digital transaction data could be giving analyses that are more accurate. For a more satisfactory result, another statistical model also can be applying and compare the result of it. Further, if the significant level increases from 5% to 10% then might the result will vary, and other relationship will be established.

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India's look West Policy: An Overview

*Dr. Hari ram Parihar**

Introduction

India's relations with the west Asian countries are historical since the independence of India. India has invested in economic, political security and strategic fields with the West Asian nations.

In the post colonial Era both side work along the ideology of non- alignment India's look West policy indicates India's emerging economic and relation with the countries of West Asian the order to boost its energy security a counter balance to the strategic influence of other major powers in the region.

During the PM Manmohan Singh emphasized on a "look West policy" like India's "look East" but he failed to get much more. The new PM Modi has started to reinforce the "look West" or "link West" policy since May 2014.

Prime Minister Modi has transformed Indian foreign policy according to new work and India's emerging National investment in his one year of office. Despite the Hindutva GOI the PM Modi keens to make friendly and deep relations with the Arab countries.

PM Modi's New Foreign Policy efforts are also to break the conventional dichotomy to India Arab relations. Arab countries want stronger and greater engagement with India.

India's recent two big initiatives in its West Asia Strategy could explain this. One is Indian Air Force (IAF) visit to Saudi Arabia and another is Indian Prime Minister's trip to the United Arab Emirates.

the being with you for policy effort Charleston to bring the dimensional did Johnny to India of a fetish instead of countries are stronger and later and get meet with India.

India speaking to pick invitations and Alicia to Jessica texting this one is Indian food is pathetic and Olivia and another Indian play Minister tripto the United of Emirates.

The best Asian region is one of the most unstable and conflicted regions in the contemporary world.

Multifaceted factors, including regional and international powers interest produced vast turmoil in the post Arab spring era in the region. A range of Islamic terrorist groups, civil wars and external intervention made West Asia the most horrible region.

The whole West Asia is now in big Socio political, economic turmoil and boundaries are regularly fragmenting and integrating. The Islamic state and other terror groups are rapidly moving ground in Iraq, Syria, Yemen and beyond. The Islamic state has become the biggest challenge for this region.

The West Asia region is also in the process of resettlement and re- alignment of the region of Iran due to the vacant entry of Iran in the international arena through text historic nuclear deal.

A trustful relation between regional power only can bring peace and stability in the region.

In the Midst of these challenges, the west Asian nation and India should develop their relations in near future.

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Research Methodology

The data presented in this research paper is on the basis of secondary data which has been published in the various books, research papers, magazine, and journals and on several government websites the fact introduced here are collected on the basis of many governmental organization and on the basis of having conversation with the local public.

The sprouting of the 'look West' policy

Narsimha Rao's look East policy succeeded because southeast Asia began to look West to India seeking a balancer to China Mr. Modi look West policy will succeed because West Asia is looking East worried about the emerging strategic instability in its own neighborhood and structural shift in the global energy market.

Nuanced view of reason

The foundation for Mr. Modi successful outreach to West Asia was inspired laid by his procedure when India invited the king of South America South Arabia to be the chief guest at the republic day parade in 2006 this was followed by PM Manmohan Singh's visit to Riyadh and the South India Saudi defense cooperation agreement signed in 2014 growing India Saudi cooperation in the field of terrorism may also have also contributed to India's relative ne mile responsiveness to Saudi aggression in Yemen but it did set the stage for wider engagement at a strategic level with the other states of gulf cooperation council. (GCC)

Mr. Modi's visit to the UAE was presented by significant digits to other GCC States by external affairs minister Sushma Swaraj with the minority suni leadership and a majority population Brahman has tried hard not to get drawn into the wider sectarian conflict in West Asia.

GCC look West

The new strategic partnership outlined is not just defined by India's look West policy based on its energy and financial need but that it is equally defined by the sea is look East policy soliciting greater India engagement with West Asia several factors have contributed to this fundamental shift in investigation strategic thinking.

It would seem to India that a strategic engagement is the product of a mutual look at each other's policy.

If China's rise of the book that draws for South East Asia as a look at India's policy, the various field failures and weaknesses and weakening of the strategic trust between the West and the West Asia may have contributed to the GCC look at India policy.

Domestic Dimension

It is in the nature of things that any visit of an Indian Prime Minister of a Muslim nation has a domestic resonance every prime minister has been aware of this offer even the timing of the visit of Muslim Nations is defined by the domestic political calendar.

This address in Dubai was aimed at not just on Indian audience but a wider Southern Asian audience of course the global audience of the diplomats and strategic policy and lets the PM made it clear that he did have the audience in the Pakistan in the mind when he spoke about working together with the UI fighting terrorism.

Mr. Modi and his political manager should be satisfied that prime minister visit to the capital of neighboring Muslim Nations Bangladesh and the UAE and to the central Asian republics went well.

That all of this may have been planned with the demo stick political ideas in mind to be expected given the history of India's relation with the Islamic world it remains to be how much and how lasting and impact all of this would have on domestic politics.

Regional non-alignment

Stepping away from religious activities and accepting is my and multicultural as the defining principle of a modern state is the only way forward for each of the countries of Asia from west to east India appeal to Asia as a whole is built on these foundation principles of its constitution.

India – Saudi Arabia Relations

Saudi Arabia relations Saudi Arabia has identified India as one of the 8 strategic partners it tended to deepen partnership investment and culture.

Political Corporation - There is a strong political win in both India and Saudi Arabia to take relation to new heights.

The current scenario is unlike the cold war period when India Saudi Arabia ties were determined by the Pakistani factor.

For decades this prevented both New Delhi and we had from discovering the strategic importance of engaging one another alongside the growing political economic ties cooperation in the security PLM is significantly progressing and agreement to constitutive conference comprehensive security dialogue at the national security advisor NSA level and joint working group on counter terrorism is timely.

Challenges for India

The politics of the middle East are complex and multidimensional. The Saudi Arabia Turkey Rivera re is one of the dimensions. Another dimension is the Saudi Arabia Iran every India has close relationship with both Saudi Arabia and Iran however India is yet to work out a way to balance its ties with Iran on the one hand and Saudi Arabia and the United States on the other.

Way forward Conclusion

Uplifting corporation is Maritime security domain from the current status would be in the interest of both countries India could explore the possibility to engage with the newly established of the space agency shifting some labor-intensive establishment from Saudi Arabia to India would serve the respective nation that is to reduce the kingdoms executive population and boosting in make in India.

India Israel relations

Since India established full diplomatic ties with Israel in 1992 relationship between the two countries have grown at an astonishing face covering a wide range of issues from defense and homeland security to agriculture and water management and now education and even outer space.

Political Corporation - The political ties have become special equity under the Modi government in 2017 Modi became the first ever Indian PM to visit Israel during this visit the diplomatic relationship was separated by a strategic level and 7 agreements IMO use was signed in areas of R&D innovation, water agriculture and space.

In 2018 Israeli PM who visited India during which government to government G2G agreement on cyber security oil and gas corporation film corporation and air transport were signed along with the five other semi government agreements.

An increase in the high-level exchange in recent times has expanded cooperation in areas like trade, agriculture, science and technology and security.

What is India's stand on Israel Palestine issue however India's stand on Israel Palestine conflict has not entered the growing diplomatic relationship with India and Israel at the recent close ties with Israel had diluted India's instance on the issue however the Indian government clarified that this doesn't mean that there is a change in India's traditional support

for the separate state of the Palestine never the less from the the growing strategic ties it is evident that India is distancing itself from advocating for the Palestinian cause.

Conclusion

India's close diplomatic relationship with Israel is vital for India's national interest despite the criticism of India abandoning Palestine in the current junction it is necessary to undertake a balancing in the high and stable West Asia so that there is room for change when the need arises.

India Iran Relation

India and Iran have friendly relations in many areas despite India not welcoming the 1979 revolution they continue to collaborate in supporting the broad base anti-Taliban government led by Ashraf Ghani and backed by the US and two countries signed a defense cooperation agreement in December 2002.

The two countries have in place several bilateral consultative mechanisms at various levels whose meetings take place regularly in addition the institute of defense studies and analyses IDSS of India and institute of political and international studies IPI of Iran hold regular roundtable to exchange views and ideas on bilateral and multilateral issues.

India and Joint Commission Meeting (ICM)

India Iran holds regular talks on economic and trade issues at the INR to Iran joint commission meeting.

India Iran Joint Business Council (JBC)

Both India and Iran hold joint business councils. Cultural and Education

India and Iran maintain regular culture and education exchange m o u has signed a January 2008 between the Indian council for cultural relations (ICCR).

India is to set up a cultural center in Iran. Iran has two cultural centers in Delhi and Mumbai; there are about 8,000 Iranian students studying in India. India provides 67 scholarships every year to Iranian students under ITEC, ICCR, Colombo Plan and IOR-ARC scheme.

India over the years has emerged as a one of the favorite tourist destinations for Indians tourists and every year around 40,000 Iranian visit India for various purposes.

India UAE Relation

India US relations can be seen as a bond built for the ages starting that diplomatic relations in 1972 for the country's enjoy strong bonds of friendship based on age old cultural, religious and economic ties between the two nations.

The recent productive visit of PM Modi to UAE so there is intention to get closer with West Asian countries and India Indian prime minister resided the UAE over 34 years in a country that contains 2.6 million Indian workers.

Bilateral Relations

Around 2.8 million Indians are living harmoniously in the U.A.E.

U.A.E has a special place due to its business-friendly atmosphere, willingness to invest in the Indian economy and its important role in maintaining peace and stability in the region.

Economic Relations - Trade and commerce forms the backbone of the bilateral relations.

Investment from UAE to India exceeds and 11 billion about and four to five billion in the format of the FDI.

UAE is India's third largest trade partner after China and the United States.

The UAE accounts for 8% of India's oil import and was the fifth largest supplier of crude oil to India in 2015 to 2016.

Security and Defense Cooperation –

Another significant pillar of India you it is reflected in their growing corporation in security and defense sectors with the spread of radicalism in gulf and South Asia India looks to an hour security cooperation with you a to counter terrorist threats and combat radicalization desert eagle to attend their combat exercise was held in May June 2016 between the air forces of India in the UAE.

Concerns/Challenges - As far as investment is concerned, slow implementation from Indian sites is a major obstacle. The bilateral trade has come down significantly in the past four years. It has been noticed that workers from other nations include the Philippines and then the disease was replacing Indian workers.

Conclusion

The gulf region has historical, political, economic, strategic and cultural significance for It has been assessed that Saudi Arabia is a fading power whereas UAE, Qatar and Iran are emerging as the new regional leaders.

Indo- Israel defense cooperation must be up-scaled in terms of Joint ventures (JV) and Joint Research and Development (RD) which can be a force multiplier to realistically achieve India's ambition to be a major global power.

Thus, Indian interests would be best served if the stability in the region is ensured through cooperative security since the alternative, of competitive security options, cannot ensure durable peace.

We must take collective and concerted action to prevent the terrorism from posing an existential threat to human kind.

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Implementation of Basel II Norms: Issues and Challenges

*Dr. Vikash**

Full scale implementation of Basel II will surely go a long way in overhauling banking industry in any country. But full scale, implementation of Basel II is not going to be easy for Indian Banks. The technology infrastructure in terms of computerisation is still in a nascent stage in many of the Indian Banks computerisation of all branches particularly, rural and semi-urban branches will be a difficult task. Data management will be another tough job. Owing to late start in computerisation most Indian banks lack robust data- capture, cleansing and management practices.

Introduction:

The for international settlements was for a long time grappling with the issue of how much capital a bank should have in order to ensure its continued stability having regard to the environment in which it operates and on the basis of assessment of risks involved. The significant and far reaching initiative of the Basel Committee on Bankng Supervision [BOBS] was laying down the minimum capital standards in 1988 known as Basel-I The BIS (Bank for International Settlements) arrived at the minimum capital requirement at eight per cent of risk weighted assets. The major objective of Basel I was was strengthening the international banking system by promoting convergence of national capital standards in order to iron out competitive inequalities among banks across countries. The Basel I recommendations on minimum capital requirement were accepted by most countries for adoption by banks in their respective countries. India too adopted Basel-I for implementation.

The Basel I accord being quite simple adopted a straight "one size fits all" approach which does not distinguish between differing risk profiles and risk management standards across banks. Basel I norms were mainly meant for ensuring adequacy of capital as a definite proportion of risk weighted assets. These norms however do not take into account risk in respect of individual assets. They consider and take into account risks in totality alone. Also Basel I gave no weight-age to availability of security for a credit facility which has been given due weight-age in Basel II. Also Basel I prescription of keeping same risk capital regardless of maturity profile of loans has been corrected by Basel II making a distinction between short term and long term loans. The Basel committee came out with modified approach. The final version of the Accord titled "International Convergence Of Capital Measurement And Capital Standards: A Revised Framework" was released by BIS in June 2004. This is popularly known as New Basel Accord or simply Basel II.

Objectives

Basel II seeks to rectify most of the defects of Basel I Accord. The objectives of Basel II are the following:

1. to promote adequate capitalisation of banks
2. to ensure better risk management and
3. to strengthen the stability of banking system

Pillars of the Basel II:

Basel II rests on three mutually reinforcing pillars. The first pillar is concerned with closer alignment of bank capital with range of perceived risks. Basel I categorised risks in respect of credit in broad terms without taking into account individual credit worthiness or

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lack of it. In other words it does not consider risks involved in individual assets. Under Basel II the above defect is sought to be rectified by stipulating higher capital for higher risks and vice versa. This pillar of the Approach seeks to bring about alignment of capital requirement to each bank's actual risk of economic loss. It takes into account all types of risks including market risk operational risk and credit risk. It prescribes minimum capital requirement having due regard to risk profile of each bank.

Pillar II of the new capital framework recognises the necessity of undertaking effective supervisory review of bank's internal assessment of their overall risks. This is to ensure that bank managements exercise sound judgement and set aside adequate capital for these risks. Using this Pillar Bank Supervisors namely RBI may evaluate the activities and risk profiles of individual banks in order to determine whether the banks have provided sufficient capital in terms of Pillar I and spell-out ways to set right discrepancies if any.

Pillar III is meant for imposing market discipline among banks to ensure prudent management. This is sought to be done by enhancing the degree of transparency and public disclosures in bank's public reporting. Banks may follow the standardised approach where under they can make use of external credit ratings to assess and evaluate risks. More sophisticated banks can make use of internal rating based approaches. This may however be subject to strict supervision by Regulatory authorities. Apart from credit risk and market risk covered by Basel I, Basel II also provides for operational risks such as losses caused by failure in systems, lapses on the part of staff and also losses arising out of external events such as natural disasters.

The RBI had earlier announced that banks should come out with a framework for migrating their standards of supervision accountability and best practice guidelines in line with the provisions of Basel II Accord. Moreover, the framework adopted by banks must be adaptable to changes in business size, market dynamics and introduction of new products in future. Basel II provides menu of options to measure the risk in respect of all the three types of risks as indicated below:

- a) Credit risk: - External rating based
 - Standardised approach
 - Internal rating based
 - Foundation IRB and advanced IRB
- b) Market risk - Standardised approach
 - Maturity based and duration based
 - Internal model based approach
- c) Operational risk - Basic indicator approach
 - Standardised approach
 - Advanced measurement approach

Basel II norms are very complex and extensive and presuppose a compact techno savy environment and sound MIS.

The RBI had indicated that it would closely monitor the progress to be made by banks and banks will be allowed to migrate to IRB approach only after they develop required skills internally. The Basel II norms set out the details for adopting more risk sensitive minimum capital requirements for banks. The new framework reinforces these risk sensitive requirements by laying down principles for banks to assess the adequacy of their capital and for supervisors to review such assessments to ensure that banks have adequate capital to support their risks. It also seeks to strengthen market discipline by enhancing transparency in

banks' financial reporting. In overall terms we can broadly classify the essentials of Accord of Basel II as follows:

1. Capital Adequacy:

Basel II intends to replace the existing approach by a system that would use external credit assessments for determining risk weights. It is intended that such an approach will also apply either directly or indirectly and in varying degrees to the risk weighting of exposure of banks to corporates and securities firms. The result will be reduced risk weights for high quality corporate credits and introduction of risk weight of 150 per cent for low quality exposures. RBI has maintained higher base level of 9 per cent as against global capital adequacy level of 8 per cent.

2. Risk Based Supervision:

This ensures that a bank's capital position is consistent with overall risk profile and strategy thus encouraging early supervisory intervention. The new framework lays accent on bank managements developing internal assessment processes and setting targets for capital that are commensurate with bank's particular risk profile and control environment. This internal assessment then would be subjected to supervisory review and intervention by RBI from time to time.

3. Market Disclosures:

The strategy of market disclosure will encourage high disclosure standards and enhance the role of market participants in encouraging banks to hold and maintain adequate capital. Banks having high capital adequacy ratios can project better public image and attract larger volumes of business.

Issues Concerns & Challenges

As per RBI guidelines, Indian banks having foreign branches and foreign banks operating in India had to adopt Basel II norms by 31st March, 2008. Excepting LABs and RRBs all other commercial banks have to adopt Basel II norms by 31st March, 2009.

Banks can plan their growth only based on the plan for enhancement of capital consequent on the migration to Basel II norms. In the present stock market scenario, it is extremely difficult for banks to mobilise additional capital from the market through IPOs and follow on issues. Government cannot go on providing additional capital to public sector banks to meet the additional capital requirement from time to time. In the case of private sector banks also, it may not be possible for the promoters to bring extra capital as and when required. Therefore, mobilisation of additional capital for sustaining growth and expansion will be a perennial concern for banks.

Guidelines issued on Supervisory Review Process under Basel II direct banks to make provision for risks relating to credit, concentration, liquidity settlement risk, reputation, strategy and under estimation of credit risk that were not indicated under Basel I. Banks may assess these risks differently based on their understanding and assessment and in this process, they may even commit mistakes. Therefore, the possibilities of shortfall in provisions may not be ruled out.

If rating agencies commit mistakes in this manner in rating credit portfolios of banks by assigning ratings indiscriminately Indian banks may land themselves in trouble later on. This is a matter of concern and banks must exercise caution in this matter. Also there must be stricter rules and guidelines governing surveillance exercises and the assignment of rating by rating agencies. There must be an authority to supervise the work and activities of rating

agencies and such authority must be empowered to take strict action against erring rating agencies.

Also, at times rating cannot be a reliable basis as rating agencies want to make money by attracting more and more rating work. They can be lavish and generous in giving rating in order to expand client base and to amass substantial rating fees. The possibilities of foul play in rating or rating black mail through unsolicited rating etc cannot be ruled out. Moreover, rating exercises in India are restricted to issues and they do not cover issuers. It is not possible to get ratings of issuers and motivating the rating agencies to rate issuers will be a difficult task.

Another concern is anomaly in risk weight. In the case of unrated sovereigns risk weight prescribed is 100 per cent. But, in the case of entities with lowest rating risk weight is 150 per cent. Hence, entities which have fear that they will get poorest rating will avoid rating to take advantage of lesser risk weight of 100 per cent. Thus, there is an inbuilt incentive for various entities to remain unrated.

Basel II provides for alternative approaches for calculation of capital requirement for different types of risks. Bigger banks can develop internal ratings based (IRB) approaches and smaller banks cannot do so. This will bring about domination of the IRB approach among big banks and smaller banks may lag behind in this regard.

Banks which adopt IRB approach will be more sensitive than those adopting standardised approach as a small change in the degree of risk weight gets translated into considerable impact on additional capital requirement for IRB banks. As a matter of strategy, Banks with IRB approach may avoid extension of high risk loans. Banks with standardised approach on the other hand will be less risk sensitive and they may therefore take more such exposures. It is possible that banks with standardised approach may sanction loan proposals earlier rejected by IRB banks. As a result in aggregate terms there is a risk of all banks together maintaining lesser capital than what is required. This will make the banking system vulnerable. This is a concern which has to be addressed by the RBI.

Pillar II of the Basel II framework requires lot of disclosures by way of market discipline. No doubt, such disclosures may be of use and relevance to regulators and rating agencies. But, the customers and general public may not be able to understand appreciate and interpret the details correctly. Unnecessary disclosure may bring about a situation of information or data over load and this may even affect public image of the bank concerned. This issue must be examined by the regulators.

As a result of application of more and more risk sensitive methods thereby ensuring high quality of credit, capital charge for credit exposure may decline. But, this may be counter-balanced by extra capital charge for operational risks. With the result, there will be no saving in capital at all. Banks may have to devise effective ways of managing operational risks as well.

The process of saving capital by focussed lending to those entities with highest credit ratings may lead to acute competition in lending to blue-chip companies and corporates with high credit ratings. These entities will bargain top much for lowest sub-PLR rates of interest on the loans and as a result there will be further pressure on the thinning margins. This will affect profitability of banks which extend large amounts of loans to such entities.

It will be a challenging job for banks to put in place advanced risk management systems. This will entail huge implementation cost. Smaller banks cannot afford to spend heavily by way of implementation costs. How small banks are going to face this challenge

remains to be seen. Another challenge will be storage of requisite data and development of historical data base. This may take lot of time and involve additional expenditure for banks.

On account of implementation of Basel II, there will be need for additional capital of about Rs.12,000 Crores for meeting the capital charge in respect of operational risks. Also, another Rs.20,000 Crores may be required in the next 5 years by way of additional capital. Mobilisation of capital of such magnitude will be a formidable challenge for banks in the present capital market scenario. Banks cannot think of accessing capital through public issues or follow on issues for a couple of years. Ploughing back of profits and creation of extra reserves also may not be possible as it will be difficult to resist the demand of shareholders for dividend at reasonable rate. Therefore, banks will have to encounter the formidable challenge of mobilising required capital in the years ahead.

Basel II will act as a spur for profitable lending of good quality. As a result lending to weaker sections and loaning to priority sectors may not get required attention at the hands of banks. Also, lending to SMEs tiny sectors rural and cottage industries etc may not get required attention. Financial inclusion efforts may take a back seat. These are matters of concern and RBI may have to devise ways of addressing these concerns.

Implementation of Basel II will require huge investment, financial outlay human skill set and knowledge management. All banks are not equally capable to make such huge investment and arrange for required human skill set and knowledge management. Smaller banks may require lot of guidance and support from RBI in this regard.

Advantages

The advantages that may accrue to India on account of implementation of Basel II will be in the form of both banking opportunities and non-banking opportunities.

Banking Opportunities

India is presently one of the fastest growing economies in the world. A sound vibrant efficient and evolved banking system will act as a spur to the growth efforts of the economy. Indian banking system is no doubt stronger than its counterparts in Asia in terms of performance indices financial strength resilience and range of products. When compared to many peer group countries still some better and improved risk practices are required to be adopted by Indian banks.

Many of the Indian banks have low levels of competence in credit to market and operational risk measurement and management system. They are yet develop expertise in the use of modern risk methodologies and tools when compared to their western counterparts. Second stage economic reforms, higher market dynamics and increased globalisation demand robust risk management system in Indian banks. Failures of banks like global Trust Bank and United Western Bank have shown that the existing level of risk based supervision and market disclosures are not adequate in Indian banking system. Basel II will give a new framework for improvement in these areas.

Banks which are Basel II compliant can project a better image and amass more business from the market. The public can choose banks on the basis of market disclosures for keeping their deposits and for their credit requirements. Banks will also have incentive to select assets of better quality. As a result, there will be accent on toning up of credit appraisal and professionalism in credit decisions. There will be shift of emphasis from adequacy of capital to capital efficiency. There will be lot of emphasis on saving capital and economising capital by restricting lending to blue chip companies and entities having highest credit rating.

Credit port-folios of banks may attain better quality in the days ahead. Basel II compliant banking system will further enhance the image of India in the world and India's country rating will go up. This will facilitate larger capital inflows into the country. With improved image Indian banks will be able to raise resources at competitive and cheaper rates in other countries as well. With higher net worthiness and improved capital efficiency Indian banks can aggressively pursue the task of financial inclusion and try to exploit the financial intermediation opportunities available at the bottom of the pyramid with greater measure of success. Risk based capital maintenance by banks will enhance financial stability. This will also promote risk based pricing which will ultimately contribute to enhancement of shareholder value.

Non-Banking Opportunities:

The major advantage of Basel II to India is going to be in the area of services in general and IT and manpower in particular. Banks all over the world will have to make huge investments in order to be Basel II compliant. These investments will be mainly in the areas of information technology systems; training, etc. These will cover software tools database management business intelligence hardware etc. These are necessary to create risk infrastructure to address the three compliance pillars of Basel II. Here is the opportunity for consultancy for IT companies in India and abroad. Employment opportunities in IT companies will increase and grow. Need for experts in the field of risk management credit management planning and strategic planning, management of MIS etc will increase.

Conclusion

Basel-II norms afford an opportunity for banks to put their houses in order and adopt top class risk management practices. Banks that adopt and migrate to the advanced approaches spelt out in Basel II will immensely benefit their share holders in the long run by creating long term sustainable share holder value. Banks are highly leveraged public institutions in as much as they are in control of enormous amounts of public money. Having regard to their high leverage and guided by their role in the nation's economy and requirement of financial stability the governments and regulators world over are concerned about adequacy of capital of banks as a cushion against unexpected losses. Minimum regulatory capital requirements are part and parcel of the mechanism for ensuring that banks have adequate cushion. From this perspective it is extremely important for all banks to ensure full scale implementation of Basel II norms.

Full scale implementation of Basel II will surely go a long way in overhauling banking industry in any country. But full scale, implementation of Basel II is not going to be easy for Indian Banks. The technology infrastructure in terms of computerisation is still in a nascent stage in many of the Indian Banks computerisation of all branches particularly, rural and semi-urban branches will be a difficult task. Data management will be another tough job. Owing to late start in computerisation most Indian banks lack robust data- capture, cleansing and management practices.

However, it is necessary to address the concerns and face the challenges that are likely to crop up in the process of implementation. The challenges that are to be encountered include low level of rating penetration, existence of different kinds of banks with different sizes and financial strength with varying complexities cross border issues in respect of banks operating in countries other than host countries, inadequate computerisation in rural and semi-urban branches lack of robust data capture cleansing and management practices huge implementation cost and requirement of huge financial outlay human skill set and knowledge management.

All the staff of banks must be made to understand that risk management cannot be handled by the Risk Management Department at the corporate office single handed. All branches and all staff should join hands in this complex task. Each bank and each branch of a bank should view Basel II principles from the angle of fine tuning and improving its risk management capabilities by means of constant efforts and mind-searching rather than as a regulatory requirement to be complied with.

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Truncated Question Hour in the 2020 Monsoon Session of Indian Parliament: Emerging Questions

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The 'Question Hour', one of the most striking features of parliamentary form of government in India is an important part of parliamentary proceedings for it ensures Executive's accountability to the Legislature considered as the hallmark of responsible and representative Government. The recent decision of the Centre to restrict and truncate the Parliamentary Session and 'Question Hour' in the name of COVID-19 is not prudent one for this is the time when the Government can handle large number of questions and issues raised by the opposition members and rekindle people's faith in its policies and programmes especially in the health, employment and economy sectors. This is the best opportunity for the Government to prove its worth as one of the most popular Governments ever formed in India.

Key Words: 1. Question Hour, 2. Zero Hour, 3. Representative form of Government, 4. Parliamentary form of Government, 5. Accountability of Government.

Truncated Question Hour in the 2020 Monsoon Session of Indian Parliament: Emerging Questions

The 'Question Hour', one of the most striking features of parliamentary form of government in India is an important part of parliamentary proceedings for it ensures 'executive's accountability to the legislature' considered as the hallmark of responsible and representative government. The 'Question Hour' remains one of the most vibrant hours of the parliamentary proceedings for it is during this one hour that Member(s) of Parliament (MPs) ask questions to ministers and hold them accountable for the overall functioning of their ministries.

There are three types of questions: i) Starred Questions; ii) Unstarred Questions and iii) Short Notice Questions. Starred questions are those to which a member wishes to have an oral answers on the floor of the House. Such questions are distinguished by an asterisk. Supplementary questions may be asked after replies to such questions are given by the ministers. Unstarred questions do not carry an asterisk mark. Answers to them are given in written form. No supplementary questions can be asked thereon. Short notice questions relate to a matter of urgent importance. The minister concerned has to be asked whether he/she can reply to the question at short notice. Answer may be followed by supplementary questions.

On 2nd September, 2020 (Wednesday) the *Lok Sabha* and *Rajya Sabha* secretariat notified that there will be no 'Question Hour' and 'Private Member's Business' during the Monsoon Session of Parliament, which has been truncated to September 14 - October 1 in view of COVID-19 pandemic. It also mentioned that 'Zero Hour' will be restricted to thirty minutes only in both the House. Opposition MPs criticized the decision taken by the government saying they will lose the opportunity and right to question the government.

Miffed over having no 'Question Hour', *Rajya Sabha* member, Derek O' Brien of *Trinamul Congress* questioned this move and said that the pandemic was being used to murder democracy (*The Bangalore Mirror* 2020). Similarly, senior Congress leader, Shashi Tharoor too lashed out and accused the Government of seeking to "reduce Parliament to a notice board

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and using its majority as a rubber-stamp”. According to him, “questioning the Government is oxygen of parliamentary democracy” (*The Bangalore Mirror* 2020).

Although the *Shiv Sena* came out in support of the Centre’s move to drop ‘Question Hour’ from the upcoming monsoon session of Parliament and said “the decision was taken due to an emergency situation caused by the pandemic, which everyone needs to understand” (*The Economic Times* 2020).

Faced with severe criticism for cancelling ‘Question Hour’, the Centre on 3rd September, 2020 (Thursday) revised its decision allowing a thirty minute ‘Question Hour’ in the upcoming session of the Parliament with a rider that only ‘Unstarred Questions’ will be taken. This decision of Government has raised many emerging questions, some important among them may be discussed as given below:

1. Can ‘Question Hour’ be cancelled/suspended/truncated from the proceedings of the Parliament?

Technically, the Centre can cancel/suspend/truncate the ‘Question Hour’ from the proceedings of the Parliament. It is also necessary to mention that ‘Question Hour’ is regulated properly¹. ‘Question Hour’ in both the Houses is held on all days of the ongoing Session but there are two days when an exception is made. There is no ‘Question Hour’ on the day the President addresses MPs from both the Houses in the Central hall of the Parliament. The President’s speech takes place at the beginning of a new *Lok Sabha* and on the first day of a new Parliament year. ‘Question Hour’ is not scheduled either on the day the finance minister presents the Budget (*The Indian Express* 2020 a; 11).

The records showed that ‘Question Hour’ was done away with in *Rajya Sabha* in 1962, 1975, 1976, 1991, 2004 and 2009 (total six times) for various reasons. It further says that during 2015-19, only about forty percent of the total ‘Question Hour’ time was used to raise questions and obtain responses from the Government.

In the five year period, *Rajya Sabha* held three hundred thirty two (332) sittings during which three hundred thirty two (332) hours were available for ‘Question Hour’ at one hour per sitting. However, only one hundred thirty three (133) hours and seventeen (17) minutes were utilized to raise questions and obtain replies from the ministers (*The Times of India* 2020a; 11).

Since the beginning of the current *Lok Sabha*, as per data available at the website of *Lok Sabha* approximately fifteen thousand (15000) questions have been asked in the Lower House.

Regarding *Lok Sabha*, the first *Lok Sabha* had six hundred seventy seven (677) sittings, the Sixteenth (16) only two hundred twenty six (226). When a Government refuses to be questioned or challenged, Parliament ceases to matter (*The Times of India* 2020b; 16).

She further adds that “the main reason for the disdain for Parliament among top politicians is the increasing disjunction between electability and parliamentary performance. A media saturated politics has created personality cults which short circuit Parliament. Parliament is also becoming irrelevant because of the fundamental de-legitimization of debate across our intensely polarized society. Asking any kind of question is seen as politically motivated or loaded with agenda. Only when genuine debate and not the meaningless television (TV) shouting match is re-legitimized, can Parliament see the return of substantive debate”.

Thus even today if the Government so decides, ‘Question Hour’ may be suspended/cancelled from the parliamentary Proceedings during a particular session of the House but that should only be done if there is an agreement between the ruling and opposition parties and such a decision is in the national interest.

2. What has been the practice regarding the conduct of Legislatures around the world during COVID-19?

The Monsoon Session of Parliament is scheduled to begin on September 14 and continue till October 1. While *Lok Sabha* will sit from 9 a.m. on the opening day, it will convene from 3 p.m. to 7 p.m. for all subsequent sittings. *Rajya Sabha* will sit in the first half from 9 a.m. to 1 p.m. Proceedings of both the Houses will be held on a daily basis with no breaks even on the weekends. Those who attend the Session would be required to follow the necessary coronavirus protocols including getting tested for COVID-19 within seventy two hours.

Parliaments the world over have to adapt to the COVID-19 outbreak. But the time tables of other major Parliaments meeting during the pandemic, be it in the United Kingdom (UK) or New Zealand, have remained largely unchanged even as there have alterations in the modalities, for instance, questions to the Prime Minister in the British Parliament were posed both by members in the Chamber and remotely (*The Indian Express* 2020b).

Further, it is important to note that in some countries like the UK, Australia, Canada and South Africa etc. calendar of the Legislature with sitting dates are announced at the beginning of the year itself (Khullar 2017).

In contrast to Indian Parliament having no set calendar in advance, “several Parliaments across the world are committed to meet on set dates through the year, and therefore, it was not surprising to see many parliamentary constitutions quickly adapting to the changed circumstances by adapting the virtual or hybrid sessions, for example, the UK, Canada, the Bureau of European Parliament, Chile, Spain, Maldives, etc. (*Economic & Political weekly* 2020; 15). This is high time, the Indian Parliament issues the annual calendar in the beginning of the year itself highlighting the sittings of the two Houses in advance.

Even within our own country, ‘Question Hour’ has not been done away with by all State Assemblies that have met during the pandemic, for example, while Rajasthan and Uttar Pradesh (UP) did not have a ‘Question Hour’, others like Chhatisgarh and Arunachal Pradesh did have the ‘Question Hour’ (*The Indian Express* 2020 b; 8).

Thus to use COVID-19 as an excuse to restrict and truncate the Parliamentary Session and ‘Question Hour’ is not *bonafide* on the part of the Centre for this is time when the Government can handle large number of questions and issues raised by the opposition members and rekindle people’s faith in its policies and programmes especially in the health, employment and economy sectors. This is the best opportunity for the Government to prove its worth as one of the most popular Governments ever formed in India.

3. Relevance of ‘Question Hour’ for Parliamentary Democracy

Basically, a parliamentary form of Government works on the principles of ‘responsibility’ and ‘representation’, making sure that the Executive remains responsible to the Legislature. In the words of noted constitutional expert, Subhash Kashyap (Kashyap 2015; 52-71),

Indian Parliament is a multifunctional institution which performs variety of roles, e.g. to form or end the Government; to represent the electorate; to legislate; to hold the Government accountable for its functions; to monitor the expenditure of public funds; to be a forum of debate; to be a forum for the expression of grievances and to call for information etc. About the important role of Parliament, another scholar, Neera Chandhoke (*The Hindu* 2016) says,

Parliament makes laws, ensures accountability of the Government and considers and scrutinizes legislation through committee system. But above all, Parliament provides a

forum and establishes procedures for reflection on and critical engagement with, what has been done and what needs to be done in the light of popular expectations.

The above mentioned role of Parliament will never be effectively and fully justified to meet people's expectations without the tools and means like 'Question Hour'. Although the apparent purpose of asking a question is to elicit information, the real object of the member is to point out the deficiencies and weakness of the administration; to solicit the viewpoint of the Government on a particular public policy which is already in existence or the Government is planning to execute in future and to mold the public opinion on the current issues as per response given by the Government.

On paper, 'Question Hour' provides space for MPs from both the ruling and opposition parties to ask questions. 'Zero Hour', an Indian parliamentary innovation, is also a space open to all MPs to raise matters of urgent public importance. But in practice, both 'Question Hour' and 'Zero Hour' are far more important for opposition MPs than those from the ruling party for the opposition especially cramped in a House in which the ruling party enjoys a large majority, these are precious spaces and opportunities. Presently amid the pandemic in which the Executive is appropriating more powers, and when there is a larger tendency on its part to short-circuit debate and deliberation, it is the Oppositions' spaces that need to be specially and specifically protected, even extended (*The Indian Express* 2020 b; 8). 'Question Hour' has become more relevant than ever before for it enlightens a hope among both the 'citizens' and 'representatives' that the Government may be reminded of its duties towards them as per provisions of our Constitution. Through 'Questions', may the Ministers be reminded of their solemn oath they had taken while resuming their respective offices.

Conclusion : The 'Question Hour' gives expression and meaning to the Executive's accountability to the Legislature and is considered as a basic feature and component of parliamentary form of Government. The two Houses of Indian Parliament are the solid symbols recognized as temple of democracy and occupy privileged position as the voice of people and States in India's federal democratic set up. Any attempt to convene the Session of the House just for legislative sanction on Government business whether there is COVID or no COVID is a retrograde step in the direction of making the role of the institution of Parliament effective and powerful.

'Question Hour' is one of the life lines of parliament proceedings which enables the members particularly from the opposition to do their job, which is necessary for a healthy and vibrant democracy. It is agreed that presently COVID-19 has created a peculiar situation but these are no excuse for abolishing/suspending/truncating 'Question Hour' for this one of the foundations on which the Parliamentary democracy keeps standing tall. On the other hand, the Government in agreement with the opposition should organize more viable forums for the debate and through these debates, a consensus on the future means of public welfare and long term solutions for the pandemic should be arrived at in the consonance with the ideals mentioned in the Constitution of India.

Notes:

Parliament has detailed and comprehensive rules related with Question Hour and the Presiding Officers of the two Houses are the final authority with respect to the conduct of Question Hour. For example, usually Question Hour is the first hour of a parliamentary sitting [Rule 32 of *Rules of Procedure and Conduct of Business in Lok Sabha*, 15 th Edition, 2014, p.15 and Rule 38 of *Rules of Procedure and Conduct of Business in Rajya Sabha*, https://rajyasabha.nic.in/business/resume_main.aspx seen on 04.09.2020)]. In 2014, *Rajya*

Sabha Chairman Hamid Ansari shifted Question Hour from eleven (11) a.m. to twelve (12) noon to prevent its disruption.

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David Hume The Idea of Necessary Connection

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First published Mon Feb 26, 2001; substantive revision Wed Apr 17, 2019 Generally regarded as one of the most important philosophers to write in English, David Hume (1711–1776) was also well known in his own time as an historian and essayist. A master stylist in any genre, his major philosophical works—*A Treatise of Human Nature* (1739–1740), *the Enquiries concerning Human Understanding* (1748) and *concerning the Principles of Morals* (1751), as well as his posthumously published *Dialogues concerning Natural Religion* (1779)—remain widely and deeply influential.

Although Hume's more conservative contemporaries denounced his writings as works of scepticism and atheism, his influence is evident in the moral philosophy and economic writings of his close friend Adam Smith. Kant reported that Hume's work woke him from his "dogmatic slumbers" and Jeremy Bentham remarked that reading Hume "caused the scales to fall" from his eyes. Charles Darwin regarded his work as a central influence on the theory of evolution. The diverse directions in which these writers took what they gleaned from reading him reflect both the richness of their sources and the wide range of his empiricism. Today, philosophers recognize Hume as a thoroughgoing exponent of philosophical naturalism, as a precursor of contemporary cognitive science, and as the inspiration for several of the most significant types of ethical theory developed in contemporary moral philosophy.

1. Life and Works

Born in Edinburgh, Hume spent his childhood at Ninewells, his family's modest estate in the border lowlands. He came from a "good family" (MOL 2)—socially well connected but not wealthy. His father died just after David's second birthday, leaving him and his elder brother and sister in the care of our Mother, a woman of singular Merit, who, though young and handsome, devoted herself entirely to the rearing and educating of her Children.

(MOL 3) Katherine Falconer Hume realized that David was uncommonly precocious, so when his older brother went up to Edinburgh University, Hume went with him, although he was only 10 or 11. There he studied Latin and Greek, read widely in history and literature, ancient and modern philosophy, and also did some mathematics and natural philosophy—what we now call natural science.

The education David received, both at home and at the university, aimed at training pupils to a life of virtue regulated by stern Scottish Calvinist strictures. Prayers and sermons were prominent aspects of his home and university life. At some point, Hume read *The Whole Duty of Man*, a widely circulated Anglican devotional tract that details our duties to God, our fellow human beings, and ourselves.

Hume's family thought him suited for a legal career, but he found the law "nauseous", preferring to read classical texts, especially Cicero. He decided to become a "Scholar and Philosopher", and followed a rigorous program of reading and reflection for three years until "there seem'd to be open'd up to me a new Scene of Thought" (HL 3.2). The intensity of developing his philosophical vision precipitated a psychological crisis in the isolated scholar.

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The crisis eventually passed, and Hume remained intent on articulating his “new Scene of Thought”. As a second son, his inheritance was meager, so he moved to France, where he could live cheaply, and finally settled in La Flèche, a sleepy village in Anjou best known for its Jesuit college where Descartes and Mersenne had studied a century before. Here he read French and other continental authors, especially Malebranche, Dubos, and Bayle, and occasionally baited the Jesuits with arguments attacking their beliefs. By this time, Hume had not only rejected the religious beliefs with which he was raised, but was also opposed to organized religion in general, an opposition that remained constant throughout his life. In 1734, when he was only 23, he began writing *A Treatise of Human Nature*.

Hume returned to England in 1737 to ready the *Treatise* for the press. To curry favor with Joseph Butler (1692–1752), he “castrated” his manuscript, deleting his controversial discussion of miracles, along with other “nobler parts” (HL 6.2). Book I, “Of the Understanding”, and Book II, “Of the Passions”, appeared anonymously in 1739. The next year saw the publication of Book III, “Of Morals”, as well as his anonymous “Abstract” of Books I and II.

The *Treatise* was no literary sensation, but it didn’t fall “deadborn from the press” (MOL 6), as Hume disappointedly described its reception. Despite his surgical deletions, it attracted enough of “a Murmur among the Zealots” (MOL 6) to fuel his lifelong reputation as an atheist and a sceptic. When he applied for the Chair of Ethics and Pneumatical (“Mental”) Philosophy at Edinburgh in 1745, his reputation provoked vocal and ultimately successful opposition. Six years later, he stood for the Chair of Logic at Glasgow, only to be turned down again. Hume never held an academic post.

In 1745, he accepted a position as a young nobleman’s tutor, only to discover that his charge was insane. A year later he became secretary to his cousin, Lieutenant General James St Clair, eventually accompanying him on an extended diplomatic mission in Austria and Italy.

In 1748, *An Enquiry concerning Human Understanding* appeared, covering the central ideas of Book I of the *Treatise* and his discussion of liberty and necessity from Book II. He also included material he had excised from the *Treatise*. In 1751, he published *An Enquiry concerning the Principles of Morals*, a “recasting” of Book III of the *Treatise*, which he described as “incomparably the best” of all his work (MOL 10). More essays, the *Political Discourses*, appeared in 1752, and Hume’s correspondence reveals that a draft of the *Dialogues concerning Natural Religion* was also underway at this time.

An offer to serve as Librarian to the Edinburgh Faculty of Advocates gave Hume the opportunity to begin another project, a *History of England*, using the law library’s excellent resources. Published in six volumes between 1754 and 1762, his *History* was a bestseller well into the next century, giving him the financial independence he had long sought. But even as a librarian, Hume’s reputation as an atheist and sceptic dogged him. One of his orders for “indecent Books” prompted an unsuccessful move for his dismissal and excommunication from the Kirk. Friends and publishers persuaded him to suppress some of his more controversial writings on religion during his lifetime.

In 1763, Hume accepted a position as private secretary to the British Ambassador to France. During his three-year stay in Paris, he became Secretary to the Embassy, and eventually its *chargé d’affaires*. He became the rage of the Parisian salons, enjoying the conversation and company of famous European intellectuals. He was known for his love of good food and wine, as well as his enjoyment of the attentions and affections of women.

Hume returned to Edinburgh in 1769. He built a house in Edinburgh's New Town, and spent his autumnal years quietly and comfortably, dining and conversing with friends, not all of whom were "studious and literary", for he also found that his "company was not unacceptable to the young and careless" (MOL 21). He spent considerable time revising his works for new editions of his *Essays and Treatises*, which contained his collected *Essays*, the two *Enquiries*, *A Dissertation on the Passions*, and *The Natural History of Religion*, but—significantly—not *A Treatise of Human Nature*.

In 1775, Hume was diagnosed with intestinal cancer. Before his death in 1776, he arranged for the posthumous publication of his most controversial work, the *Dialogues concerning Natural Religion*, and composed a brief autobiography, "My Own Life". Although there was much curiosity about how "the great infidel" would face his death, his friends agreed that he prepared himself with the same peaceful cheer that characterized his life.

2. The Idea of Necessary Connection

The early modern causation debate revolved around a family of "nearly synonymous" key ideas, the most prominent of which were the ideas of power and necessary connection. For Hume, "there are no ideas, which occur in metaphysics, more obscure and uncertain". He showcases the critical and constructive uses of his account of definition as he attempts "to fix ... the precise meaning of these terms", in order to "remove some part of that obscurity, which is so much complained of in this species of philosophy" (EHU 7.1.3/61–62).

2.1 Necessary Connection: Critical Phase

To get clear about the idea of power or necessary connection, we need to determine the impressions that are its source. Hume identifies three possible sources in the work of his predecessors: Locke thought we get our idea of power secondarily from external impressions of the interactions of physical objects, and primarily from internal impressions of our ability to move our bodies and to consider ideas. Malebranche argued that what we take to be causes of the motion of bodies or mental activity aren't causes at all. They are only occasions for God, the sole source of necessary connection, to act in the world. Hume rejects all three possibilities.

He argues that external impressions of the interactions of bodies can't give rise to our idea of power. When we see that the motion of one billiard ball follows another, we're only observing their conjunction, never their connection.

Attending to internal impressions of the operations of our minds doesn't help. Although voluntary bodily movements follow our willing that those movements occur, this is a matter of fact I learn through experience, not from some internal impression of my will's power. When I decide to type, my fingers move over the keyboard. When I decide to stop, they stop, but I have no idea how this happens. Were I aware of the power of my will to move my fingers, I'd know both how it worked and its limits.

Our ability to control our thoughts doesn't give us an impression of power, either. We don't have a clue about how we call up our ideas. Our command over them is limited and varies from time to time. We learn about these limitations and variations only through experience, but the mechanisms by which they operate are unknown and incomprehensible to us. If I decide to think about Istanbul, my idea of that city comes to mind, but I experience only the succession of my decision followed by the idea's appearance, never the power itself.

When ordinary people can't determine an event's cause, they attribute it to some "invisible intelligent principle". Malebranche and other occasionalists do the same, except they apply it across the board. True causes aren't powers in the physical world or in human

minds. The only true cause is God's willing that certain objects should always be conjoined with certain others.

Anyone aware of our minds' narrow limits should realize that Malebranche's theory takes us into "fairyland"—it goes so far beyond our experience that we have no way of intelligibly assessing it. It also capitalizes on how little we know about the interactions of bodies, but since our idea of God is based on extrapolations from our faculties, our ignorance should also apply to him.

2.2 Necessary Connection: Constructive Phase

Since we've canvassed the leading contenders for the source of our idea of necessary connection and found them wanting, it might seem as if we have no such idea, but that would be too hasty. In our discussion of causal inference, we saw that when we find that one kind of event is constantly conjoined with another, we begin to expect the one to occur when the other does. We suppose there's some connection between them, and don't hesitate to call the first, the cause, and the second, the effect. We also saw that there's nothing different in the repetition of constantly conjoined cases from the exactly similar single case, except that after we've experienced their constant conjunction, habit determines us to expect the effect when the cause occurs.

Hume concludes that it is just this felt determination of the mind—our awareness of this customary transition from one associated object to another—that is the source of our idea of necessary connection. When we say that one object is necessarily connected with another, we really mean that the objects have acquired an associative connection in our thought that gives rise to this inference.

Having located the missing ingredient, Hume is ready to offer a definition of cause. In fact, he gives us two. The first, A cause is an object, followed by another, where all the objects similar to the first are followed by objects similar to the second, gives the relevant external impressions, while the second, A cause is an object followed by another, and whose appearance always conveys the thought to the other, captures the internal impression—our awareness of being determined by custom to move from cause to effect. Both are definitions on Hume's account, but his "just definition" of our idea of cause is the conjunction of the two (EHU 7.2.29/76–77). Only together do they capture all the relevant impressions involved.

Hume locates the source of the idea of necessary connection in us, not in the objects themselves or even in our ideas of those objects we regard as causes and effects. In doing so, he completely changes the course of the causation debate, reversing what everyone else thought about the idea of necessary connection. Subsequent discussions of causation must confront the challenges Hume poses for traditional, more metaphysical, ways of looking at our idea of causation.

Hume's treatment of our idea of causation is his flagship illustration of how his method works and the revolutionary results it can achieve. He goes on to apply both his method, and its concrete results, to other prominent debates in the modern period, including probable inference, testimony for miracles, free will, and intelligent design.

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Empowerment of women and their Economic Development

*Dr. Preeti Sharma**

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Women empowerment and economic development are closely related: in one direction, development alone can play a major role in driving down inequality between men and women; in the other direction, empowering women may benefit development. Does this imply that pushing just one of these two levers would set a virtuous circle in motion? This paper reviews the literature on both sides of the empowerment– development nexus, and argues that the interrelationships are probably too weak to be self-sustaining, and that continuous policy commitment to equality for its own sake may be needed to bring about equality between men and women

Women's empowerment defined as improving the ability of women to access the constituents of development in particular health, education, earning opportunities, rights and political participations. Women empowerment in India is dependent on many different variables like education status, social status, geographical status and age. This paper is focused to economic participations and opportunities for women. There is very close relation between economic development and women's empowerment. The main objective of this study is to identify an economic status of women's economic, educational and empowerment status.

Introduction

Woman empowerment itself elaborate that social rights, political rights, economic stability, strength and all other rights should be equal for both gender. There should be no discrimination between man and women. Swami Vivekananda, one of the greatest sons of India, quoted that "There is no chance for the welfare of the world unless the condition of the woman is improved. it is not possible for a bird to fly on only one wing. India needs to transform colossal women force into an effective human resources and this is possible only through the empowerment of women. The Govt. of India is running various welfare schemes both at state & central level for the empowerment of the women. All policies and programs focus on social, economic and educational empowerment of women across various age groups.

WOMEN EMPOWERMENT AND ECONOMIC DEVELOPMENT:

The Indian women have spread of their age old shackles of serfdom and male domination. She has come to her own and started scaling the ladder of social advance with proud and dignity. Women in India are now uplifted and granted equal status with the men in all of life activities including the political, social, domestic and educational. But still there is a need to motivate and encourage women to participate in the activities because women secure around of in the total population. For this, Women empowerment must need some interventions for making women to be involved in the economic development of the country. The development interventions which must focus on the real gender needs, including women's income and material assets which will lead to the increased women empowerment and decreased poverty. From this intervention the women empowerment will start and led to the extent. With the implementation of some new interventions the rate of increase in the

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women empowerment will raise to mark. Duflo's explanation was that there was a positive correlation between women's rights and the per capita GDP in terms of a cost benefit calculus. From this point of view it was clear that by increase in the women empowerment the economic development may a raise.

WOMEN EMPOWERMENT AND ECONOMIC GROWTH: Most women in the India rely more on the informal work sector for an income. If women are empowered to do more the possibility for economic growth will be at large. If the informal sector is involved into many tasks and activities then there will be more growth. It was proved that female participation in counsels, groups and businesses is seen to be an increase in efficiency. For instance how an empowered women can impact a situation monetarily this was done by fortune 500 companies, " Those with more women's in the category of board directors had significantly higher financial returns, including 53% higher returns on equity, 24% higher returns on the sales and 67% higher returns on the invested capital (OECD,2008)." This study shows that there was a impact of women in the overall economic benefits of the company. If this was implemented on the global scale then the women in the formal workforce can increase the economic output of a nation. There by the increase in the economic growth of the nation

THE MAJOR TYPES OF EMPOWERMENTS:-

- 1. Educational empowerment:** Education is an important factor to progress in life. It means empowering women with the knowledge, skill and self confidence necessary to participate fully in the development process. It means making women aware of their rights and developing confidence to claim them.
- 2. Social women empowerment:** - A critical aspect of social empowerment of women is promotion of gender equality. women face many social challenges today, whether it be making soaps and license in order to secure an income for their family.
- 3. Economic empowerment:-** It implies a better quality of material life for a sustainable livelihood owned and managed by women. There is a strong correlation between economic development and women's legal rights.
- 4. Political empowerment:** - The existence of political system is favoring the participation by women in the political decision making process and in governance. infusing other government policies and decisions the affect on rural communities, changing town based peoples beliefs, networking with people in government and industry and other women to discuss and rural communities.
- 5. Economic empowerment:-** There is a bidirectional relationship of economic development & women empowerment defined as improving the ability of women to access the constituent of development. Economic development can also lead to the empowerment of women by freeing their time. The world that is interested in women's right favors for economic development. Women contribute to the Indian economy in many ways. Apart from her importance in the social framework, a women's vital role in village centric community activities, protecting our culture and in determining the consumption attitude makes her special for economy. The high growth figures of 8 to 9 percent of Indian economy depend basically on high rates of its gdp of which 70 percent comes from household saving, 20 percent from private sector and rest 10 percent from public sector. Household saving in the country is all due to women as it is a part of the culture of the Indian society is to do savings. Report of the working group on empowerment of women XI plan concedes, with the growing globalization and liberalization of the economy as well as increase in privatization of services. women as a

whole have been left behind and not been able to partake the fruits of success. Although most women in India work and contribute to the economy in one form or another, women plow fields and harvest crops while working on farms, women weave and make handicrafts while working in industries. 90 percent women involve in informal sector. The informal sector includes jobs such domestic servants, small traders .we understand that contribution of Indian women is neither appropriately accounted nor our policy makers have the vision to approach the importance of women for development of the economy.

Initiatives Taken to Enhance Women Empowerment in India: The Government of India is running various welfare schemes and policies, both at the central and state levels for the empowerment of women. Some of the major programs and measures include Swadhar (1995), Swayam Siddha (2001), Support to Training and Employment Program for Women (STEP-2003), Sabla Scheme (2010), National Mission for Empowerment of Women (2010) etc., two acts have been enacted to emancipate women in India-Protection of Women from Domestic Violence Act, 2005 and the Compulsory Registration of Marriage Act, 2006. Provisions made under the Constitution of India such as: Rights to equality under Article 14 of the Indian Constitution guarantees to all Indian women equality before law; equal pay for equal work under Article 39(d) and Maternity Relief under Article 42. All such policies and programs focus on social, economical and educational empowerment of women across various age groups. A number of organizations in India work to build the capacity of women through financial and vocational training. SEWA (Self-Employed Women's organization) provides support to women as they take out a loan, open bank account, manage their own money and earn revenue on original products. The Navjyoti India Foundation, in addition to provide training for economic independence, highlights community development with the mandate: if women are empowered, they can empower their communities in return. Through all these years, the attentions is only on developing and devising new schemes, policies and programmes and have paid less attention to the proper monitoring system and implementation short-sightedness, for example, despite the presence of The Pre-Natal Diagnostic Technologies Act and various health programs like Janani Suraksha and National Rural Health Mission (NHRM), our country has a skewed sex ratio and a high maternal mortality rate (MMR)

On the one hand, economic development alone is insufficient to ensure significant progress in important dimensions of women's empowerment, in particular, significant progress in decisionmaking ability in the face of pervasive stereotypes against women's ability. On the other hand, women's empowerment leads to improvement in some aspects of children's welfare (health and nutrition, in particular), but at the expense of some others (education). This suggests that neither economic development nor women's empowerment is the magic bullet it is sometimes made out to be. Equity between men and women is only likely to be achieved by continuing policy actions that favor women at the expense of men, possibly for for a very long time. While this may result in some collateral benefits, those benefits may or may not be sufficient to compensate the cost of the distortions associated with such redistribution. This measure of realism needs to temper the positions of policy makers on both sides of the development/empowerment debate. This may not be the most comforting message to deliver, but may be necessary to prevent the backlash that failed miracle solutions generally attract.

It is concluded that from the above discussions that women empowerment plays a major role in the developing countries like India as by undertaking the education they sustain their importance in each and every category which this they are ready to solve the

organizational problems too there by reduction in the poverty levels and improvement in the economic growth happens.

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Economic Thought of Mahatama Gandhi

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Gandhiji's ideas have a marked influence in the economic sphere also. This is so not only because of the general influence of Gandhiji's ideas on the masses of the people. His economic ideas are part of his general Philosophy of life; they are reflected in his writings and speeches, mixed up with other related topics; they have to be discerned more in his actions, which must be viewed in their entirety not merely in an isolated way. In other words, one has to interpret Gandhiji's economic ideas and build up what may be described as Gandhian Economic Thought from what he did and said in this connection. Gandhi's thinking on what we would consider socio-secular issues (he himself saw little distinction between the sacred and its expression in the social world) was influenced by John Ruskin and the American writer Henry David Thoreau. Throughout his life, Gandhi sought to develop ways to fight India's extreme poverty, backwardness, and socio-economic challenges as a part of his wider involvement in the Indian independence movement. Gandhi's championing of Swadeshi and non-cooperation were centred on the principles of economic self-sufficiency. Gandhi sought to target European-made clothing and other products as not only a symbol of British colonialism but also the source of mass unemployment and poverty, as European industrial goods had left many millions of India's workers, craftsmen and women without a livelihood.

The paper deals with the relevance of economic ideas and views of Mahatma Gandhi. The main objective of the Gandhian economics were to remove poverty and unemployment and how to make the economy self-reliant. The main theme of the paper is the analysis of the Gandhian economics and the extent of its relevance to which it is applied in the Indian economy for its successful implementation.

Non-Violent Economy

Gandhi advocated non-violence and hence his economics may be called economics of non-violence. Gandhi was remembered as most for his non-violent struggle against British imperialism. Truth and non-violence are two socio-political tools which he used to achieve his goals. The principle of non-violence is the principle of Gandhian philosophy. As there was no industry and no activity without certain violence, he wanted to minimize it. He believed that violence in any form breeds greater violence.

Gandhi's most famous slogan is 'God is truth' or 'Truth is God'. He believed that a permanent change in individual or society cannot take place with the use of physical power. So with the help of these supportive socio-political tools we can win over all evils.

He defined a non-violent occupation as one "which is fundamentally free from violence and which involves no exploitation or envy of others".

The solution to Indian basic problems lies in the practice of non-violence. Gandhiji opposed capitalism as it resulted in exploitation of human labour. He believed that nature produced enough for the satisfaction of the people's wants and there would be no pauperism and starvation if everybody took only that much that was sufficient to him.

Decentralisation of economic system

Gandhiji strongly supported the concept of decentralization of economic system which means that power should not be concentrated in few hands but opportunity should

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equally open to all . gandhian economics is a separate branch of study that is based upon socio-economic principle .

In such an economy, exploitation of labour would be nil. His belief was strong in the context of the Indian economy. India has plenty of human resources but capital supply was poor, therefore labour intensive technology should be followed. Gandhiji advocated a decentralised economy.

Gandhiji believed that decentralisation was essential for the survival of democracy and for the establishment of a non-violent state.

Khadi Industry

For Gandhiji, khadi was the “symbol of unity of Indian humanity of its economic freedom and equality”. Khadi means the decentralisation of production and distribution of the necessaries of human life. Khadi movement began only after Gandhiji’s return from South Africa.

In the first and second industrial policies of 1948 and 1956 of Independent India khadi and village industries were mentioned as important opportunities for providing rural employment .

He believed that Khadi industry would save millions of people from starvation and would supplement the earnings of poor people. To him, the music of the spinning wheel was sweeter and more profitable than harmonium. Gandhiji advocated the use of charkha due to its advantages. Charkha requires a small amount of capital; it is simple in operation. It is a source of steady income; it does not depend upon monsoon; it helps in solving the problem of unemployment. Charkha was considered to be the symbol of nonviolence. His slogan was “swaraj through spinning”.

His khadi scheme included the following:

1. Compulsory spinning in all primary and secondary schools.
2. Cultivation of cotton in areas where it was not grown.
3. Organisation of weaving by the multipurpose co-operative societies.
4. All employees in the department of education, co-operation, municipalities, district boards and panchayats should be required to pass a test in spinning, otherwise they may be disqualified.
5. Control of prices of handloom cloth woven of mill yarn.
6. Imposition of a ban on the use of mill cloth in areas where the hand woven cloth was in abundance.
7. Use of hand-spun cloth in all Government and textile and weaving departments.
8. The old cloth mills should not be allowed to expand and new ones should not be opened.
9. Import of foreign yarn or cloth should be banned.

However Gandhiji’s belief in charkha as a means to solve the problem of poverty was criticised as stupid, and childish. Some people criticised Khadi as a non-economic proposition because its roughness caused it to soil more quickly than the mill made cloth.

Gandhi philosophy on education

By education he means an all round drawing out of the best in child’s and man’s body mind and spirit .the as per his thought should be the basic education ,handicraft (skill based) education ,practical training child centered education , education through mother tongue ,inculcation of universal moral values and free and compulsory education upto 14 years . the ultimate aim of gandhi’s education is the realization of god.

Use of Machines

Gandhiji described machinery as ‘great sin’. He believed that the modern technology was responsible for human frustration, violence and war. It was also responsible for the multiplication of material wants. The use of machines created a class of wealthy people and led to unequal distribution of wealth. Gandhiji was not against machinery.

He says “the spinning wheel itself is a machine; a little toothpick is a machine, what I object to is the craze for labour saving machinery. Men go on saving labour, till thousands are without work and thrown on the open streets to die of starvation”. But he was against all destructive machinery. He welcomed such instruments and machinery that saved individual labour and lightened the burden of millions of cottage workers.

Cottage industries

Gandhiji was well aware of the rural poverty, the local problem. Gandhi came forward advocating the development of cottage or village industries. The idea of spinning wheel (Gandhi charkha) later gave way to the establishment of khadi gramodaya which includes promotion of cottage industries, viz. tanning, dairying, oilk pressing, hand pounding of rice, bee-keeping, etc., were but a few small scale cottage industries.

Regeneration of Villages or Village Sarvodaya:

Gandhiji evolved the ideal of Village Sarvodaya. Speaking about the old village economy, Gandhiji said, “Production was simultaneous with consumption and distribution and the vicious circle of money economy was absent. Production was for immediate use and not for distant markets. The whole structure of society was founded on non-violence.”

Gandhiji wanted the revival of ancient village communities with prosperous agriculture, decentralised industry and small scale co-operative organisations. He also wanted that there should be the participation of people at all levels.

The Trusteeship Doctrine:

Gandhiji remarked that the capitalist who had amassed a large sum of money was a thief. If a person had inherited a big fortune or had collected a large amount of money by way of trade and industry, the entire amount did not belong to him. It belonged to the entire society and must be spent on the welfare of all. All social property is meant for all people—rich or poor. Capitalists being trustees would take care of not only themselves but also of others.

Law of Bread Labour:

The Law of Bread Labour was propounded by T.M. Bondaref and popularized by Ruskin and Tolstoy. This law emphasises that man must earn his bread by his own labour. To Gandhiji the law of bread labour related to agriculture alone. But as every-body was not a cultivator, he could earn his bread by doing some other work.

Food Problem

Gandhiji had seen the worst famine of his life during 1943-44, when Bengal suffered heavily owing to the country-wide shortage of food. To start with, Gandhiji thought that this scarcity of food had been artificially created. But after visiting Madras, Bengal and Assam, he arrived at the conclusion that the shortage of food was real and not artificial..

Exchange Economy

Gandhian idea on exchange economy is based on the swadeshi spirit. Every Indian village should be a self-supporting and self-contained unit exchanging only necessary commodities with other villages where they are not locally producible. The guiding principle that he laid down in respect of all foreign goods was that those things should not be imported which were likely to prove harmful to the interests of the indigenous industry.

Thus on the basis of these evidences it can be said that views of mahatma ganghi were so relevant that even today the government is adopting measures to spread employment on the basis of their potential skills and creativity of working like “Kaushal vikas yojana” promotion of swadeshi by “make in india” employment perspective by “skill development” and “skill india” plan and promoting entrepreneurship in order to fulfill the needs of the people and the elevation of economy. .

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Different Retail Formats and How Store Attributes Impact Shoppers' Loyalty in the Context of the Indian Retailing Industry

*Rabina Verma**

Malls, supermarkets, hypermarkets, department stores, convenience, major retail chains, and other forms of modern retail formats have travelled from metros to smaller towns and some semi-urban and rural regions. The young Indian customers are finding value in value-added services that these modern retail formats offer, the same has led to a surge in these retail formats across the nation. These retailers are also always experimenting with loyalty programs, shelf arrangement, floor space, in-store services, and other store attributes to attract customers, enhance the shopping experience, boost customer loyalty, and in the process, gain a competitive edge. But which of these attributes are working and which ones aren't that effective? Is there a difference in how these attributes are useful for a hypermarket vs department stores? Which of the modern retail formats do the young Indian consumers prefer and for what kind of retail items? This paper investigates these questions based on secondary data and existing literature.

Keywords: store attributes, the retail sector of India, retail formats, customer loyalty

1. Introduction

In the past 10 years, the retail industry in India has seen considerable growth, from tiny mom and pop retail formats to organised retailing. Financial reforms, per capita income growth and rising consumerism, have stimulated the creation of retail models by larger business houses and manufacturers; real estate firms and investors are showing interest in the retail sector. In India, retail revenues sum to a colossal \$400 billion that make up for about 12% of India's GDP. The Indian retail sector has over 15 million outlets and is the world's biggest destination for retail outlets. As conventional retailers are making room for modern, creative models, the retail industry in India is undergoing a major revamping exercise. This new retail models provide shoppers with a wide range and deliver a perfect shopping environment with a mix of food, entertainment and service, all under one roof. The new shopping models that have been illustrated in the literature are malls, hypermarkets/supermarkets, and speciality stores.

In terms of enhanced availability and efficiency, a friendly shopping climate, a range of choice, trial rooms for apparel items, return policies and affordable rates, modern Indian customers are finding more value in these services. In recent years, this has provided an increasingly rising potential for organised, new retail models to emerge and grow at a rapid rate. The appetite and tastes of consumers are evolving, culminating in a dramatic shift in habits and buying behaviours. The buying behaviour of consumers is shifting, which has culminated in the introduction of major supermarket outlets in most metros, tier-II cities and smaller towns. Kar (2007) reports that multinational retailers such as Walmart, GAP, Tesco are attempting to develop themselves in the Indian market. These giants have, in reality, already started their retail outlets in India with Bharti and TATA. The global retailing giant, Walmart, also recently acquired the home-grown e-commerce giant, Flipkart, which gives the global giant, Walmart, a big nationwide market leap in the retail sector of India.

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At the same time, competition has also negatively impacted customers' loyalty. When customers are loyal, customers would be happy to purchase for a significantly higher price. Take brands like Apple, for instance. Apple is said to have cult followership. Apple users pay a significantly higher than market price for Apple products as well as their services. Yet, the brand has cult followership and it exchanges its brand value for cash. Apple is the most valued company globally, it is valued at a whopping \$2 trillion. While Apple has a retail as well as e-commerce presence besides its other brand attributes, customer loyalty is as an important subject for the bigger retail industry. Because of this, today, retail stores run campaigns targeted at reinforcing customer loyalty. Advancement in technology and big data has enabled retail stores to get insights into customers' likes and dislikes. As such, stores have tried to use this data to manipulate the environment and store attributes in an attempt to improve purchasing experience for their users and build customer loyalty. Different retail formats and store attributes are widely experimented with by big retail chains but there is little comparative evidence of which retail format and what store attributes win the customer loyalty better than others.

As such, there is a need to investigate into these emerging retail formats to understand how are they performing and which is the winning format. For this purpose, eleven store attributes have been identified and existing literature has been investigated to study how these attributes lead to improved or worsened customers' shopping experience and loyalty.

2. Background And Literature Review

The customer has several options to choose from, starting from convenience and departmental shops to their larger-sized supermarkets and malls. They all are unique and display a large collection of high quality retail items they may deal in. Consumers purchase comfort items with low-risk levels from coordinated outlets, according to Satish and Raju (2010), and critical items with greater intervention from treacherous retailers. According to Goyal et al. (2009), the Indian retailing industry is at present under the 2nd phase of evolution. Stores ought to customize their store formats in line with the taste and tastes of the Indian customer. Herpen and Pieters (2000) noted that traditional models, such as department stores, hypermarkets, supermarkets, speciality shops and malls have been converted into new forms that are leading the way in attracting customers in metropolitan areas.

Swinyard (1997) addresses and considers sophisticated shoppers the buying habits of US customers. High standards of service and product quality are anticipated by US customers. The retail sector is being significantly impacted by economic and demographic patterns. The implications of retailing developments in the United States are micro-marketing, globalisation, emerging platforms, and age-related shifts in merchandising. The rise of organised retailing in India is demonstrated by Goyal & Aggarwal (2009) and its influence of retailing on India's GDP is visible. The numerous catalytic impact on the Indian economy is job creation, real estate development, rise in income level and the growth in supported sectors. The changing Indian retail scenario has seen a surpassing change in customer tastes.

Ali et al. (2010) analysed activities and developments in the Indian retail market in the last 10 years. They studied the existence of a vast range of retail items over this period, causing an effect on the item's demand as well as how it was consumed. Customers are not purchasing clothing and other retail items at department stores anymore, today, the location of transaction has switched to shops inside megamalls. While Bhardwaj & Makkar (2007) identified the retail opportunities in India, they highlighted that nearly half of India's population was young and in the age group of less than 20, yet, this age group is expected to further increase in the coming decades, making this young population an influential group for

the retail industry and for the larger economic roles. Gupta et al. (2003) indicate that the expanding middle-class, liberalisation of economy, economic growth, and development in infrastructure have all contributed to a spurge in consumption and thereby growth in the retailing sector.

Jasola (2007) shared his views on the emergence and development of supermarkets, which through displacing them gradually diminished the market share of conventional formats, and the economic capacity of consumers and format production are some reasons behind retail chains acquiring customers away from traditional retail formats. Ghosh et al. (2010) assume that in metro and tier-II cities led by the integrated retail market, mall growth is projected to expand at a frantic rate. Malls constitute 90 per cent of the overall potential growth of shopping. The underlying theory underlying the rise of malls is in its ability to deliver an atmosphere and not only products. Retail experiences constitute deals, high-quality products, games, and other children's leisure services and multiplex theatres, etc.

Kuruvilla & Ganguli (2008) assume that, because of rising income and double-income households, disposable incomes have grown and a consumption class has emerged across the country. According to Arshad et al. (2008), because of the oversaturation of home markets and difficulties faced by foreign retailers, Indian retailers are spreading to the world market.

3. Customers' Preference of Retail Formats

Robinson (1998) explores the significance of store attributes on customer experience and preferences. His analysis found that the collection of the terminal and instrumental qualities perceived by shoppers to be significantly affected by important decisions related to store attributes. The attribute-method best captures the understanding of the user of the fresh perspectives into assortment length. The approach of Tripathi et al. (2008) is focused on three latent factors that combine the image properties of various retailers and clarify interrelationships between them. These considerations include I the extra value and logo, (ii) the shop, and (iii) the items.

Such variables provide multiple features of different distributors, which enable the chain stores to evaluate positions. Kaur and Singh (2007) indicated that the evolving market features have enabled customers with an ever large choice in terms of store attributes and facilities like brand selection of goods and premium items, etc. Jackson et al. (2006) concluded that the preference of shopping centres by customers over conventional market stores is affected by different variables such as environment, assortment, product promotion, programmes, and services. There was a positive response from customers to the one-stop-shop service, customers found this comfortable, satisfying, and time-economic. Findings of Ghosh and Tripathi (2010) indicates that in terms of usability and comfort, customer preference between stores can be recognised, whereas in-store choice requires conceptions of value, price, and consistency.

Another research by Benito et al. (2006) explores the degree to which gender and demographic cohorts vary in attitudes towards mall characteristics and retail value generated from a mall visit. Review of findings reveals that by generational cohort there are no variations in hedonic and functional retail principles, but there were generational differences in attitude towards mall grooming causes, ease of place and entertainment characteristics. Thang & Tan (2003) say that two sets of characteristics would have to be taken into consideration in the marketing campaign for retailers: loyalty boosters and enhancers of shopping experience. It would be important to incorporate these characteristics into retail formats.

The different tactics proposed by Crispin and Tendai (2009) for stores are cross-merchandise, private-label products, funds and movies, productive distribution staff and technological acceptance. For potential changes in retailing, they stated a need for customer orientation rather than commodity orientation. They believe that a family's household size has a beneficial impact on whether or not they would go for a shopping trip. In contrast with other educational levels of the household, more and more knowledge about the latest goods available is sought by the young customer and needs to be shared more efficiently by distributors (Jackson et al., 2006).

Table 1 Customers' preference for retail formats for different retail items (Srivastava, 2008)

Retail item category	Most suited retail format
Food and grocery	Supermarket
Clothing and Apparels	Mall
Entertainment	Mall
Watches	Hypermarket
Pharmaceuticals	Hypermarket
Electronics, Mobile, and related Services	Hypermarket
Footwear	Departmental store

4. Store Attributes And Their Influence On Customer Loyalty And Shopping Experience

For this study, eleven store attributes have been identified. These are quality, length of assortment, in-store services, price competition, location, floor space, product promotion, loyalty programs, personnel management, ambience, and operational excellence. Some studies use different names and a different classification to refer to these attributes. Further, these attributes are distributed across 7Ps of the marketing mix as in the following table.

Table 2 Store attributes and their distribution across 7Ps of Marketing mix

MIX	Store attributes
Product mix	Quality, length of assortment, and in-store services
Price mix	Price competition
Place mix	Location, floor space
Promotion mix	Product promotion, loyalty programs,
People mix	Personnel management
Physical evidence mix	Ambience/display
Process mix	Operational excellence

Product Mix

One of the most critical aspects of any retail enterprise is consistency. Department stores concentrate strongly on efficiency, focusing more on commodity consistency rather than costs (Arnold, 1997). Hypermarkets maintain a wide variety of decent and mediocre quality items, their domestic brands are of high quality, whereas private labels are of low quality (Korneliussen et al., 2009). They, therefore, offer moderate focus on the performance of their goods. High-quality items that are impossible to locate in other markets are sold through niche stores. In a speciality shop, the range of items is called unique, that is, stuff people purchase to get any comfort in their lives (Ruiz et al., 2012). As their driving focus, convenience stores have dedicated themselves to new, high-quality produce (Longo & Bruzzone, 2007).

As with the duration of the merchandise line, department stores again give considerable significance to this shop characteristic. To draw more and more clients, it is

necessary to have diversity for them (Williamson, 1986). Similarly, the number of items they maintain in their shops is strongly stressed among hypermarkets (Zentes & Schramm-Klein, 2007). In general, the range of the speciality store selection is not so large, they stock a small selection of items that can not be called broad nor narrow. Thanks to their smaller scale, grocery stores offer a restricted range of products relative to other supermarkets.

Customer loyalty is specifically influenced by in-store facilities. Department stores have services such as gift packaging, tidy washrooms, facilities for child care, etc. Department stores, therefore, have a heavy focus on in-store facilities (Austin, 1992). Both hypermarkets and grocery stores stress the separate in-store facilities offered to consumers on an average or modest basis (Boon & Lin, 1997). Speciality retailers attach considerable emphasis to in-store facilities.

Place Mix

The impression that customers have of the shops will impact prices and promotional activities (Gagliano & Heathcote, 1994). There is a mild emphasis on market competitiveness in retail stores. Compared to their rivals, such as department shops, etc, they are not as competitive with rates (Srivastava & Lurie, 2004). To maximise sales value, hypermarkets put a very high focus on commodity pricing (Chong et al., 1996). Speciality shops sell unique items and are therefore frequent by customers because of the high costs (Cataluna et al., 2015). Since convenience stores rely primarily on convenience without always price, the merchandise price is moderately essential for a convenience store (Schiffman et al., 1997).

Place Mix

In contrast to a speciality shop, where the position of the store is a less relevant consideration, department store shoppers have been shown to attribute moderate or high value to location convenience. In general, hypermarkets are clustered outside the city centres (Wood & Browne, 2007). The place is an important consideration for convenience stores since they rely on customer convenience and their name means that they are typically situated in suburban neighbourhoods that are readily available to customers (Castrillo et al., 1997).

As for floor space, in general, retail stores are broad in number. They vary in scale from as little as 30,000 sq. Ft. up to as large as 70,000 sq. ft. A broad floor area is, thus, very necessary for these shops. Hypermarkets have been described as those between 70,000 and 100,000 sq. ft. of retail stores (Zentes & Schramm-Klein, 2007). Of all the supermarket models everywhere, hypermarkets are the biggest. In the growth of speciality retailers, scale plays a significant part. Speciality discount outlets are limited in scale relative to most retail types. Their size depends heavily on a variety of variables, such as place, consumers, assortment, etc (Carneghi, 1981). Convenience stores are very limited in number, varying from as little as 2000 to 4000 sq. ft.

Promotion Mix

Department stores put significant focus on the marketing of goods. The largest percentage of growth in loyalty card use by shoppers in the United States has been reported by department stores (Berry, 2013). By heavily using outlets such as newspapers, posters, and discounts, even hypermarkets stress a great deal on product marketing. Speciality stores rely moderately on retail advertising by mass marketing channels, rather than utilising media such as social networking sites or sites such as YouTube for this reason (Zentes & Schramm-Klein, 2007).

By different ways, department stores aim to improve their customer care systems and their partnership management (Berry, 2013). Loyalty services are one such element of this. Department stores in the United States have registered a rise in customer consumption

(Noordhoff et al., 1990). Hypermarkets heavily rely on rewards schemes. These services provide knowledge regarding consumer buying habits and are beneficial for hypermarkets, although convenience stores do not have the scope or infrastructure to incorporate rewards programmes (Wood & Browne, 2007). Speciality retailers have a modest focus on services for loyalty. There is a shortage of research in retail retailers on the utility and effect of loyalty schemes.

People Mix

Personnel management in a department store is more critical because shoppers also need assistance while shopping and thus more focus is put on staff management, while the same study empirically studied that convenience stores need less of that help and therefore less importance on staff management (Berry, 2013). Similarly, the performance and friendliness of employees were examined as an equally significant aspect measured by consumers and merchants alike, stressing the value of staff supervision in speciality shops (Bianchi, 2009). Since the in-store operation is an important feature of hypermarkets, there must be a heavy emphasis on staff control as workers in hypermarkets are high in number (Wood & Browne, 2007; Hansen, 2003).

Physical Evidence Mix

Department stores are tastefully made and well-organized stores with a heavy emphasis on the store's atmosphere (Gagliano & Hathcote, 1994). A great deal of effort is committed to enhancing the visual merchandising of these shops. This applies to the configuration of products and exhibits. Speciality retailers rely on merchandise show as it is seen by buyers as an indicator of product quality and shape expectations regarding the retail image (Zentes & Schramm-Klein, 2007). With a simplistic retail design and a practical store environment, the hypermarket layout is cost-effective, whereas grocery stores provide an ordinary-looking store atmosphere due to a small scale of operations (Gagliano & Hathcote, 1994).

Process Mix

Owing to the vast number of product categories and the considerable scope of operations, department stores put a strong focus on organisational excellence (Castrillo et al., 1998). Hypermarkets deal with a significant number of lines and widths of products, and they have a huge set up to handle, so they give more weight to achieving operational excellence. While nothing much to be seen in the retail store operations of speciality and grocery stores, it was speculated that these stores offer moderate focus on operational excellence depending on the scale and breadth of their businesses.

5. Conclusion

Literature shows that for department stores, all the strategic measurements are of high value, whereas they are only high or mildly significant for hypermarkets and speciality stores. There are only two strategic things that are of no interest to retail shops, such as floor space and rewards schemes. All of the strategic measurements are considered to be of high value for department stores, whereas they are only high or moderately essential for hypermarkets and speciality stores. There are only two strategic things that are of no interest to retail shops, such as floor space and rewards schemes. The central aim of both these organisations is to represent and attract customers profitably. And, because of the changes in their marketing mix, they follow this purpose in various forms. On related criteria and lengths, both of these retail formats have been investigated. Based on the category of shopping formats they adopt, it is often observed that they vary in their attitude.

There is a dearth of literature to validate these findings in the specific context of the Indian retail stores. A future study is targeted at filling this gap with empirical research.

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Decentralization Under Federal Order : Problem and Prospect

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In this study an attempt has been made to investigate the impact of political decentralization on the functioning of federal structure. The 73rd amendment brought a substantial change in the structure and functioning of the Indian political system. As we know the federal structure talks about the division of power between the central and the state government but the 73rd amendment created a list of power for the local self-institutions. This paper also intend to study the repercussion of political decentralization in India in making the federal structure more democratic and to examine this process has whether helped in achieving the desired result of peoples participation in the decision making?

The concept of polical decentralization is not new for India but the 73rd amendment has given it a relatively new look by giving it a constitutional status. It has made our federal structure more legitimate and accountable by giving people more power in decision making. As this article is mostly of an empirical nature, it is based on the views expressed in the authoritation books and leading journals on different aspects of political decentralization. An attempt has been made through this article with the help of materials collected from various sources to highlight the structure and functioning of local government institutions.

Federalism and decentralization are the two dominant contemporary theories which support vertical power sharing among multiple layers of government and protect the interest and choice of the people. Federalism means existence of two forms of government, namely the central government and the state government, each with a measure of constitutional autonomy, each directly governing and being accountable to the people. Decentralization further promotes distribution of power within the federal polity and provides certain new institutional mechanism for extending the democratic powers further to the community at large. Decentralization further facilitates to translate the agenda of the principles of federalism into operation and bring the different social sections into democratic action. This in turn, facilitates the democratization process and force the different tiers of government work with a high degree of legitimacy and accountability. Decentralization no doubt, makes the federal system more democratically and politically balanced one and establishes new institutional arrangements for political participation of different sections of people in a society having diversity and multiculturalism. In India the 73rd constitutional amendment Act, 1993 ushered a new era of democratic decentralization, in which both powers and responsibilities are devolved upon elected Panchayats at the district, intermediate and village levels. No doubt, the act provides opportunities to the people and engages them in the process of decision making. Presently, more than 26 Lakhs representatives stand elected to the three levels of Panchayats of which over 10 Lakhs are women, 5.2 Lakhs belong to the Schedule Castes and 3.3 Lakhs to the Schedules Tribes. Despite numerous efforts by the governments over last several decades, the process of decentralization has been an onerous task.

Objectives:

India, being a federal state, gives the state considerable powers to govern the devolution of bureaucratic authority to the local level governmental and electoral bodies. According to the 73rd amendment, states are required to pass their own conformity legislation

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which outlines the power, functions and procedures of local governance at village, district and intermediate levels. The constitutional amendment mandates only political decentralization, leaving administrative and fiscal aspects to the states. While political decentralization has progressed satisfactorily, administrative and fiscal decentralization have lagged in all states. Keeping this lacuna in mind, this study seeks to examine how the institution of Panchayat has evolved within the frame of Indian federalism and decentralization of governance:

Key Questions:

- 1) Indian constitution before the enactment of the panchyati raj system envisages the distribution of power between the central and the state government the 73rd amendment added eleventh Schedule which gives 29 subjects to the Panchayats. These functions are also enshrined in the state list. Some of these functions of local government overlapping with the functions of state government. Given this overlap of functions, questions have been raised over the exclusive areas of function/authority for the Panchayati Raj institutions (PRI, hereafter). In order to ensure the effective governance through the local bodies, their areas and functions have to be demarcated and clearly spelled out?
- 2) Linked to the above question is the issue of fiscal decentralization for the PRI. In 1997-1998, Panchayats have received 1.3 percent of GDP as transfers, while the allocation from the state government is less than 10 percent. Moreover, the revenue generated by the PRI's (0.05 percent of GDP) are not enough to ensure their effective functioning. Therefore, the stated aim to financial financially empower Panchayats has not been achieved so far.
- 3) Another key factor associated with the lack of administrative and fiscal decentralization in India is the concentration of power in non-elected bureaucracy, which has a reticent approach to the PRI's.
- 4) In the post-reservation era, the devolution of power has been confined to the economically elite sections the backward, Scheduled Caste and Tribes. It has failed to reach economically deprived sections of the intended population. Despite the inclusion of gender, the act has failed to empower women and ensure their effective leadership.

Prospective:

As per the 73rd constitutional amendment and Eleventh schedule of the constitution, 29 subjects are assigned to the rural local governments (29 subjects). The functions of local governments can be generally divided into two categories-obligatory and discretionary. Obligatory functions include supply of drinking water, construction and maintenance of public streets, lighting of public streets, cleaning of public streets, regulation of offensive and dangerous trade, maintenance of public hospitals, establishments and maintenance of primary schools, registration of birth and death etc. Discretionary functions mainly include laying out areas, securing and removal of dangerous buildings, construction and maintenance of public parks, gardens and markets, rescue houses for women, housing for low income groups, public entertainments, provision of transportation etc. Even though, some of these functions of local governments overlap with the functions of the state governments, local governments touch almost every aspects of the social and economic life of the people and play an important role in public policy decision and delivery of goods and services.

Article 243 G of the constitution provides financial power to the PRI's According to the Article 243 h of the constitution, state legislature have been empowered to enact laws:-

1. To authorize a panchayat to levy, collect and appropriate taxes, duties tolls, and fees.
2. To assign to the panchayat some taxes, duties, tolls levied and collected by the state government

3. To provide for making grant-in aid to the panchayats from the consolidated fund of the state, and
4. To provide for constitution of such funds for panchayats for creating all money received by or on behalf of panchayats and also the withdrawal of such money therefore

The above list enumerates the aims and if these are implemented by the state governments, PRI's would emerge as effective organs of local governance. However, some of these measures have been initiated in states like Kerala, which have ensured effective implementation of welfare measures for socio-economic equality. In case of Bihar, the financial autonomy is yet to be achieved.

The Bihar Panchayatraj Amendment Act 1995 was published in the Bihar Gazettes on 23 July 1995. PRI's have been created as mechanism to include socially and economically deprived sections of the society. Till 1966, the PRI's of Bihar were dominated and controlled by Zamindars, landlords and powerful persons of the upper castes. They were generally elected unopposed to Panchayats. But this trend is gradually disappearing and particularly the marginalized and depressed sections have increasingly started participating in the process. The landmark event in enlarging the ambit of social inclusion was the passing of Bihar Panchayati Raj ordinance, 2006. The ordinance incorporates following points:

1. Reservation is provided to the Schedule Castes on the basis of their population. For example, if the schedule caste constitutes 16% of total population in Bihar, they will be entitled to 16% of representation in Bihar.
2. Schedule tribes will get reservation on the basis of their population. For instance, if they constitute 1% of total population in Bihar, they will get 1% representation in PRI's.
3. From the point of view of reservation, the government has taken three new and significant steps. a) Provision of 20% has been made for the most Backward castes; b) 50% of the total seats reserved for these weaker has been reserved for the women of schedule tribes and backward classes; c) of the remaining seats, after providing reservation for schedule castes/ tribes and backward classes, 50% has been reserved for the women.
4. Under this act, judicial Panchayats (gramin Kutcheries, courts) have been constituted to ensure appropriate and effective justice at their door steps at the village level.
5. The Bihar Panchayati Raj Act 2006 contains directives to undertake social audit and constitute vigilance committees in order to ensure transparency, accountability and supervision of the works of the PRI. The elected representatives of the PRI's have been given the status of the public servant.

The PRI have a role in rural development through different development programmes. As examples, the selection of the beneficiaries in India Awas Yojna, selection of schemes sites in different development programmes, different programmes of educational department such as appointment of Shikhas Mitra and Panchayat Teachers, Literacy programme and adult education, preparation and distribution of job-cards under Mahatma Gandhi National Rural Employment Gurantee Programme, selection of Aganbadi Sewika and Assistant under the village welfare Department, Vaccination programme and health of the children under the national rural health mission, distribution of relief during natural calamities and ration coupons under the village welfare Department, Vaccination programme and health of the children under the nation rural health mission, distribution of relief during national calamities and ration coupons under Supply Department, survey of families living below the poverty lines, selection of beneficiaries for National and state old age Pension scheme and selection of beneficiaries and distribution of mini-kits in Micro-mode and other schemes under Agriculture department are quite significant. By devolving these functions to the local level

institution, some of the powers of the bureaucracy have been effectively curtailed. However, the financial authority still lies with the block level governmental officers, which has somehow not ensured accountability within the functioning of PRI's. A plausible approach would be to involve civil society to monitor the implementation of socio-economic welfare schemes and some efforts are visible towards these goals.

As a result the Bihar Model of decentralization has widely been acclaimed in regional, national and international platform. Decentralization has certainly triggered sweeping social changes in Bihar and empowered local bodies and rewritten the rules of democratic decentralization. A large number of institutional structures have been innovated as a part of participatory planning to engage the citizens in the political process at the local level and to identify priorities their felt and protecting their democratic rights. Therefore the PRI's have progressed at multiple levels, but given the challenges of a globalised world, PRI's continue to evolve. For instance a crucial and impactful study could be role of PRI's in **MNREGA programs.**

Now question arise, what can make local self- government institutions more accountable to the poor? There are three conditions under which local institutions can be made more accountable to the poor and marginal groups (1) an active citizenry, whose participation in broad areas of political life serves to counter the arbitrary use of power (2) fiscal and political support from higher level authorities within the government, and (3) the existence of competitive political parties. The system has been hallowed with all these three pre-conditions of accountability. As a result it is desirable to expect that the local governance in India must fulfil these leg to make itself more people oriented.

Conclusion :

The Indian constitution was established with a strong federal foundation and with strong cultural roots. Changing state of federalism in the changing context of democratic decenration is of interesting to those who are studying the Indian federal polity. India fulfils all the essential characteristic of a federal state and with decentralization and devolution of powers and recourses to the third tier of governments the democratic base of the polity has been further strengthened. Decentralization provided new room for political participation and mobilization and no doubt, this has aroused the political awareness of the people of all sections including the socially excluded groups.

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Community Involvement in Promoting Inclusion, Participation and Self Determination Community and Inclusion

*Mr. Pradeep Kumar**

Over the last few decades, advances and innovations in the field of disability and disability supports have resulted in changes in the way in which disability itself is understood and conceptualized. These changes, which embrace a person-environment fit model of disability, have obvious implications for disability supports and research. Within such conceptualizations, more attention must be given to the interaction between people with disability and the environments in which they live, learn, work, and play. As such, there has been increased attention to the right of people with disabilities to be fully included in their communities and to the importance of self-determination, participation, and quality of life. This emphasis also underscores the important roles family members, teachers, peers, health service providers, and volunteers play in promoting community inclusion.

This article examines these changes and innovations in depth and provides recommendations to facilitate the involvement of community members in promoting inclusion, participation and self-determination. This article will describe some of the actions we see as important to take the next steps in promoting full community inclusion for people with disabilities, beginning by briefly introducing the constructs of participation and quality of life, which emphasize the role of community life. The issues of school and work inclusion and self-determination will then be discussed as means of fostering the active presence of people with disabilities in their community. A focus on promoting inclusion and self-determination requires people without disabilities to take an active role supporting people with disabilities in typical communities, beyond what can be achieved by social health and disability services systems alone.

Keywords: *Self-determination, participation, quality of life, habilitative and rehabilitative community inclusion and disability services .*

Introduction

The World Health Organization has played an important role in changing the way disability is understood, and through its International Classification of Functioning system (ICF; WHO, 2001), has proposed a positive approach to conceptualising disability to supplant the deficits approach. Within the ICF, the term ‘disability’ is an umbrella term for limitations in human functioning, where human functioning refers, simply, to all the life activities in which one would typically engage. Limitations in functioning are labelled a ‘disability.’ Disability can result from any problem in one or more of three dimensions of human functioning: body structures and functions, personal activities, participation. Body structures are anatomical parts of the body; body functions are the physiological and psychological functions of body systems. Problems in body functions and structures are called impairments. Personal Activities are the execution of tasks or actions by an individual. Activities refer to skills and abilities of the individual that allow that person to adapt to the demands and expectations of the environment. Problems in this dimension are referred to as Community and Inclusion.

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Real participation and inclusion in the community does not just happen, changing understandings of disability or not, but requires the commitment of all community members. Changing attitudes and expectations, the primary outcome of changes to conceptualizations of disability, is a necessary first step, but action needs to follow. A second step is that people without disabilities recognize that segregating people with disabilities “is a form of social oppression on a par with other forms of oppression in our society associated with gender, race, class, and sexuality”

Focusing on participation in the lives of people with disabilities requires the examination of a wide array of issues, including personal care, mobility, social relations, home life and care for others, education, work, the economy, social and community life.

Programming school inclusion

We strongly believe that to realise the goal of school, work, and social inclusion, in addition to ensuring the involvement of people with disabilities and strengthening their self-determination, a network of family, work and social health settings and a network of economic and social helps and supports are needed. Formative and educational activities should be devised to enable a number of individuals, such as parents, teachers, schoolmates, social health providers, and others to:

a) use an essentially descriptive
b) abandon stereotypical ways to address disability issues in favour of models that promote active participation in educative, habilitative and rehabilitative choices;

Forty-six nursery, elementary, and middle school teachers were involved in a training aimed at increasing teaching abilities in a heterogeneous group and devising personalised interventions. The intervention involved 10 two-hour training sessions once a week and was implemented in two phases. The training activities during the first phase took about three months and their aim was to facilitate acceptance of the importance of inclusion and increase capacity to individualise and personalise learning supports. The issues dealt with during this phase included: Conditions of teaching and learning; Defining the aims; Personalising the aims; Choosing the aims; Systematic observation; Direct and indirect observation; Learning disabilities; Personalised teaching; How to personalise teaching; How to teach acceptance of disability. The second phase lasted for about five months, with meetings every two weeks and was implemented using three modules. In the first, attention was focused on increasing the abilities

Community and Inclusion
Self-Determination and Community Inclusion Throughout this paper, we have referred to a focus on self-determination as both part and parcel of a social-ecological model of disability and as important in interventions to promote inclusion. In this section, we provide a more detailed discussion of this construct and its importance to school, work, and community inclusion.

Self-determination emerges across the life span as children and adolescents learn skills and develop attitudes that enable them to be causal agents in their lives, including skills such as problem solving, goal setting, and decision making. components related to self-determination increased the participation and independence of students with disabilities in performing community activities. It is also worth observing that the interaction between self-determination and community inclusion may be reciprocal.

Conclusion

Inclusion at school and work, and therefore also in the community, and the self-determination of people with disabilities are essential to improve participation and enhance the quality of life of people with disabilities. However, it is still too common that the actions

taken within the community to develop conditions to facilitate school, work and social inclusion

A focus on self-determination, inclusion, and participation for people with disabilities is still the most demanding challenge that practitioners and researchers have to face, as well as an important indicator of the quality of treatment and intervention programmes.

An increased focus in these areas would be the clearest sign that a new culture has actually developed and generalised around these issues.

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Role of Information and Communication Technology in Rural Development in India

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Communication has been seen by a large number of development planners as a panacea for solving major social ills and problems. Apart from development, the introduction of communication in the educational process for open and distance learning is seen as step towards improving the quality of education and bridging the social and educational gap. However, experience indicates that those rich who could afford to have access to private resources have hogged the advantage whether development or education. In this respect it seems that communication technology has, in no way has helped the poor for improving their socio- economic condition. Primarily the responsibility of rural development remained with the government. In the pre-economic liberalization period, i.e. before 1992 broadcast media were used to reach the large rural population or target groups for the rural development projects. In the post economic liberalization period, rural development projects added information and communication technology (ICT) to provide individual need based information in broad development areas through Internet.

Keywords: Information and Communication Technology (ICT), Access, Provider, Rural Development, Infrastructure.

Introduction:

Rural Development which is concerned with economic growth and social justice, improvement in the living standard of the rural people by providing adequate and quality social services and minimum basic needs becomes essential. The present strategy of rural development mainly focuses on poverty alleviation, better livelihood opportunities, provision of basic amenities and infrastructure facilities through innovative programmes of wage and self-employment. ICT is the new tool for rural development. Information and Communication Technology, if used properly can be of great advantage for the development at grass root levels. At the same time challenge remains with the administration to capture the minds of the rural masses, mostly illiterate, to make them adapt the new technology which is completely alien to them. There are various Rural development schemes run by the government of India and also organizations are present to look after the implementations of these programmes.

Recent developments in Information and Communication Technology (ICT) have introduced a plethora of opportunities for development in every conceivable

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area. ICT as an enabler has broken all bounds of cost, distance and time. The fusion of computing and communications, especially through the internet has reduced the world indeed into global village creating new actors and new environments. One of the major components and driving force of rural development is communication. Conventionally, communication includes electronic media, human communication & now information technology (IT). All forms of communications have dominated the development scene in which its persuasive role has been most dominant within the democratic political frame work of the country. Persuasive communication for rural development has been given highest priority for bringing about desirable social and behavioral change among the most vulnerable rural poor and women. Initially, the approach lacked gender sensitivity and empathy of the communicators and development agents who came from urban elite homes. Added to these constraints is political will that still influences the pace and progress of rural development. Technological changes further compounded the direction of rural development as information and communication technology (ICT) has been thought by communication and development workers as a panacea for other ills that obstructs the development process. It has lead to indiscriminate applications and use of ICT in every aspect of information dissemination, management & governance of development. While there are few shining examples of achievements of ICT in development, there are a large number of failures and unauthenticated claims.

ICT stands for Information and Communication Technology. The concepts, methods and applications involved in ICT are constantly evolving in our daily lives. The Rural development in India is one of the most important factors for growth of the Indian economy. The present strategy of rural development mainly focuses on poverty alleviation, better livelihood, provision of basic amenities and infrastructure facilities. Even after so many years after independence India have not been able to move to the stage of “developed nation”, the nation is still developing. Public administration, governed by bureaucratic structures built on rationale principles, that dominated the twentieth century, has failed to respond to the changing requirements of the present times. Application of ICT is a paradigm shift to the traditional approaches that the government has been using past so many decades. With the use of ICT, government renders services and information to the public using electronic means.

With the rising awareness amongst the citizens and their better experiences with the private sector– the demand for better services on the part of government departments became more pronounced. The infusion of Information and Communication Technology (ICT) is playing a prominent role in strengthening such a demand. Combining ICT in Rural Development can not only speed up the

development process but it can also fill the gaps between the educationally and technologically backward and forward sections of the society. Several e-governance projects have attempted to improve the reach, enhance the base, minimize the processing costs, increasing transparency and reduce the cycle times. Introduction of simputers, e-chaupal are some of the initiatives by the government that has up to an extent been able to bring the rural population in contact with the information technology. The opportunities of ICT application in rural development are immense at the same time the government will also be facing some challenges also.

Paper present majorly focuses on the scope of ICT in Rural Development, the opportunities and the challenges that can come along. India is a country of villages and about 50% of the villages have very poor socio-economic conditions. Since the dawn of independence constant efforts have been made to emancipate the living standard of rural masses. The five-year plans of the central government also largely aim at Rural Development. The Ministry of Rural Development in India is the apex body for formulating policies, regulations and acts pertaining to the development of the rural sector. Agriculture, handicrafts, fisheries, poultry, and diary are the primary contributors to the rural business and economy.

The closing decade of twentieth century was the opening of historic information and communication technology interventions for development. This period has witnessed enormous and unprecedented changes in every aspect of communications technologies policies, infrastructure development and services. The ICT boom in India has already started changing the lives of Indian masses. The role of ICT in Rural Development must be viewed in this changing scenario. Since the dawn of independence, concerted efforts have been made to ameliorate the living standard of rural masses. So, rural development is an integrated concept of growth, and poverty elimination has been of paramount concern in all the five year plans. Rural Development (RD) programmes comprise of following: Provision of basic infrastructure facilities in the rural areas e.g. schools, health facilities, roads, drinking water, electrification etc improving agricultural productivity in the rural areas. Communication has been seen by a large number of development planners as a panacea for solving major social evils and problems. Apart from development, the introduction of communication in the educational process for open and distance learning is seen as step towards improving the quality of education and bridging the social and educational gap. ICT can be used towards betterment of education, agriculture, social awareness and health and hygiene.

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introduction of communication in the educational process for open and distance learning is seen as step towards improving the quality of education and bridging the social and educational gap. However, experience indicates that those rich who could afford to have access to private resources have hogged the advantage whether development or education. In this respect it seems that communication technology has, in no way has helped the poor for improving their socio- economic condition. Primarily the responsibility of rural development remained with the government. In the pre-economic liberalization period, i.e. before 1992 broadcast media were used to reach the large rural population or target groups for the rural development projects. In the post economic liberalization period, rural development projects added information and communication technology (ICT) to provide individual need based information in broad development areas through Internet.

After independence, the government took upon itself the major responsibility of development. Hence, the central and state governments carried out development projects. Two such projects are briefly described. Radio for Rural Development Popularly known as “Radio Farm Forum” was one of the earliest efforts in the use of radio for rural development. The experiment was carried out from February to April 1956 in five districts of Maharashtra State by All India Radio (AIR). Rural listener groups were organized, who would listen to radio broadcasts twice a week at 6.30p.m. for half an hour. “The group then stayed together for discussion of what they had heard, the discussion lasted usually, about half an hour, seldom less, frequently more”. The summative impact evaluation indicated positive outcome of radio rural forum. Impressive knowledge gains as a result of radio listening were reported across illiterates and literates, agriculturists and non- agriculturists, village leaders and others. However, over a period of time the project withered away.

Satellite Instructional Television Experiment (SITE) is considered to be one of the biggest techno-social communication experiments in education and rural development. The one-year experiment aimed to provide direct broadcasting of instructional and educational television in 2400 villages in states of Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa and Rajasthan. Over 500 conventional television sets spread over 335 villages in Kheda district, Gujarat was also part of SITE. Satellite technologists had called SITE as leap fogging from bullock cart stage to satellite communication, which did not discriminate between rural poor and urban rich for information and communication. It had given 50 years communication lead to rural poor of the country.

SITE provided telecast for rural primary school children in the age group 5 - 12 years studying in grades 1-5. Rural adults viewed television programmes on

improved agricultural practices, health and family planning. They were also able to view news. Television was considered as window to the world. The telecast reliability was above 99 per cent during the experiment period. More than 90 per cent direct reception television sets were in working. Both quantitative and qualitative in-depth evaluation indicated modest gains in some areas, whereas no gain or negative gain in other areas. The one- year duration was thought to be too little for any positive results. Based on the experiences and positive gains, INSAT satellite was launched in 1981. Since then a series of INSAT satellites have been launched and used for nationwide television telecast for education and development. The sad part is that, in spite of best efforts, satellite television has been used for entertainment more than rural development. I am sad that my prediction came true that satellite television will be used for entertainment and not rural development.

Several states have initiated the creation of State Wide Area Networks (SWAN) to facilitate electronic access of the state and district administration services to the citizens in villages. The Information and Communication Technologies (ICT) are being increasingly used by the governments to deliver its services at the locations convenient to the citizens. The rural ICT applications attempt to offer the services of central agencies (like district administration, cooperative union, and state and central government departments) to the citizens at their village door steps. These applications utilize the ICT in offering improved and affordable connectivity and processing solutions.

Conclusion

Communication Technology and Rural Development in India could not be operationalised for large-scale implementation in one form or the other. Lack of political will and indifference of bureaucracy killed the rural development project even before it could help poor to take advantage of radio broadcast. Information and Communication Technology has great relevance in today's world. If implemented properly ICT can surely bridge the gap between economically and technology backward and forward classes. With the IT boom in India technology is easily accessible to the government machineries with relevantly cheaper and convenient manner. Proper training and implementation of ICT programmes in simple way and language which is easily understandable by the rural people can surely bring about revolution in rural development.

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Analysis of Food Security In India With Reference To The National Food Security Act,2013

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Abstract

Food is an individual human's foremost biological need to live and flourish with dignity. In recognition of the fundamental need, Govt. India has advanced the inspirational National Food Security Act (NFSA) with the goal of providing the right to food to the impoverished, homeless and other people in those who of need and making efforts to save them from malnutrition and hunger. The State obliged by the National Food Security Act to introduce different schemes to ensure the food security of entitled poor people. There are guidelines for the integration of machinery with certain penalties at different stages. The regulatory framework under the NFSA will be analysed in the present paper.

Historical Overview

The campaign for the right to food has played a prominent role in the revival of economic and social rights over the past two decades. That was the first human rights framework of the United Nations to be analysed in 1966 in terms of economic, social and cultural rights. The Right to Food campaign has played a role over the past two decades. The highly influential Poverty and Hunger Report¹ of the World Bank in 1986 introduced the generally recognised distinction between chronic food insecurity, poverty-related and low-income issues, and transitional food insecurity, including cycles of increased pressure triggered by natural disasters, economic collapse or war. In terms of "Access to adequate food for an active, quality diet for all people at all times," this definition of food security has again expanded. By the mid-1990s, food safety has been recognized as a major concern, covering a continuum from the individual to the global scale. The 1994 United Nations Human Development Study (UNHDS) advocated the construction of human security, including a number of component elements, of which food security was only 2. This definition has closely linked to the individual's viewpoint on development, which has in fact influenced food security conversations.

A brief analysis of The National Food Security Act, 2013

Under the National Food Security Act, which aims to protect individuals against malnutrition, hunger and to ensure the establishment of a safe and productive nation. The Act reflects its goals of "providing food and nutritional security through human lifespan intervention, providing people with a dignified life with access to a sufficient amount of quality food at affordable prices." The National Food Security Act provides for a legal right for citizens belonging to preference households and common households to obtain food grains at subsidized rates under the Targeted Public distribution System and address the food safety and malnourishment problems of the Indian population. A legal basis for a system that guarantees food security for everyone, which should be established by the proposed Act.

Brief of The National Food Security Act, 2013 are following-

i. Objectives:- Under the Targeted Public Distribution Scheme, NFSA Schedule-1 offers subsidy rates, Schedule-2 has Nutritional Standards, Schedule-3 provides provisions for advancing food safety, and Schedule-4 provides for state-wise distribution of food grains. All

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over India is covered by the National Food Security Act, 2013, and it has been organised into 13 sections and 45 sections with 4 schedules.

ii. Eligibility:-Priority households are entitled, under the Act, to 5 kg of food grains per person per month, while Antyodaya households are entitled to 35 kg per household per month. The aggregate distribution of priority households and then of the households of Antyodaya (called "eligible households") shall cover "up to 75% of the rural population and up to 50% of the urban population"³. According to Schedule-I Rs. 3 per kg for rice Rs.2per kg for wheat and Rs. 1 per kg for millets, the TPDS issue prices are issued. After three years, these can be updated. For children 6-month to 6-year age category: a free age-appropriate meals via the local Anganwadi. One free mid-day meal every day (other than on school holidays) in all government and government-aided schools for children aged 6-14 years, up to Class VIII. 'Exclusive breastfeeding shall be encouraged by this Act, for children below six months living in abject poverty, meals will be given free of charge to every pregnant and lactating mother (during delivery and six months after giving birth) via the local Anganwadi.⁴ Maternity benefits of Rs. 6,000 are also provided to pregnant women, in installments⁵

iii. Identification of Households

No parameters for determining households eligible for TPDS entitlements are stated in the Act. The State-wise coverage of the TPDS (proportion of rural/urban population) shall be decided by the Central Government. Totals of eligible individuals will be estimated from Census population estimates.⁶ The specification of beneficiary beneficiaries is left to state governments, subject to the Antyodaya guidelines of the scheme, and subject to criteria for priority households to be 'identified' by the state government. Eligible households must be reported within 365 days.⁷The qualified household lists are to be put in the mainstream media and shown noticeably.⁸

iv. Implementing Equipment's

The NFSA provides for the establishment of State Food Commissions to track the enforcement of the Act, provide advice to the Governments of the States, their agencies, investigate infringements of rights and hear appeals against orders from the Redressal Officer of the District Grievance and prepare annual reports.⁹ Including the District Grievance Redressal Officer¹⁰ (DGRO) and State Food Commissions, the Act provides for a two-tier grievance redressal system. An internal grievance resolution system must placed in place by state governments, which could include call centres, help lines, etc.¹¹

v. Mandate for Accountability

Obligatory accountability provisions shall include: (1) the publication in the public domain of all TPDS-related records¹²; (2) daily social audits of TPDS and other welfare schemes¹³; (3) the use of information and communication technology 'to ensure transparent recording of transactions at all levels'¹⁴; (4) the establishment of vigilance committees at all levels to monitor all schemes covered by the Act.¹⁵

vi. Compensation and Fines

There are powers for the Food Commissions to enforce sanctions if District Grievance Redressal Officer order has not operated with, a fine of up to Rs.5,000¹⁶ can be levied on the affected authority or officer. The Commission may allow "any of its members" to serve for this purpose as an adjudicating officer. In the event of 'non-supply to entitled persons of the entitled amounts of food grains or meals,' those persons shall be entitled to food protection allowance, as provided by the state government as well as central government.¹⁷

vii. The Reforms of TDPS

Chapter V of the Act explains that various TPDS reforms are to be gradually pursued by Central and State governments, including: door-to-door distribution of food grains; end-to-end digitalization; utilizing 'Adhaar' (UID) for unique identification of eligible beneficiaries; full transparency of records; preference for fair price shops by public bodies or entities; Managed by women or their groups and individuals of fair price shops; consolidation of edible commodities distributed under the TPDS; complete disclosure of records; and 'introduction to target beneficiaries of schemes such as cash transfer, food coupons or other schemes to ensure their food grain entitlements,' as mandated by the Central Government.¹⁸

viii. Obligations of Government and Local Authorities

The central government's primary duty is to provide food grains (or, failing that, funds) for the implementation of the key welfare benefits to State governments at the prices stated in Schedule I¹⁹. The central government has wide-ranging powers to make rules in consultation with the State Government regarding TDPS. The key responsibility of state governments is to enforce, in accordance with guidelines of the central government, the related schemes. Local authorities and Panchayati Raj Institutions are responsible for proper execution of the Act in their respective fields, and additional responsibilities may be delegated by notification.²⁰

Judicial Approach to Food Security

Very recently, the right to food has been invoked by citizens' groups in an effort to bring about dramatic changes in the provision of food access in the world. And the Indian Judiciary has recognised the right to food for people through its different alternatives, by deliberately stretching the horizons of the right to life in line with the changing social scenario.

Some landmark judgements have described below:-

Chameli Singh v. State of U.P.²¹ It is held by the Supreme Court that perhaps the right to live as a human being is guaranteed in any organized society, not only by satisfying a man's animal needs, but only when a man is realized of all the equipment to develop himself, and extricated from all those restrictions that constrain his growth. **In Francis Coralie v. Union Territory of Delhi**²² The Apex Court held that the right to life includes the right to live with human dignity and all that accompanies it, that is, the bare basic necessities of life, such as sufficient nutrition, shelter and clothing over the head and equipment for studying, communicating and express feelings in a variety of ways, freely moving and mixing and interacting with human beings. In **P.U.C.L. v. Union of India and Others**²⁰ is known as "right to food case," A public interest litigation has filed in 2001 when food stocks throughout the nation reached unprecedented levels, while hunger worsened in drought-affected areas. "In this case, the Hon'ble Supreme Court ordered vulnerable sections about food security and the implementation of TPDS and AAY by realizing that the right to food is an outcome of the basic right to food enshrined in Article 21 of the Constitution of India. In **Swaraj Abhiyan v. Union of India & Ors.**²⁴ Supreme Court held that executive Committee etc. to ensure that the NFS Act is faithfully implemented and measures taken are reviewed and monitored from time to time. Similarly, the National Food Security Act, 2013 and the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 also mandate the constitution and establishment of bodies and authorities under the statute to review and monitor the implementation of the statute and the schemes or programs thereunder.

Expected consequences:-

The generally accepted food security definition has not defined. Sustainable food security involves improving the sustainability of the living standards of all household members by

ensuring physical and economic access to healthy diets, including the available essential nutrients, safe drinking water and sanitation, sufficient health care and primary education. Challenges for food security policy of India has a laudable goal of ensuring that food grains are available to the common people at an affordable price and has made it possible for the poor to have access to food where none exists. The policy focuses primarily on growth in agricultural production (once India imported food grains) and on supporting prices for the acquisition and maintenance of stocks of wheat and rice. The FCI is responsible for the production and storage of food grains and for distribution through the public distribution system (PDS).

Conclusion and suggestions

The NFSA is expected to be the solid foundation for the implementation of food security. It provides provisions for the distribution of food grains to poor people, but the food did not reach the poor people it deserved in reality. There are problems such as minimum aid prices, input subsidies, problem prices, market demand, food jobs schemes, urban bias. However, under continuing pressure from the powerful farmers' lobby, the state has raised the minimum support amount. Subsidies have reached unsustainable levels and have also resulted in the use of such limited inputs being largely inefficient. In order to ensure the effective implementation of food security, numerous steps should take to avoid widespread price fluctuations and to avoid distressed sales by small farmers, it is possible to stimulate potential demand. The improved system of ICT coordination will help farmers cope better with their production. In order to protect farmers against natural disasters, crop insurance schemes should be introduced with a view to attaining private sectors in the production of food grain, the Government should also encourage the use of the latest techniques and promote the implementation of each district/block and village level. A five year transitional period will be allowed when applying these. Thus, India will, from the above figures, achieve food security in real terms and within a fair time by ensuring the above measurements.

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Quantitative vs. Qualitative Research Paradigms- Epistemological, Theoretical and Methodological Perspective

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Researchers in every discipline need to be familiar with various research approaches and have capability to make decisions about which approach to use when embarking on a research study. There are two major approaches to research that can be used in the study of the social, psychological, educational problems. These are quantitative and qualitative research paradigms. There are major differences between the two research paradigms in context of their epistemological, theoretical, and methodological foundations. Since quantitative research has well-established strategies and methods but qualitative research is still growing and becoming more differentiated in methodological approaches. The present paper mainly focuses on the basic differences between these two approaches based on epistemological, assumptions, sample, tools used and data collection procedure and analysis grounds.

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Quantitative research basically explains phenomena according to numerical data which are analyzed by means of mathematical based methods, especially using inferential statistical methods. It is a type of empirical research used in investigating into a social phenomenon or human problem, testing a theory consisting of variables which are measured with numbers and analyzed with statistics in order to determine if the theory explains or predicts phenomena of interest (Creswell, 1994; Gay & Airasian, 2000). On the other hand, qualitative research is of multi-dimensional nature and supported by different traditions (Hitchcock & Hughes, 1995). Strauss and Corbin (1998) define the qualitative research as a type of research that produces findings not arrived at by statistical procedures or other means of quantification. Qualitative research is conducted in a naturalistic setting, in order to gain an insight which is not possible using other types of research. Qualitative research is an emergent, inductive, interpretive and naturalistic approach to the study of people, cases, phenomena, social situations and processes in their natural settings. Qualitative research draws on philosophical ideas in phenomenology, symbolic interactionism, hermeneutics and other paradigms to support the attention on “quality” rather than “quantity” (Brewer, 2003). Qualitative research is a broad research paradigm. It includes descriptive study, case study, field research, ethnography, participant observation, biographical method, life history, oral history, narrative inquiry to phenomenological research, ethno-methodology, symbolic interactionist study, grounded theory and action research.

Quantitative vs. Qualitative Research Paradigms-

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Qualitative and quantitative research paradigm differs based on their epistemological, theoretical methodological perspectives. Following table presents basic differences between these two paradigms.

Base	Quantitative (Positivist) Modes of Inquiry	Qualitative (Naturalistic) Mode of Inquiry
Epistemology	<ul style="list-style-type: none"> • Objectivist Epistemology- seeks to develop explanatory universal laws in social behaviors by using statistical measure • Emphasizes the measurement and analysis of causal relationships between variables • Framework - value-free, logical, reductionist, and deterministic, based on a priori theories 	<ul style="list-style-type: none"> • Constructivist Epistemology-based on a constructivist epistemology and explores what it assumes to be a socially constructed dynamic reality. • Framework is value-laden, flexible, descriptive, holistic, and context sensitive. • In-depth description of the phenomenon from the perspectives of the people involved
Assumptions	<ul style="list-style-type: none"> • Reality is single, tangible, and fragmental. • Social facts have an objective reality. • Knower and known are independent, a dualism. • Dominance of method • Variables can be identified and relationships measured. • Inquiry is objective, value-free. 	<ul style="list-style-type: none"> • Realities are multiple, constructed, and holistic. • Reality is socially constructed. • Knower and known are interactive, inseparable. • Dominance of subject matter • Variables are complex, interwoven, and difficult to measure. • Inquiry is subjective, value-bound.
Purposes	<ul style="list-style-type: none"> • Generalizability - Time and context free generalizations through generalized statements • Prediction • Causal explanations 	<ul style="list-style-type: none"> • Aim - describe and understand the phenomenon studied by capturing and communicating participants' experiences in their own words. • Contextualization -Only time and context bound working hypotheses through idiographic statements, Understanding actors'

		perspectives
Approach	<ul style="list-style-type: none"> • Begins with hypotheses and theories • Manipulation and control • Uses formal, structured instruments • Experimentation and intervention • Deductive Component analysis • Seeks consensus, the norm • Reduces data to numerical indices • Abstract language in write-up • requires a deductive approach and predetermined sets of standardized responses based on theory 	<ul style="list-style-type: none"> • Ends with hypotheses or grounded theory • Emergence and portrayal • Researcher as the instrument • Naturalistic or nonintervention • Inductive approach • Searches for patterns • Seeks pluralism, complexity • Makes minor use of numerical indices • Descriptive write-up • Concerned with process, context, interpretation, meaning or understanding through inductive reasoning
Tools	<ul style="list-style-type: none"> • Pre-constructed standardized instrument or pre-determined response categories - Questionnaires, surveys and systematic measurements involving numbers • Measure the responses of a number of participants to a limited set of questions 	<ul style="list-style-type: none"> • Participants' observation, in-depth interviews, document analysis, and focus groups. • People can elucidate how they make sense of the world around them and their experiences through interviews with open-ended questions

Sample of Study	<ul style="list-style-type: none"> • Generally, randomly selected large representative samples in order to generalize their findings • The logic and power of probability sampling derive their purpose, generalization 	<ul style="list-style-type: none"> • Purposeful sampling - study a small number of people or unique cases for detailed information and an in-depth understanding of the people, programs, cases, and situations. • Purposive sampling procedure limits the possibility of generalizing research findings to other settings or situations
Data collection and analysis	<ul style="list-style-type: none"> • Researchers use mathematical models and statistics to analyze the data and report their findings in impersonal, third-person prose by using numbers. 	<ul style="list-style-type: none"> • The data are usually in textual, sometimes graphical or pictorial form. • Basic statistics- central tendency, curve, graphs used
Findings	<ul style="list-style-type: none"> • Broad and generalizable set of findings and present them concisely and parsimoniously • Fail to provide insight into the participants' individual or personal experiences • Respondents do not describe their feelings, thoughts, frames of reference, and experiences with their own words • Generalization, prediction, and cause-effect relationships through deductive reasoning 	<ul style="list-style-type: none"> • Findings are far longer, more detailed • Researcher understand and present the world as it is seen and experienced by the participants without predetermining those standpoints. • Direct quotations document the participants' depth of feelings, experiences, thoughts about what is happening, and meaning at a personal level. • Researchers disseminate their findings in a first-person narrative with a combination of etic and emic perspectives.

Conclusion :

Researchers in social science need to acquaint themselves with different research approaches especially quantitative and qualitative approach. These research approaches represent the two ends of the research continuum. They differ in terms of their epistemological assumptions, theoretical frameworks, methodological procedures and research methods. Whereas, quantitative research is based on positivism or objective epistemology, trusts on quantitative measures for collecting and analyzing data, and aims to

make predictions and generalizations but qualitative is based on constructivism, draws on naturalistic methods for data collection and analysis, and aims to provide an in-depth understanding of people's experiences and the meanings attached to them.

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Procedure of Community Based Rehabilitation

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Jyoti**

Persons with Autism, cerebral Palsy, Mental Retardation and Multiple Disabilities should not become victims of our low expectations; at the same time, over expectations tend to cause frustration resulting from repeated failure — this may in turn lead to a permanent sense of inadequacy. The key therefore, is in making the most realistic assessments possible and pitching the goals one or two notches higher. But most of all, the challenge lies in creating pervasive attitudinal change in civil society so that the public's negative attitude does not become the disabled person's real handicap. The priority is to ensure access to appropriate, timely, affordable, and high-quality rehabilitation interventions, consistent with the CRPD,

for all those who need them. In middle-income and high-income countries with established rehabilitation services, the focus should be on improving efficiency and effectiveness, by expanding the coverage and improving the relevance, quality, and affordability of services.

Keywords: Community awareness, Habitation services, Promote Community, Intervention and Barrier Free Environment.

Introduction: CBR is “a strategy that can address the needs of people with disabilities within their communities in all countries. This strategy promotes community leadership and the full participation of people with disabilities and their organizations. It promotes multisectoral collaboration to support community needs and activities, and collaboration between all groups that can contribute to meeting its goals. CBR cannot be delivered by one ministry or even one sector. People with disabilities and their families,

organizations and communities must be central to the implementation of CBR along with the relevant governmental and nongovernmental health, Education, vocational, social and other services. CBR makes a difference at the grassroots level, through individual empowerment, group empowerment and community change, which together contribute to meeting basic needs, reducing poverty, and creating access to health, education and livelihood. Disability is no longer viewed as merely the result of impairment. The social model of disability has increased awareness that environmental barriers to participation can be major causes of disability. CBR promotes the enjoyment of human rights and fundamental freedom of people with disabilities to live as equal citizens within their own communities, with equal opportunities for full participation in all dimensions of community life enhance their quality of life.

Components Of Cbr: The five components (health, education, livelihoods, social and empowerment) each have five key elements which inform the implementation of CBR. Both the components and their elements are underpinned by the principles of participation, inclusion, sustainability and self-advocacy. According to the World Health Organization

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(WHO, 2010) these principles should inform and affect the activities within each of the topic areas.

In using this matrix, CBR programmed may only address some of the components and elements, depending on local circumstances. For example, in South Africa, many of the CBR programmed were historically set up through the Department of Health and therefore focus mainly on the health component. However, they also include elements such as early childhood development, self-employment through income generating activities and self-help groups. This demonstrates how elements of CBR can be inter-related.

Ten basic rules for integrated living:

1. *Family life: As a person with a disability, you should have the freedom to find a partner, have children, and set up your own family. You should live with your family and be part of your community.*
2. *Shelter: You should have shelter and be able to move about freely at home and in your surroundings.*
3. *Food: As an infant, you should be breast-fed. As a child and as an adult, you should have a fair share of your family's food.*
4. *Schooling: As a child with a disability, you should go to school with the non-disabled. Your teacher should have learned how to take care of your special needs and to include you in all school activities.*
5. *Education and training: You should get the opportunities for education and training that you need in order to prepare yourself to work and to live independently.*
6. *Leisure time: You should be free to join others on social, cultural and religious occasions.*
7. *Public services: You should have access to all public services and all public buildings. Roads and public transport should be designed in such a way as to let you move and mix freely and independently in society.*
8. *Association: You should not be denied membership of any associations or organization's open to all, and you should be free to form or join an association of disabled people, should you so wish.*
9. *Economic opportunities: You should have the same opportunities to work as other people; any loss of income caused by your disability should be compensated.*
10. *Political participation: You should be allowed to vote and to participate in government as other citizens do. Your voice should be heard in matters of concern to you and regarding services provided for you.*

Objectives of rehabilitation:

Based on the above principles, the broad long-term objective - or goal - for rehabilitation is: "***To promote a development that eventually will allow all disabled people to live a life in dignity.***"

To achieve this end requires actions aimed at, among others:

- providing all the rehabilitation services needed;
- reducing or eliminating environmental barriers;
- compensating disabled people for any loss in their standard of living caused by disability;
- promoting social integration and self-actualization;
- protecting and ensuring the security of disabled people;
- empower disabled people, so they can exercise their rights and have adequate representation and influence in the society where they live.

National Strategic plan on CBR for India

CBR can be an appropriate strategy to achieve the principles of the UN Convention on the Rights of Persons with Disabilities (UNCRPD) in India, especially in marginalized communities in both rural and urban areas. India has some Excellent CBR programmed, mainly in the non-governmental sector. Despite these efforts, CBR promotion in the country has been sporadic, random and limited to micro levels. For example, the District Rehabilitation Centre (DRC) scheme, District Disability Rehabilitation Centers (DDRCs) and the National Programmed for Rehabilitation of Persons with Disabilities have had limited impact in terms of coverage of underserved areas. In order to reach all people with disabilities, Indian government should incorporate CBR in their programs.

Rehabilitation Services:

Rehabilitation services are managed by government, private or nongovernment sectors. In most countries, the ministry of health manages these services; in some countries, however, rehabilitation services are managed by other ministries, e.g., by the Ministry of Labor, War Invalids and Social Affairs in Viet Nam and by the ministries of social welfare in India, Ghana and Ethiopia. In some countries, services may be managed through joint partnerships between government ministries and nongovernmental organizations, e.g., in the Islamic Republic of Iran, Kenya and China.

Services are provided by a broad range of personnel including medical professionals (e.g., nurses, physiatrists), therapy professionals (e.g., occupational therapists, physiotherapists, speech therapists), technology specialists (e.g., orthotists, prosthetists) and rehabilitation workers (e.g., rehabilitation assistants, community rehabilitation workers). Rehabilitation services can be offered in a wide range of settings, including hospitals, clinics, specialist centers or units, community facilities and homes; the phase during which rehabilitation occurs (e.g., the acute phase following an accident/injury) and the type of interventions required usually determine which setting is appropriate.

Community-based services

Historically, CBR was a means of providing services focused on rehabilitation to people living in low-income countries through the use of local community resources. While the concept of CBR has evolved into a broader development strategy, involvement in the provision of rehabilitation services at community level remains a realistic and necessary activity for CBR programmed.

Rehabilitation at specialized centers may not be necessary or practical for many people, particularly those living in rural areas and many rehabilitation activities can be initiated in the community. The WHO manual on *Training in the community for people with disabilities* is a guide to rehabilitation activities that can be carried out in the community using local resources

Evaluation of management in CBR

The realization of the CBR goals depends on a management mechanism, which should be scientific, reasonable, effective and sustained. The main duties of management are planning, organizing, allocating personnel, guiding, controlling and blazing new trails, etc. The management of CBR includes policy-making, planning, training of personnel, implementation at all levels, provision or resource, monitoring and evaluation. It involves government and its departments, NGOs, communities and disabled person's families.

(a) Government's commitment: Government plays a leading role in CBR programme. Government should be involved in making policy and regulations relating to CBR, fitting

CBR plan into the social development strategy, taking action, comprehensive study, overall planning, coordinating among sectors and systematic implementation.

The list below shows what are the evaluation contents for government in CBR programme:

- (i) Integrate CBR programme with the government's working goals and local social development strategy.
- (ii) Set up CBR leading group, headed by a community leader consisting of departments concerned, and set up a special office with full time persons to cope with the daily work.
- (iii) Make CBR plan.
- (iv) Use the feasible network of community, for instance, the primary health care network, social security system.
- (v) Play an important role in the overall coordination among the sectors involved in CBR programme.
- (vi) Make and implement roles, regulations and the staff duties.
- (vii) Establish and perfect CBR resource centre.
- (viii) Allocate personnel and set up professional consult group.
- (ix) Financial support (amount, allocate and expenditure)

Evaluation of implementation in CBR:

- (a) Evaluation of CBR delivery system.

Most countries in Asia and the Pacific region depend on the public health care network, social security network, women organizations, child health care and person's organizations. These networks form the backbone of CBR delivery systems and referral systems, with which disabled persons can get rehabilitation service at family, community through national levels. An effective CBR network should be provided with four functions, namely, organization management, professional technique, monitoring and evaluation, information and statistics.

(i) Organization management system:

This system consists of sectors concerned and administrators. To provide good CBR services for disabled people, sectors concerned should maintain a close cooperation in the work to bring about the overall effect of services.

(ii) Professional technique system:

This system consists of resource centre and rehabilitation professionals.

Resource centre: WHO recommended many departments or units which can play roles in management, coordination, implementation, professional guide, personnel training, monitoring and evaluation of CBR. The resource centre should be established in co-operation with the existing centres or institutions, for example, health care facilities, rehabilitation centres, educational facilities, vocational facilities, legal structures, welfare facilities, etc. The evaluation to a resource centre should base its responsibilities in CBR services.

Rehabilitation Professionals: As rehabilitation services are facing various categories of disabilities, multiple professional fields are needed for the rehabilitation consumers. For instance, people with physical disabilities need orthopaedic doctors, neurological doctors, PT, OT, equipment or aids. If the service receivers are adult, they need vocational training of various kinds and also barrier-free facilities; people with mental retardation need early identification, psychological consultant, education, vocational training, etc. Professionals, teachers, family members and disabled people may work together as a team. Rehabilitation professionals are working in various fields at different levels, including community-based level, intermediate level, provincial and national level. In fact, this professional system is the rehabilitation referral system. The evaluation of the professionals should be conducted in accordance with their role and duty in rehabilitation services.

(iii) Monitoring and evaluation system:.

The evaluation of this system includes monitoring and evaluation of rehabilitation effect on the disabled individual and the services provided. Monitoring and evaluation in CBR have been emphasised by WHO, UNDP, UNICEF, and other organizations and institutions. Monitoring and evaluation may be done by staff members within the community or by people from the outside for the purpose of improving the CBR service.

(iv) Information and statistics system:

Depending on the various kinds of forms of information and statistics to indicate work progress, quality and quantity, resource input and output, etc. The written forms should be sent to the related departments and persons in time to keep them informed on the implementation of CBR programme. This system also includes the dynamic survey on disabilities, exchange of information and data, work experience as well as the rehabilitation effect on disabled individual, etc. See Chart Implementation system in CBR.

Services in medical rehabilitation:

It includes screen and diagnosis disabilities, functional assessment, identify the rehabilitation needs of disabled, making rehabilitation plan for disabled individual, functional training disabled and disability prevention, etc. The list below for an example shows the evaluation contents in medical rehabilitation services:

- (a) The rate of disabled surveyed;
- (b) The rate of making rehabilitation file and record for disabled;
- (c) The rate of making rehabilitation plan for disabled;
- (d) The coverage rate of medical rehabilitation services for disabled;
- (e) The improvement rate of functional training of disabled;
- (f) The changes of disability prevalence.

Services in educational rehabilitation:

It includes regular education and special education for disabled people, while providing ideological and cultural education, strengthen physical and psychological compensation and vocational and technical training. Creating access to independent living for disabled. The examples below show the evaluation contents in educational rehabilitation services:

- (a) the rate of health and rehabilitation education to the community masses;
- (b) the enrolment rate of disabled children;
- (c) the training rate of parents or guardians of disabled children;
- (d) the anti-illiteracy rate of disabled people;
- (e) training rate of Braille for people with visual impairment.

Services in vocational rehabilitation: "Getting work" is one of the basic human rights. Vocational rehabilitation is an important task in the overall rehabilitation process as well as a measure for independent living of disabled persons. The examples below show the evaluation contents in vocational rehabilitation service:

- (a) vocational training rate of disabled persons;
- (b) The employment rate of disabled persons;
- (c) the increasing rate of income of disabled persons;

Services in social rehabilitation:

Social rehabilitation means the measures through which disabled persons can take an active role in society and live a independent life with full participation in family life and social activities and enable disabled people realize self-esteem and self-actualization. In

conformity with the ultimate rehabilitation goals, CBR programme should provide social rehabilitation services. The examples below show the main points in the evaluation:

- (a) The changes of participation in social life of disabled persons.
- (b) The change of barrier-free facilities for the accessibility of disabled persons to roads, buildings and houses.
- (c) The change of facilities and accommodations for disabled persons at places of cultural, sports, recreation, etc.
- (d) The chance of activities for disabled persons.

Evaluation of social impacts from CBR

CBR is a course with one of the main purposes of making socially beneficial results. It appeals to create a social atmosphere with equality, justice, solidarity integration and dignity, an ideal CBR programme should be founded on positive attitude changes.

Usually, the evaluation of social benefits is conducted by means of observation, discussion, questionnaire and interview, etc. Some examples are given below.

- the opinion of the community leaders on the CBR programme.
- (2) the opinion of the community mass on the CBR programme.
- (3) the opinion of the disabled persons on the CBR programme. (or the approval rate of disabled persons to the CBR programme).

Conclusion:

Community-based rehabilitation (CBR) was initiated by WHO following the Declaration of Alma-Ata in 1978 in an effort to enhance the quality of life for people with disabilities and their families; meet their basic needs; and ensure their inclusion and participation. While initially a strategy to increase access to rehabilitation services in resource-constrained settings, CBR is now a multisectoral approach working to improve the equalization of opportunities and social inclusion of people with disabilities while combating the perpetual cycle of poverty and disability. CBR is implemented through the combined efforts of people with disabilities, their families and communities, and relevant government and non-government health, education, vocational, social and other services.

Problems and Prospects of Waste Land in West Champaran District

*Dr. Vinod Baitha**

Wasteland is defined as land that is at present lying unused; or land which is not being used to its optimum potential due to various constraints; or land which cannot be used. Wasteland in India therefore consists of two broad classes of land: Cultivable Wasteland and Non-Cultivable Wasteland. Cultivable Wasteland is capable of, or has the potential for, development for agricultural or pastoral purposes or can be afforested. It is not being used at present due to such constraints as water shortage, salinity or alkalinity of the soil, soil erosion, water logging, an unfavorable physiographic position, or human neglect. Non-Cultivable land, on the other hand, is barren land and cannot be put to any productive use, either for agriculture or for developing forest cover.

Keyword: Waste Land, Forest, Cultivable, Desert, Development.

Introduction

Waste land may refer to Desert or barren area which comes under uncultivated area of land whether wooded or not whether common land or not. It is not being used at present due to such constraints as water shortage, salinity or alkalinity of the soil, soil erosion, water logging, an unfavorable physiographic position, or human neglect. Non-Cultivable land, on the other hand, is barren land and cannot be put to any productive use, either for agriculture or for developing forest cover.

According to the latest estimate by the NSRA, there are 53.3 million hectares of wasteland in India. The states with the largest areas of the wasteland are Jammu and Kashmir with 13.3 million hectares and Rajasthan with 12.9 million hectares. They comprise nearly 50 percent of the total national wasteland. Whereas almost the entire Jammu and Kashmir wasteland cannot be cultivated, most of the Rajasthan wastelands can be cultivated.

In most of the other states, the greater portion of their wasteland is cultivable. Among these states those with the largest amount of wasteland are Uttar Pradesh, 4.3 m. ha., Gujarat 3.3 m. ha., Andhra Pradesh 2.4 m. ha. And Himachal Pradesh 2 m. ha. All other states account for only 28 percent of the wasteland in India.

Rajasthan has the largest cultivable wasteland (11.9 m. ha.) in the country. This will become cultivable from schemes like the Indira Gandhi Canal Project. A large number of patches of salt affected land are found in Uttar Pradesh and Gujarat and this is attributed to over-irrigation resulting in salt accumulation. Some parts of Tamil Nadu and the northern eastern hill areas, forests are often felled or burnt of cultivation. When the crop is reaped, the wandering cultivators move on, leaving behind ravaged land.

Forest Conservation:

Increasing destruction and degradation of forests and tree-lands, especially, in the Himalayas and other hilly areas contribute to heavy erosion on top soil, erratic rainfall and recurring floods. It is causing acute shortage of firewood and loss of productivity due to eroded and degraded lands. Another area of concern is degradation of forests due to biotic pressure. The National Forest Policy explicitly recognized the multiple use nature of forests, rights of local populations, including the inadvisability of protecting forest resources without

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their active participation, and the role that forests play in the survival strategies of the poor. The task of regenerating the degraded forests and lands adjoining forest areas and other protected and ecologically fragile areas and the implementation of eco-development programs is being undertaken by the National A forestation and Eco-Development Board.

Table - 1 Culturable Wasteland (CWL) Barren and Unculturable Land (BUL) and Total Wasteland (TWL) of Bihar 2018

District	CWL	BUL	Total
Patna	1216	13475	14691
Nalanda	638	1210	1856
Gaya	4380	27664	32044
Nawada	2110	11304	13414
Aurangabad	1464	16440	17904
Rohtas	4777	36241	10320
Saran	324	18086	18410
Siwan	288	8882	9170
Gopalganj	1637	5577	7214
East Champaran	708	8206	8914
West Champaran	4974	3025	7999
Madhepura	65	3953	4018
Muzaffarpur	240	5301	5541
Vaishali	355	24265	24620
Sitamarhi	224	2237	2461
Darbhanga	429	1977	2406
Madhubani	476	2382	2858
Samastipur	446	4520	4966
Munger	13250	48415	61665
Begusarai	629	18133	18712
Bhagalpur	14608	65810	80418
Saharsa	4512	34000	38512
Purnea	2356	17932	20288
Katihar	819	22289	23108
Kishanganj	1817	11395	13212
Araria	1066	5087	6153
Source:-			

A redeeming feature of Table 1 is a consistent decline in culturable waste land. A decline of this kind may be explained by reclamation of water-logged or marshy or salt-affected lands, by a decreasing incidence of shifting cultivation, and through a reduction of degraded land under pastures and plantation crops, and so on. In spite of the declining trend, nearly 15.00 million hectares are still lying as the culturable wasteland in 2017-18. This constituted a neat 5.0 percent of total reported area and as much as 10.5 percent of net sown area. This is clearly the area on which most attention must be fixed if wasteland development for augmenting agricultural land mass is to succeed. Regional variations, especially those at the district-level, must be thrown bare so that the stark gross-roots realities facing certain depressed parts of rural India come up more focused for policy interventions.

Today no nation can sit in comfort and afford to neglect the gravity of environmental problems which threaten the very survival of life on earth. India is no exception to the global phenomenon of environmental degradation. It shares, with the poorer seventy percent of the world, the painful results of the deterioration of its natural resources and the dilemmas in trying to halt this deterioration. It may be mentioned that the wasteland management of the drought stricken West Champaran district of Bihar in India is not an easy task which requires high degree of technical input. The degradation of land and soil erosion causing vegetation loss have brought about such a stage, from where regeneration will take sufficient time. In some places, physiography play obstruction for managing wasteland up to a mark. Communication system is not well developed throughout the district, so in the remote areas, wasteland management is difficult because of poor communication.

However, economic exigencies notwithstanding, environmental protection and the conservation of natural resources have always been an integral part of India's cultural heritage and it received a much stronger emphasis in the wake of the 1972 Stockholm Conference on Human Environment. Between the Stockholm Conference and the Rio Summit in 1992, all the states of India have been able to develop a stable organisational structure for environmental protection in the country.

Problems of Waste Lands

Agriculture continues to be the main economic activity in rural areas of the developing world in spite of a steady diversification of their economic base during the preceding decades. Agriculture will continue to dominate rural economy of these areas for a long time to come. It is natural, therefore, that the availability of land to, and its use pattern in, agriculture would remain issues of extreme importance to policy planners, especially because unlike other factors of production, land is not only a highly scarce but is also a non-reproducible means of production. In the particular context of Indian realities, typically characterized by continuing population pressures, and ever declining land, man ratio, preponderance of small and fragmented holdings, highly iniquitous land distribution structure, etc., the significance of land-population balance rises all the more. Further, the limited capability of the urban-industrial sector to absorb the expanding rural labor force would keep a vast majority of work-seekers tagged to land, principally in agricultural activities, and to some extent, in diverse non-farm jobs in and around the villages. From every conceivable angle, therefore, the most crucial and most vexatious issue in rural India would be of land availability. In a broad sense, the availability of land to agriculture by itself would set the future pattern of India's development, most ostensibly the farm-nonfarm link-ages, the rural-urban migration, the incidence of rural-urban poverty, and so on.

The problem of declining land: man ratio gets exasperated through the increasing incidence of wastelands. Both nature and man-induced factors are at work in pushing more and more of cultivable area out of use for agricultural production, food supply and rural well-being. Inadequate property rights, poverty, population pressure and declining land-man ratio, inappropriate government policies, and lack of access to markets, credit, and technologies appropriate for sustainable agricultural development, etc., are the more glaring among such factors. These are usually put under the rubric man-made factors. There is a natural tendency with the rural poor to "over exploit" land resources. This generally takes the form of overgrazing or deforestation or "unhealthy" cultivation practices.

The process of deforestation has been another area of deep concern. Petty farming and other poor households clear forest land, usually unauthorized, to meet immediate food needs. Such clearings accounted for roughly two-thirds of the deforestation in current decade.

There is no reason to believe that such forest conversions will slow down unless very stringent measures are resorted. In recent years, while Latin America had the largest area of forests cleared and converted to other uses, other areas with smaller forest endowments had higher rates of forest conversion and carry heavier risks of completely losing their forest assets. Rates of forest conversion are most rapid, inter-alia, in continental Southeast Asia, averaging about 1.5 percent a year.

The problem of land degradation needs to be tackled both at the individual farm household level and the institutional level. Accordingly, it requires conjunctive initiatives of private and public investments, the former being usually supported by the latter. Private initiative and investment may concentrate on resource conservation and soil improvements. It is imperative that incentives, such as partial coverage of costs, should be provided to farmers to undertake initiatives towards restoration of degraded lands; the underlying subsidy on land-improving on-farm investment by individual farmers may better be interpreted as public investment for a social purpose. Such an incentive may spur private investment initiatives; at least the consciousness at the farm household level is heightened and further degradation may stop.

From the above, it may not be concluded that all types of soil conservation initiatives at the farm household level are bound to succeed or have a potential to succeed or throw up favorable benefit-cost ratios, and so on. "Returns to conservation depend on the specific agro-ecological conditions faced, on the technologies used, and on the prices of inputs used and outputs produced". Moreover, all conservation proposals may not be economically viable to individual farmers, especially where 'very fragile soils' are involved and cropping patterns are "stubbornly likely to be profitable either when they are cheap and simple or when they allow farmers to adopt improved practices".

On the other hand, the larger and capital intensive areas of land reclamation and other supportive actions necessarily fall in the domain of state intervention and public investment. A two-pronged attack may be conceived. First, land reclamation schemes such as desalinization of affected areas, reforestation, contour bonding, flood control, drainage or developing crop varieties with higher salt tolerance so that productivity on Stalinized lands goes up, etc, may be taken up with utmost urgency. Public investment in these areas of national importance must command high priority. In most of these areas neither market nor are policy incentives presently strong enough for farmers or other private agencies to undertake them. "Thus, either the government must make tile investment or the land will be left to deteriorate further until incentives are right".

As regards fallow lands, current fallows have generally gone up while old fallows have gone down. The decline in old fallows practically stopped around the time that the green revolution arrived in India. If some of the old fallows were activated back into the cultivation cycle, after the green revolution ensued in mid-2000s, it must have kept a check on total culturable waste land. In any case, in a land-scarce rural economy, such as ours, old fallows must be kept under constant vigilance so that climatologically stresses do not automatically throw some "old fallows" into the pool of culturable waste land.

Conclusion :

Today no nation can sit in comfort and afford to neglect the gravity of environmental problems which threaten the very survival of life on earth. India is no exception to the global phenomenon of environmental degradation. It shares, with the poorer seventy percent of the world, the painful results of the deterioration of its natural resources and the dilemmas in trying to halt this deterioration. It may be mentioned that the wasteland management of the

drought stricken West Champaran district of Bihar in India is not an easy task which requires high degree of technical input. The degradation of land and soil erosion causing vegetation loss have brought about such a stage, from where regeneration will take sufficient time. In some places, physiography play obstruction for managing wasteland up to a mark. Communication system is not well developed throughout the district, so in the remote areas, wasteland management is difficult because of poor communication. However, economic exigencies notwithstanding, environmental protection and the conservation of natural resources have always been an integral part of India's cultural heritage and it received a much stronger emphasis in the wake of the 1972 Stockholm Conference on Human Environment. Between the Stockholm Conference and the Rio Summit in 1992, all the states of India have been able to develop a stable organizational structure for environmental protection in the country.

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Juvenile Delinquency and the difficulty in rehabilitation and social re-integration of juveniles in the light of COVID-19 pandemic

*Vimal Kumar Jha**

Our Children are our greatest treasures. They are our future. Those who abuse them tear at the fabric of our society and weaken our nation.

----- *Nelson R. Mandela*

The term “Juvenile Delinquency” is used to describe the act or omission of a person below 18 years of age, which is disapproved by the society. When a juvenile commits any delinquent activity then he comes in contact with the Juvenile Justice System, and is punished according to the provisions of the law.

In every police station, at least one officer, not below the rank of Assistant Sub-inspector is designated as child welfare police officerⁱ to exclusively deal with children. In every district Special Juvenile Police Unit, headed by a police officer not below the rank of Deputy Superintendent of Police is constituted. When a juvenile commits any offence and is apprehended by the police, such child is handed over to the child welfare police officer and then he is produced before the Juvenile Justice Board. In the light of COVID19 pandemic, the Government has given certain directions to the juvenile police regarding arrest of juvenile. It has also been provided that if the juvenile is arrested then at first he will be sent to the quarantine centre and he will stay there for a minimum period of 14 days. Physical appearance of the accused person is restricted.

When a child is alleged to have been committed an offence is apprehended by the police, such child is placed under the charge of the special juvenile police unit or the designated child welfare police officer, who produces the child before the Juvenile Justice Board within 24 hours of apprehending excluding the time necessary for the journey.. During the trial of the case and after conviction by the Juvenile Justice Boardⁱⁱ delinquent juvenile is being kept in Observation Homes, Special Homes etc. The Government has made provisions for regular inspection of these institutions registered under this Act.

Practically, the Government has not developed the proper infrastructure to keep the children in conflict with law in these homes. Several children are kept in a small room which is not hygienic and a social distancing is also not maintained there. So, there is a chance that COVID-19 pandemicⁱⁱⁱ may spread in these institutions.

The whole world is facing health related problems due to COVID-19 pandemic. The Government has also given instructions that every person must wear mask and a social distancing should also be maintained to defeat this pandemic. The Supreme Court in “Re Contagion of COVID 19 Virus in Children Protection Home”^{iv} has taken cognizance suo moto and issued several directions to take measures in these homes.

The current situation needs some curative measures to keep the juveniles safe from COVID-19 pandemic during stay at observation home, place of safety etc. and to help them in

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social re-integration, so that they may restart their life and forget all the dark side of their life which was the result of mistake, misfortune or childhood.

Keyword : - Juvenile, Juvenile delinquency, Juvenile Justice System, Child in conflict with law, Observation Homes, COVID-19 Pandemic

Introduction : *“Children need at least one person in their life who thinks the sun rises and sets on them, someone who delights in their existence and loves them unconditionally.”*

----- Pam Leo

Children are the pillar of any country on which it's future is built. They become creator of the nation. They develop at different rate and develop their own views with regard to family, society and other issues. This is the age when influence of same age group child becomes important. With the increase in age the physical and the mental development also occurs and they also develop strong sexual and romantic ideas. However, these are normal changes and there is no any abnormalities in it. It has been observed generally that the maximum sexual offences are committed by the juveniles, but this is not an absolute rule.

The rate of crime committed by the juveniles has increased very rapidly in last few decades. This may be due to rapid change in the environment of the child, economic conditions of family, family structure, lack of education etc. These are some basic reasons and there are some other reasons which are responsible for increasing juvenile delinquency.

Juvenile and Juvenile Delinquency

The term “Juvenile” has been defined under Section 2(35) of the Juvenile Justice (Care and Protection of Children) Act, 2015 [further known as The JJ Act, 2015]^v as “a child below the age of 18 years” and the same definition was given in the Juvenile Justice Act, 2000. When a child who is alleged or found to have committed an offence and who has not completed eighteen years of age on the date of commission of such offence, has also been termed as “child in conflict with law” under section 2(13) of the J.J. Act, 2015.

Juvenile Justice System is a legal framework which defines juvenile justice and provides special treatment and protection to delinquent juveniles. Age determination is the most important to determine the maturity level of the accused. Generally, a “Child” means a person who has not attained the age of 18 years and is unable to understand what he is doing is wrong or against the law. The Indian Penal Code, 1860 recognises the child below 7 years of age as “doli incapax”, means incapable to commit offence. It also declares that “Nothing is an offence which is done by a child above 7 years of age and under 12, who has not attained sufficient maturity to understanding to judge of the nature and consequences of his conduct on that occasion.”^{vi} But, this rule has an exception that if the child between 7 to 12 years of age is mature sufficient to understand the consequences of his conduct, he may be punished for the offence he has committed.

Juvenile delinquency means a crime committed by an adolescent^{vii} under the age of 18 years. Under the Juvenile Justice Act, 2000 the maximum tenure of punishment which could be given to the juvenile offender was 3 years irrespective of the gravity of the offence they have committed and there was no such distinction of heinous and normal crimes. In case of an adult offender maximum punishment which can be given is capital punishment. The J.J. Act, 2000 with regard to Juvenile Offenders believed that they must be given a chance to be reformed.

The reformatory theory of punishment includes - sending them to reformation centre, juvenile homes, juvenile schools, Observation Homes etc and making them involvement in different types of programmes run by the Government or NGO's.

During my research, I visited several observation homes and after interview session with officials of observation homes and inmates I reached on conclusion that the present Act [JJ Act, 2015] provides that if the juvenile between the age of 16-18 commits heinous offence, he shall be tried and punished as an adult but it does not focus on the juveniles who come within the age group of 14 to 16 years. The juveniles between the age group of 16 to 18 very well know their act and the consequences thereof. But, the condition is not same for the age group of 14 - 16 years. This age group is very sensitive, because at this stage of growth and development the juvenile feel many physical, mental, hormonal as well as other changes in their body and due to these changes they want to do new experiments, sexual activities are more common among the juveniles of this age group. One other important matter of worry is that juveniles of age group of 14 - 16 years are on high risk now, because after the enactment of the JJ Act, 2015 they are the softest target of the mastermind criminals. So, in my opinion the parents, guardians, members of civil societies and every persons should try to provide special care and protection of the juveniles of this age group.

Causes of Juvenile Delinquency : -

1. Instability of Juveniles

The physical, psychological, biological and sociological factors are mainly responsible for juvenile delinquency. At this stage, adolescents becomes more conscious about their peer group^{viii} appearance, style, food, liberty etc. Sometimes these are made available by the parents and sometimes this results due to ignorance of the parents towards their children and finally it results in juvenile delinquency.

2. Economic Condition of the Family

Economic condition of the family also an important factor responsible for increasing rate of juvenile delinquency. Food, cloths, dwelling house, medical facility are the basic needs of every person and if his sources becomes insufficient in fulfilling these basic requirements then any one can commit offence. A juvenile has unlimited requirements and desires. If their parents become incapable to fulfil these requirements then the juvenile try to fulfil it themselves by stealing money from home or other places. And these tendency develop into habit which results finally into juvenile delinquency.

3. Modern Life Style

Modern lifestyle is also a responsible factor for increasing rate of juvenile delinquency. The modern lifestyle and the rapidly changing society are making it very difficult for the juvenile to adjust in it. They face many problems related to cultural conflicts and since they become unable to differentiate between right and wrong, so they easily move towards the wrong one. Use of drugs, injections, theft, robbery, murder etc are more common offence committed by the juveniles.

There are many other factors which are responsible for juvenile delinquency which has not been discussed here. Now a days, heinous offences like rape or murder is not an uncommon incident. When we read any daily newspaper, it contains near about 10 to 15 rape cases and several murder cases reported in different parts of the country. But, in the year 2012 "Delhi Gang Rape case"(commonly known as NIRBHAYA gang rape case)^{ix} involved a brutal rape and fatal assault that occurred on 16th December 2012 in Munirka in south Delhi. The incident took place when a 23rd year old female physiotherapy intern was beaten, gang raped and tortured in a private bus in which she was travelling with her friend.

Subsequently, public protest against the state and central governments for failing to provide adequate security for women took place in New Delhi, where thousands of people clashed with security forces. This incident drew the attention of everyone and the Legislature

and the Judiciary also did not remain untouched with it because out of six accused one was a minor. The court decided that since the accused was minor at the time of commission of the offence so he is eligible to get the remedy of “Ex post facto law” under Article 20(1) of the Constitution of India which provides that “No person shall be convicted of any offence except for violation of a law in force at the time of the commission of the Act charged as an offence, nor be subjected to a penalty greater than that which might have been inflicted under the law in force at the time of the commission of the offence”.

After this incident the central Government amended the previous Juvenile Justice Act, 2000 and enacted the new Juvenile Justice (Care and Protection of Children) Act, 2015. For the first time term “heinous offence”^x defined as “the offence for which the minimum punishment under the Indian Penal Code, 1860 or any other law for the time being in force is imprisonment for 7 years or more” and also provided that if a juvenile between the age of 16 to 18 commits any heinous offence he shall be treated and punished as an adult. But, unfortunately, incidents of rape, murder and like offences by juveniles have not been stopped. It means that rigorous punishment or capital punishment can not stop the heinous offences like rape, murder etc.

Juvenile Justice System

Child in conflict with law is the most vulnerable sections of children. For the development of a country Rule of law^{xi} and access to justice for everyone is very necessary. In India, there is a separate justice system for adult and the juvenile. Juvenile Justice System includes the Juvenile Court, Juvenile Police, Juvenile Justice Board and the Governmental and Non- Governmental organisations and all of them have distinct functions.

Juvenile Police

In every police station, at least one officer, not below the rank of Assistant Sub-inspector is designated as child welfare police officer^{xii} to exclusively deal with children either as victims or accomplice, in co-ordination with the police, voluntary and non-governmental organisations. In every district Special Juvenile Police Unit, headed by a police officer not below the rank of Deputy Superintendent of Police is constituted. When a juvenile commits any offence and is apprehended by the police, such child is handed over to the child welfare police officer and then he is produced before the Juvenile Justice Board.

In the light of COVID19 the Government has given certain directions to the police that if any person (either adult or juvenile), accused of any offence is arrested then at first he will be sent to the quarantine centre and he will stay there for a minimum period of 14 days. Physical appearance of the accused person is prohibited due to the COVID pandemic and the same direction has been given to the Juvenile Justice Board.

Juvenile Justice Board^{xiii}

A Juvenile Justice Board consists of a Metropolitan Magistrate or a Judicial Magistrate of 1st Class not being a Chief Metropolitan Magistrate or Chief Judicial Magistrate with at least 3 years of experience and two social workers, of whom at least one should be a women.

When a child is alleged to have been committed an offence is apprehended by the police, such child is placed under the charge of the special juvenile police unit or the designated child welfare police officer, who produces the child before the Juvenile Justice Board within 24 hours of apprehending excluding the time necessary for the journey. But, it has been provided that in no case a child in conflict with law shall be placed in a police lockup or lodged in a jail. Such child, if arrested shall be released on bail with or without surety. It has been further provided that such person shall not be so released if there is

probability that such release may bring that person in association with any known criminal or he may defeat the ends of justice.

When such person is not released on bail by the Board, it shall make an order sending him to an observation home or a place of safety, for such period during the inquiry.

Child Care Institutions, Observation Homes, Special Homes, Place of Safety etc. in the light of COVID-19

The rehabilitation and social re-integration of a child begins during the stay of the child in conflict with law in an Observation home, or special home or place of safety. The process of rehabilitation and social reintegration of children is based on the individual child care plan, and in this method preference shall be given to family based care, such as - by restoration to family or guardian with or without supervision or sponsorship or adoption or foster care. But, all efforts shall be made to keep siblings placed in institutional or non institutional care, unless it is in the best interest not to be kept together.

It has been provided by the Act that for the child in conflict with law the process of rehabilitation and social re-integration shall be undertaken in the Observation Homes, if the child is not released on bail or in Special Homes or Place of Safety or Fit Facility or With a Fit Person, if placed by the order of the Juvenile Justice Board. In the process of rehabilitation and re-integration of children following services are provided by these institutions -

1. Appropriate education, special education for children etc.
2. Skill development, occupational therapy and life skill education etc.
3. Basic requirements such as food, shelter, cloth, medical etc.
4. Separate arrangements for boys and girls.
5. Arrangements for safety and protection.
6. Equipments such as wheel chairs, hearing aids etc.

These are the provisions of statutes, management and arrangements of facilities in the above institutions which have been established to provide rehabilitation and social re-integration of child in conflict with law only available on paper, the actual position of these institutions are quite different. The government has established Observation Homes, Special Homes, Place of Safety at different districts of Bihar but many of these institutions are facing many problems like - they do not have their own building, lack of staff, lack of infrastructure, lack of medical facility and many others.

Maximum of these institutions are being run in a private owned buildings and maximum of these buildings do not fulfil required infrastructure for these institutions. There is lack of hygiene, water, light, fresh air, arrangement of toilets etc. Inmates are kept in a small room more than it's capacity and due to this reason they face many problems related to health.

Kanpur Shelter Home Case

In this case a total 57 girl residents of a Government Shelter Home in Kanpur were brought from different districts of U.P., had been tested positive for COVID-19 positive, out of which 5 girls were found to be pregnant were all POCSO victims. It has emerged that 171 girls were being put up in the Shelter Home with just 100 beds. The District Magistrate Kanpur clarified that the girls were already pregnant at the time they were brought to the Rajkiya Balika Grah, Swarup Nagar, Kanpur.

Poonam Kapoor, Member, State Women Commission, said that many girls were brought to the shelter home under the POCSO Act. They were minors, 16-17 years of age, so, they were kept in that shelter home. In relation to the pregnancy cases, Ms. Kapoor dismissed the possibility of any lapses and said that she inspected the Shelter Home every month and

men are prohibited from going in shelter home. The investigation of the case has not been concluded. There is a chance that many shocking material may come out because several politicians, officers, Non-Governmental Organisations etc are involved in this dirty incident.

Mr. Mithilesh Pal, the Superintendent of the Shelter, admitted that it was running far beyond capacity. He said that - "It is not easy to strictly implement the norms of social distancing when there is such a large number of girls residing here".

Muzaffarpur Shelter Home case^{xiv}

Here, it is expedient to discuss "Muzaffarpur Shelter Home Case" which drew the attention of the whole of India. This case was related to a shelter home that ran under a non-governmental organisation named as "Sewa Sankalp Evam Vikash Samiti"^{xv} at Muzaffarpur, Bihar, where cases of sexual abuse, rape, torture and murder were reported. In a medical examination, sexual abuse of 34 out of 42 inmates living at the Shelter was confirmed.

In this incident, a First Information Report was lodged on dated 31st May, 2018, against 12 people. The aforesaid shelter home was headed and run by Brajesh Thakur, and was running several other NGOs and a Hindi newspaper called "Pratah Kamal"^{xvi}. Because of the political connections of Brajesh Thakur, involvement of government officials, the delay caused by the CBI in investigation and the most important thing, failure of Government to protect the inmates residing in the shelter home and prohibit these incidents, everyone criticised the government. The Honorable Supreme Court also took cognizance suo moto and ordered the CBI to investigate as soon as possible and transfer the case to New Delhi.

In May, 2018, Tata Institute of Social Science, Mumbai (TISS) carried out a social audit of Shelter Homes across the Bihar for the year 2017. TISS submitted its report in April 2018 which revealed repeated sexual abuse of inmates at a short stay home in Muzaffarpur, Bihar. After its report, the government registered the F.I.R. on 31st May and the inmate girls were rescued from the Shelter Home and shifted to Madhubani, Patna and Mokama.

Later on, the medical Board of PMCH^{xvii}, Patna confirmed the sexual abuse of a majority of the girls of the Balka Grih. The main accused of this case was booked in another case in which 11 women were missing from another shelter home, which was being run by his NGO. Medical test confirmed that out of 42 girls housed at Balika Grih, 34 were sexually abused, forced to undergo illegal abortion, one was allegedly killed and buried on the shelter home campus. After threat the authorities dug the campus of shelter home but did not find any human skeleton.

On January 20, 2020 the court convicted Brajesh Thakur and 18 others. On February 11, 2020 the court sentenced Brajesh thakur and 11 others to "Life Imprisonment".

This case is the complete failure of the Government in proper arrangement of rehabilitation, protection, safety etc, in child care institutions. Many officials, leaders and mastermind criminals are involved in this case. The inmates were supplied to different places. Rape, sexual abuse, murder, missing etc are very common in these institutions. The care takers make available these inmates to different place after giving them drugs, injections etc. It seems that the Government has lost its control over these institutions.

COVID-19

COVID-19 pandemic is a global challenge for health and well-being. It is an infectious respiratory disease caused by severe acute respiratory syndrome corona Virus-2 (SARS-CoV-2). It was first identified in December 2019 in Wuhan, Hubei, China, and resulted in an ongoing pandemic. As of October 17, 2020, 39.2 million cases have been reported across 189 countries and territories, but the WHO estimates that around 800 million people in total may have been infected. The disease has killed 1.1 million people; more than 27 million people have been recovered. The disease spreads most often when people are physically close. It spreads very easily and sustainably through the air, primary via small droplets and sometimes in aerosols, as an infected person breathes, coughs, sneezes, talks etc. In March 2021 again a new wave of CORONA virus is coming very rapidly and it is a matter of great concern.

India has the second largest population in the world after China and has one of the densest populations. So, there is a chance that infection may spread rapidly in the country. Recommended measures to prevent infection are frequent hand washing, social distancing, covering coughs and sneezes, quarantine and keeping unwashed hands from the face. The use of face masks, clothes covering face has been recommended by the doctors and health organisations. But wearing mask is best remedy to prevent contagion of COVID 19, because as the scientists say that the pandemic spreads through air, saliva, droplets of spit etc. COVAXIN is India's first indigenous vaccine developed by our scientists, which has an efficacy rate of 81% after its phase 3 trial. COVISHIELD is another vaccine which is helpful in prevention of COVID 19 outbreak.

In India, it has taken a shape of human right crisis with a deep impact on children and their rights. Several news channels has reported serious violation of child rights during the pandemic with a steep rise in child sexual abuse and other exploitative practices such as trafficking, forced labour etc and its reason is COVID-19 pandemic.

Rehabilitation of juvenile offenders in correctional institutions and re-integration to the society are two interconnected issues which pay grave concern. Increasing rate of juvenile delinquency clearly shows the failure of existing policies and methods of rehabilitation and social re-integration of present Juvenile Justice System. For the purpose of rehabilitation and social re-integration juvenile offenders are kept in different institutions established and run by the state government. There is a lack of ideal facilities in these institution which may result in poor health and immunity system. Since this disease spreads through the air, via small droplets and sometimes in aerosols, as an infected person breathes, coughs, sneezes, talks etc and the child care institutions do not have ideal arrangements regarding its infrastructure and other facilities, so there is a chance that this disease may spread in these institutions very rapidly.

In Re Contagion of COVID 19 Virus in Children Protection Home^{xviii}

The Supreme Court listed this petition suo moto because of the COVID 19 pandemic which is sweeping in the country. There are children who need care and protection are kept in or children in conflict with law who are kept in various types of homes. There are also children who are kept in foster care and kinship care. In these circumstances, it was felt that the interest of these children should be looked into. For the protection of the interest of children, which fall within the ambit of the JJ Act, 2015, the Supreme court issued certain directions to be followed by the child protection homes.

Restoration of Children from Child Care Institutions to their families due to COVID

The Supreme Court issued notice to National Commission for Protection of Child Rights (NCPCR) during the course of the suo moto case on conditions of children protection homes across the country in wake of the country in wake of the COVID19 pandemic.

A bench headed by Justice L. Nageshwar Rao heard the submission of Amicus Curiae^{xix} and noted that a letter had been issued by the NCPCR^{xx} which recommended for the restoration of children lodged in children protection homes in eight states back to their families. The NCPCR issued letters to the district authorities, setting off a process to restore children lodged in child care institutions back to their families after a review by the child welfare committees. Many civil societies called the withdrawal of the letter and have stated that it is against the principles and spirits of the Juvenile Justice (Care and Protection of Children) Act, 2015.

A Division Bench took cognizance of conditions of Children Protection Homes across the country in wake of COVID 19 pandemic. Certain directions have been issued to State Government and various authorities to protect them.

Required Approaches and Activities

1. Make the environment of the child care institutions so favourable for the inmates that they could not feel absence of their parents and run carrier oriented programmes regularly.

2. The Government should develop ideal infrastructure and make proper arrangements for the protection and safety of inmates.
3. Fix the liability and make sure that the trial of the accused of the offence committed against the juvenile, be concluded as soon as possible.
4. Aware the parents of delinquent juveniles and their neighbours to provide them favourable environment to grow and develop the qualities of a civilized and responsible citizen.
5. Assure access to COVID19 tests, clinical consideration, psychological support and emotional well being.
6. Assure access to clean water, fresh air, clean latrines, spacious rooms to make sure social distancing.
7. Shield the inmates of child care institutions effectively from sexual abuse, rape, exploitation, trafficking like offences.
8. Grow social assurance strategies and projects to make the society awake to accept the juvenile when they come back to their home.

ⁱ Sec. 107 of the JJ Act, 2015

ⁱⁱ Sec. 4 of the JJ Act, 2015

ⁱⁱⁱ It is an ongoing pandemic of corona-virus disease 2019 (COVID 19) caused by severe acute respiratory syndrome corona-virus 2 (SARS-CoV-2).

^{iv} *Suo Moto Writ Petition (Civil) No(s). 4/2020*

^v With effect from dated - 15th January, 2016

^{vi} Sec. 82 & 83 of the I.P.C., 1860

^{vii} Phase of growth and development between childhood and adulthood. WHO defines Adolescent as a person between ages 10 and 19.

^{viii} Group of children of same age group

^{ix} *State Vs. Ram Singh & Others*, 2013 S.C.

^x Sec. 2(33) of the JJ Act, 2015

^{xi} "The Rule of Law" was popularized in the 19th century by British Jurist A. V. Dicey

^{xii} Sec. 107 of the JJ Act, 2015

^{xiii} Sec. 4 of the JJ Act, 2015

^{xiv} *Mahila Police Station, Muzaffarpur Case No. - 33/2018*, dated - 31/05/2018, registered under section - 120B, 376, 34 of I.P.C., 1860 and u/s - 4/6/8/10/12 of POCSO Act

^{xv} NGO, established in 1987 in Muzaffarpur, Bihar having Unique Registration ID - BR/2009/0003177.

^{xvi} Daily Hindi news paper, started by Sri Radhamohan Thakur [father of Brajesh Thakur] in 1982.

^{xvii} PMCH stands for Patna Medical College and Hospital

^{xviii} *Suo Moto Writ Petition (Civil) No.(s). 4/2020*

^{xix} Amicus Curiae is friend of the court. He is someone who is not a party to a case but assists the court by offering information, expertise or insights.

^{xx} National Commission for Protection of Child Rights

Financial Performance of Regional rural Banks : An Application of Post-Hoc Tukey HSD Test

*Smt. Manorama Chaurasia**

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Financial performance is the key indicator for any business organization. The survival growth and development of business depends on profitability. The profitability is the ratio which helps to measure the financial performance of business and indicates how far it has been successful. The present study attempts to analyze the financial performance of five regional rural banks in Eastern Uttar Pradesh: Allhabad UP Gramin Bank, Baroda UP Gramin Bank, Kashi Gomati Samyut Gramin Bank, Prathama Bank, and Serva UP Gramin Bank. The variables taken for the study are Net Profit, Recovery Percentage, Credit Deposit Ratio and Net NPAs . The study brings out the comparative efficiency of Allhabad UPB, Baroda UPB, KGSGB, Prathama bank and Serva UP Gramin Bank.

Keywords: Regional Rural Banks , profitability ratios, financial performance, post Hoc Tukey test.

Introduction:

In the words of Lord Keynes, "Profit is the engine that drives the business enterprise". The primary objective of a business undertaking is to earn profits. Profit earning is considered essential for the survival of the business. A business needs profit not only for its existence but also for expansion and diversification. The investors want an adequate return on their investments, workers want higher wages, creditors want higher security for their interest and loan and so on. A business enterprise can discharge its obligations to various segments of society only through earning of profits. Profits are, thus, a useful measure of overall efficiency of business. How good is a company at running its business? Does its performance seem to be getting better or worse? Is it making any money? How profitable is it compared with its competitors? All of these very important questions can be answered by analyzing profitability ratios. Profitability Ratios show how successful a company is in terms of generating returns or profits on the Investment that it has made in the business. If a business is liquid and efficient it should also be Profitable.

This Ratios shows how profitable the business is, compared to previous years and to similar business. In limited company's they may be used by investors, shareholders or seeking investors. Every firm is most concerned with its profitability. One of the most frequently used tools of financial ratio analysis is profitability ratios which are used to determine the company's bottom line. Profitability measures are important to company managers and owners alike. If a small business has outside investors who have put their own money into the company, the primary owner certainly has to show profitability to those equity investors.

It is a financial metrics that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or the same ratio from a previous period indicative

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that the company is doing well. Profits to the management are the test of efficiency and a measurement of control; to owners, a measure of worth of their investment; to the creditors, the margin of safety; to employees, a source of fringe benefits; to Government, a measure of tax-paying capacity and the basis of legislative action; to customer, a hint to demand for better quality and price cuts; to an enterprise, less cumbersome source of finance for growth and existence and finally to the country, profits are an index of economic progress.

Review of literature:

Literature review is a study involving a collection of literatures in the selected area of research in which the scholar has limited experience. In the past, various studies relating to the financial performance of banks have been conducted by researchers.

Studies by Saveeta and Verma Sateesh (2001), Shravan Singh (2001), Kantawala Amita S (2004), Ketkar W Kusum et al. (2004), analyze the performance of banks from a profitability point of view, using various parameters.

Most of the studies (Ganesan P 2001; Rayapati Vijayasree, 2002; Das M R, 2002-2003; and Gupta V & Jain P K, 2003) compared the performance of public, private and foreign banks by using measures of profitability, productivity, and financial management (Trehan Ruchi and Sonu Nitti, 2003).

P Janaki Ramudu and S Durga Rao (2006) conducted a study on A Fundamental Analysis of Indian Banking Industry, by analyzing the performance of SBI, ICICI and HDFC.

Gunjan M Sanjeev (2009) conducted a study on Efficiency of Indian public sector banks and found that the efficiency of public sector banks not increased during the period 2003-07.

R.C.Dangwal and Reetu Kapoor (2010) conducted a study on financial performance of nationalized banks. In this study they compared financial performance of 19 commercial banks with respect to eight parameters and they classified the banks as excellent, good, fair and poor categories.

Raj Mohan S and Pashupati S (2010) conducted a study to evaluate the performance of TAICO bank using profitability ratios.

Dilip Kumar Jha and Durga sankar Sarangi (2011) conducted a study on Performance of new generation banks using modern techniques.

Methodology of the study:

The present study adopts analytical and descriptive research design. The data of the sample banks for a period of 2013-2014 to 2017-2018 have been collected from the annual reports published by the banks. A finite sample size of five banks Allahabad UPB, Baroda UPB, KGSGB, Prathama bank and Serva UP Gramin Bank selected for the purpose of study. The variables used in the analysis of the data are Nat Profit, Recovery Percentage, Credit Deposit Ratio and Net NPAs. While analyzing and interpreting the results, the statistical tools used are arithmetic mean, one-way ANOVA, post Hoc Tukey HSD test for multiple comparisons using SPSS 16 and ranking method.

Bank profitability

According to **Keynes** "profit is the engine that drives the business enterprise". An enterprise needs profit not only for its existence but also for expansion and diversification. At the time of establishment of Regional Rural Banks, it was presumed that rural banks would provide credit service to weaker sections of the society and earning profit would not be the main objective of the RRBs. The major portion of Regional Rural Bank's profit comes from providing banking services and interest on sanctioned loan. Other source of bank to earn profit is by selling commercial paper in the money market.

Table 1: Net Profit of the Banks

years	Allahabad UPGB	Baroda UPGB	KGSGB	Purvanchal Bank	Serva UPGB
2014	2194.05	19440.87	4905.8	3002.14	2806.77
2015	5106.21	18346.85	3833.52	3334	3317.48
2016	931.02	12162.81	789.34	3287.2	5285.63
2017	3137.12	6870.29	1684.26	4005.17	5625.98
2018	3532.99	9690.83	2249.25	3084.33	10416.08
Mean	2980.278	13302.33	2692.434	3342.568	5490.388

Source: Annual Reports of Banks.

H₀: The Net Profit of sample banks does not differ significantly.

H₁: The Net Profit of sample banks differ significantly.

Table 1.1 depicts that F value for between the sample banks is 11.301 with p value 0.000 therefore null hypothesis rejected at 0.05 level of significance i.e., the sample banks differ significantly in the position of Net Profit during 2014-2018. Turkey test applied to make multiple comparisons as indicated in table 1.2 While comparing mean differences between Baroda UPGB with Serva UPGB, Allahabad UPGB, KGSGB and Purvanchal Bank 7811.05, 10322.052, 10609.896, and 9959.762 with p values 0.004, 0.000, 0.000, and 0.000 respectively. We conclude that Baroda UPGB outperformed the remaining sample banks. The mean difference between AUGB and KGSGB is 287.844 with p value 1.000, the mean difference between Purvanchal Bank and KGSGB is -2.962 with p value 0.985 i.e., Purvanchal Bank and AUGB both perform better than KGSGB.

Table 1.1: ANOVA of Net Profit

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	398717059.5	4	99679264.88	11.301	.000
Within Groups	176415227.6	20	8820761.38		
Total	575132287.1	24			

Table 1.2: Multiple comparisons of Net Profit using Tukey HSD test

(I) Banks	(J) Banks	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
AUGB	BUGB	-10322.052	1878.378171	0.000	-15942.86313	-4701.24
	KGSGB	287.844	1878.378171	1.000	-5332.967135	5908.655
	Purvanchal B	-362.29	1878.378171	1.000	-5983.101135	5258.521
	SUGB	-2510.11	1878.378171	0.673	-8130.921135	3110.701

BUGB	AUGB	10322.052	1878.378171	0.000	4701.240865	15942.86
	KGSGB	10609.896	1878.378171	0.000	4989.084865	16230.71
	Purvanchal B	9959.762	1878.378171	0.000	4338.950865	15580.57
	SUGB	7811.942	1878.378171	0.004	2191.130865	13432.75
KGSGB	AUGB	-287.844	1878.378171	1.000	-5908.655135	5332.967
	BUGB	-10609.896	1878.378171	0.000	-16230.70713	-4989.08
	Purvanchal B	-650.134	1878.378171	0.997	-6270.945135	4970.677
	SUGB	-2797.954	1878.378171	0.580	-8418.765135	2822.857
Purvanchal B	AUGB	362.29	1878.378171	1.000	-5258.521135	5983.101
	BUGB	-9959.762	1878.378171	0.000	-15580.57313	-4338.95
	KGSGB	650.134	1878.378171	0.997	-4970.677135	6270.945
	SUGB	-2147.82	1878.378171	0.782	-7768.631135	3472.991
SUGB	AUGB	2510.11	1878.378171	0.673	-3110.701135	8130.921
	BUGB	-7811.942	1878.378171	0.004	-13432.75313	-2191.13
	KGSGB	2797.954	1878.378171	0.580	-2822.857135	8418.765
	Purvanchal B	2147.82	1878.378171	0.782	-3472.991135	7768.631

*. The mean difference is significant at the 0.05 level.

2.Credit-Deposit Ratio

The credit deposit-ratio is also an indication of effective and efficient planning for utilization of deposits received by the banking institutions. The range of credit-deposit ratio can be between 1 to 100 percent. Higher the C. D. Ratio is a sign of the better performance of the bank in meeting the credit requirements of the clients. Hence a bank always aims at a higher credit-deposit ratio.

H0: The Credit-Deposit Ratio of sample banks does not differ significantly.

H1: The Credit-Deposit Ratio of sample banks differ significantly.

Table:2 Credit-Deposit Ratio of RRBs

years	Allahabad UPGB	Baroda UPGB	KGSGB	Purvanchal Bank	Serva UPGB
2014	79.21	39.35	30.44	48.25	66.73
2015	79.39	45.21	28.3	47.22	67.18
2016	75.43	49.42	30.43	46.27	70.16

2017	68.33	43.35	29.55	41.65	68.17
2018	61.68	41.3	29.16	35.42	69.52
Mean	72.808	43.726	29.576	43.762	68.352

Table 2.1 depicts that F value for between the sample banks is 79.83721 with p value .000 therefore null hypothesis rejected at 0.05 level of significance i.e., the sample banks differ significantly in the Credit-Deposit Ratio. Tukey test applied to make multiple comparisons as indicated in table 2.2. While comparing credit-deposit ratio of Allahabad UPGB with four other RRBs, the multiple comparison reveals existence of statistically significant difference between Allahabad UPGB and all other four RRBs. With reference to the mean values in the data table, it can be concluded that Allahabad UPGB has the highest and KGSGB has the lowest credit-deposit ratio.

Table 2.1: ANOVA output for comparison of 'Credit-Deposit Ratio'

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6694.447	4	1673.612	79.83721	.000
Within Groups	419.2561	20	20.9628		
Total	7113.703	24			

Table 2.2: Multiple comparisons of Credit-Deposit Ratio using Tukey HSD test

(I) Banks	(J) Banks	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
AUGB	BUGB	29.08200*	2.89571	.000	20.417	37.747
	KGSGB	43.23200*	2.89571	.000	34.567	51.897
	Purvanchal B	29.04600*	2.89571	.000	20.381	37.711
	SUGB	4.456	2.89571	0.551	-4.209	13.121
BUGB	AUGB	-29.08200*	2.89571	.000	-37.747	-20.417
	AUGB	14.15000*	2.89571	0.001	5.485	22.815
	Purvanchal B	-0.036	2.89571	1	-8.701	8.629
	SUGB	-24.62600*	2.89571	.000	-33.291	-15.961
KGSGB	AUGB	-43.23200*	2.89571	.000	-51.897	-34.567
	BUGB	-14.15000*	2.89571	0.001	-22.815	-5.485
	Purvanchal B	-14.18600*	2.89571	0.001	-22.851	-5.521
	SUGB	-38.77600*	2.89571	.000	-47.441	-30.111
Purvanchal B	AUGB	-29.04600*	2.89571	.000	-37.711	-20.381
	BUGB	0.036	2.89571	1	-8.629	8.701
	KGSGB	14.18600*	2.89571	0.001	5.521	22.851
	SUGB	-24.59000*	2.89571	.000	-33.255	-15.925

SUGB	AUGB	-4.456	2.89571	0.551	-13.121	4.209
	BUGB	24.62600*	2.89571	.000	15.961	33.291
	KGSGB	38.77600*	2.89571	.000	30.111	47.441
	Purvanchal B	24.59000*	2.89571	.000	15.925	33.255

*. The mean difference is significant at the 0.05 level.

3. Recovery Percentage:

Recovery Percentage of a bank shows efficiency of bank in management of NPA. It refers to the amount recovered when a loan defaults. In other words, it is the amount, expressed as a percentage, recovered from a loan when the borrower is unable to settle the full outstanding amount. A higher rate is always desirable.

H0: The Recovery Percentage of sample banks does not differ significantly.

H1: The Recovery Percentage of sample banks differ significantly.

Table:3 Recovery Percentage

Years	Allahabad UPGB	Baroda UPGB	KGSGB	Purvanchal Bank	Serva UPGB
2014	60.92	72.94	72.50	67.02	48.34
2015	59.94	76.51	75.20	69.41	71.07
2016	63.68	84.89	75.37	75.23	83.65
2017	61.66	77.44	77.3	79.06	84.15
2018	62.06	53.17	79	73.84	85.81
Mean	61.652	72.99	75.874	72.912	74.604

Table 3.1 depicts that F value for between the sample banks is 1.922 with p value 0.146 therefore

null hypothesis rejected at 0.05 level of significance i.e., the sample banks differ significantly in the Recovery Percentage during the study period. Tukey test applied to make multiple comparisons as indicated in table 3.2. The mean difference between KGSGB and Allahabad UPGB is 14.222 with p value 0.144 and the mean difference between HDFC and ICICI is 1.06 with p value 0.023. These mean differences were significant. The performance of BUGB, Purvanchal and Serva UPGB does not differ significantly.

Table:3.1 ANOVA table of Recovery Percentage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	649.535	4	162.384	1.922	0.146
Within Groups	1690.111	20	84.506		
Total	2339.646	24			

Table 3.2: Multiple comparisons of Recovery Percentage using Tukey HSD test

(I) Banks	(J) Banks	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
AUGB	BUGB	-11.338	5.813967	0.325	-28.7356	6.059568
	KGSGB	-14.222	5.813967	0.144	-31.6196	3.175568
	Purvanchal B	-11.26	5.813967	0.331	-28.6576	6.137568
	SUGB	-12.952	5.813967	0.210	-30.3496	4.445568
BUGB	AUGB	11.338	5.813967	0.325	-6.05957	28.73557
	BUGB	-2.884	5.813967	0.987	-20.2816	14.51357
	Purvanchal B	0.078	5.813967	1.000	-17.3196	17.47557
	SUGB	-1.614	5.813967	0.999	-19.0116	15.78357
KGSGB	AUGB	14.222	5.813967	0.144	-3.17557	31.61957
	BUGB	2.884	5.813967	0.987	-14.5136	20.28157
	Purvanchal B	2.962	5.813967	0.985	-14.4356	20.35957
	SUGB	1.27	5.813967	0.999	-16.1276	18.66757
Purvanchal B	AUGB	11.26	5.813967	0.331	-6.13757	28.65757
	BUGB	-0.078	5.813967	1.000	-17.4756	17.31957
	KGSGB	-2.962	5.813967	0.985	-20.3596	14.43557
	SUGB	-1.692	5.813967	0.998	-19.0896	15.70557
SUGB	AUGB	12.952	5.813967	0.210	-4.44557	30.34957
	BUGB	1.614	5.813967	0.999	-15.7836	19.01157
	KGSGB	-1.27	5.813967	0.999	-18.6676	16.12757
	Purvanchal B	1.692	5.813967	0.998	-15.7056	19.08957

*. The mean difference is significant at the 0.05 level.

4. Net NPA of RRBs in Eastern Uttar Pradesh:

Non Performing Assets (NPA) is defined as an advance for which interest or repayment of principal or both remains overdue for a period of 90 days. The level of NPA is an indicator that shows the bankers credit risks and efficiency of allocation of resource. Non Performing Assets means an asset or account of borrower, which has classified by a bank or financial institution as sub standard, doubtful or loss asset, in accordance with the directions or guidelines relating to asset classification issued by The Reserve Bank of India.

H0: The Net NPA of sample banks does not differ significantly.

H1: The Net NPA of sample banks differ significantly.

Table 4.1 Net NPA

Years	Allahabad UPGB	Baroda UPGB	KGSGB	Purvanchal Bank	Serva UPGB
2014	42306.94	0	23586.7	26716	284.59
2015	34267.01	0	15171.55	21386.41	2470.09
2016	29496.6	0	8462.56	9956.95	3921.56
2017	22011.97	76469.86	11132.45	6648.55	2417.31
2018	20256.4	21384.15	16952.91	40429.16	8173.23
Mean	29667.78	19570.8	15061.23	21027.41	3453.356

Table 4.1 depicts that F value for between the sample banks is 1.63399 with p value 0.205 therefore null hypothesis rejected at 0.05 level of significance i.e., the sample banks differ significantly in the position of Net NPA during 2014-18. Tukey test applied to make multiple comparisons as indicated in table 4.2. With reference to the mean values in the data table, it can be concluded that Allahabad UPGB has higher level of NPA (%) compared to BUPGB, Prathama B, and SUPGB. The mean values also suggest that SUPGB has the lowest of NPA among all the five banks.

Table:4.2 ANOVA of Net NPA

	Sum of Squares	Df	Mean Square	F	sig.
Between Groups	1838568215	4	459642053.8	1.63399	0.205
Within Groups	5626009257	20	281300462.9		
Total	7464577472	24			

Table 4.2: Multiple comparisons of Net NPA using Tukey HSD test

(I) Banks	(J) Banks	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
AUGB	BUGB	10096.98	10607.55321	0.873	-21644.7908	41838.7548
	KGSGB	14606.55	10607.55321	0.648	-17135.2228	46348.3228
	Purvanchal B	8640.37	10607.55321	0.923	-23101.4028	40382.1428
	SUGB	26214.43	10607.55321	0.137	-5527.3448	57956.2008
BUGB	AUGB	-10097	10607.55321	0.873	-41838.7548	21644.7908
	AUGB	4509.568	10607.55321	0.993	-27232.2048	36251.3408
	Purvanchal B	-1456.61	10607.55321	1	-33198.3848	30285.1608

	SUGB	16117.45	10607.55321	0.562	- 15624.3268	47859.2188
KGSGB	AUGB	-14606.6	10607.55321	0.648	- 46348.3228	17135.2228
	BUGB	-4509.57	10607.55321	0.993	- 36251.3408	27232.2048
	Purvanchal B	-5966.18	10607.55321	0.979	- 37707.9528	25775.5928
	SUGB	11607.88	10607.55321	0.807	- 20133.8948	43349.6508
Purvanchal B	AUGB	-8640.37	10607.55321	0.923	- 40382.1428	23101.4028
	BUGB	1456.612	10607.55321	1	- 30285.1608	33198.3848
	KGSGB	5966.18	10607.55321	0.979	- 25775.5928	37707.9528
	SUGB	17574.06	10607.55321	0.481	- 14167.7148	49315.8308
SUGB	AUGB	-26214.4	10607.55321	0.137	- 57956.2008	5527.3448
	BUGB	-16117.4	10607.55321	0.562	- 47859.2188	15624.3268
	KGSGB	-11607.9	10607.55321	0.807	- 43349.6508	20133.8948
	Purvanchal B	-17574.1	10607.55321	0.481	- 49315.8308	14167.7148

*. The mean difference is significant at the 0.05 level.

Overall performance Analysis: Ranking Method

Banks	Net Profit	C/D Ratio	Recovery%	Net NPA	Rank
Allahabad UPGB	4	1	5	5	4
Baroda UPGB	1	4	3	2	1
KGSGB	5	5	1	3	3
Prathama Bank	3	3	4	4	5
Serva UP GB	2	2	2	1	2

Conclusion:

Profitability, which aims at developing an insight into economic performance of the banks, is of paramount importance from the view point of investment decisions. The present study is conduct to examine the profitability position of four major banks in Indian banking sector. The study reveals that the sample bank does not differ significantly in earning returns by lending various funds. Baroda UPGB proved to be good in terms net profit. In terms of recovery percentage Serva UPGB was at top place. The net NPA of Allahabad UPGB, Baroda UPGB, Purvanchal Bank and Serva UPGB does not differ significantly during the study

period. The study also revealed that Baroda UPGB rated top followed by Serva, KGSGB, Allahabad UPGB and Purvanchal Bank based on overall performance.

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Covid-19: Its Impact On National Parks And Tribes

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COVID-19 is one of the most distractive and threatening periods of our life. This bio crisis has no precedent, there is no rule book that tells what government and people should be doing exactly almost 70% World population is locked into their homes. The virus is a mutant, it jumped from its animal host to human It is pernicious because it seems to find new ways to hide itself. In this situation when every government announce for a long duration lockdown and people locked themselves at their home and followed all preservatives as sanitize their hand and tightening their nose but another side of the impact on national parks and its nearest Tribes is too much vulnerable. At one side due to lockdown there is too much improvement in the parks as less deforestation and hunting of the wild animal ratio is also fallen which is good indication of the National park but on another hand its negative impact on it is changing behavior of animal and also its negative impact on tribes. In this period there is negative impact on their social and economic condition. IN this time, they face too much difficulty in their life. So, this paper aims to analyze the COVID -19 impact on wildlife in the national park and impact on tribes. Because India is a developing country. Here almost 70% of the people works in agricultural field. Among there many people are tribes, who work in the field.

Key words: *Destructive nature, lockdown, wildlife impact, socio economic condition of Tribes.*

Introduction:

The coronavirus outbreak came to light on December 31,2019 when china informed the world Health Organization of a cluster of cases of pneumonia of an unknown cause in Wuhan City in Hubei province. After that it spread to and to rest of the World. The WHO has now declared it a pandemic and a public health emergency of international concerns and reached almost all corners of the world and in a short time.

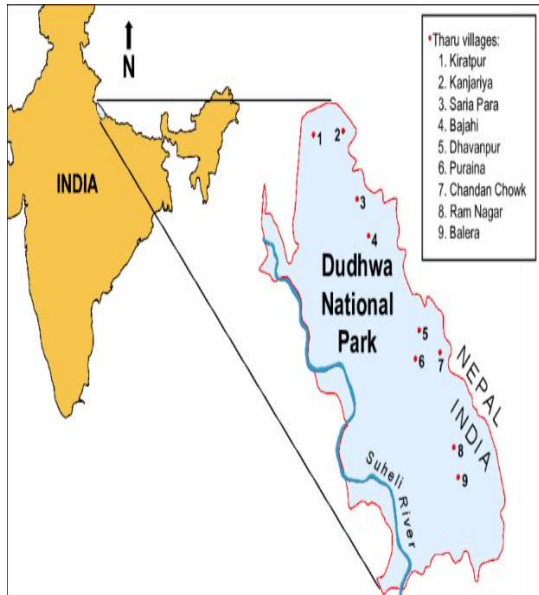
The virus has been named SARS-Cov-2 and this disease is now called COVID-19. COVID-19 is an unknowingly and unwanted virus which came in our lives. The First case of its reported in the last year in the month of December. This virus has most common symptoms like fever, dry cough, tiredness which is very normal in our daily life. According to latest evidence, WHO says the new novel corona virus is mainly transmitted between people through respiratory droplets and contact

routes as a person's nose or mouth. In this way the recognition of this virus within in right time is too much difficult. Due to this deadly virus when many countries announced lock down and people locked themselves at the homes but at the same time some people and animal could not have locked themselves because of their circumstances. One side in our national park where animals faces a changing behavior and the other side some tribes faces too much difficulty as during closed national park, they cannot collect wood for their daily food and many other basic challenges to day to day life. Before the pandemic many tribes employed themselves as a Guide in the park. Example as Tharu tribes works in Dudhwa

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National Park, and Nanda Devi National parks Bhootiya and Jaunsari, in RajaJi National Parks Bheel, in Ranthambore and Gir national Park Santhal and Khond works in tourist guide. It was their main source of economic life. But in this period all activities were closed, and they face too much problem.



Map1: Dudhwa National Park

Map2: National Park in India

Objectives:

The main objective of this research is to identify COVID-19 impact on national park and tribes in the present time. This paper has three main objective-

- To discuss the impact of covid-19 in the present time.
- To discuss the impact of covid-19 on the national park and wildlife.
- To evaluate the impact of covid-19 on the tribes and also impact on their socio-economic condition.

Impact of Covid-19 On National Park:

There are some positive as well as negative impact of COVID-19 on the national park. Such as:

Positive: There are some positive impact –

- During lockdown period all national park were closed. so, in this way in lockdown period there is minimum record of wildlife poaching and deforestation.
- In this time there is less interfere of human in the national park so some data present that there is some growth in the biodiversity of national park.
- Many national parks who has any railway or any road in the middle of national park, in the lock down when all were closed there is minimum death to causes caused by the roads on railway lines.

Negative: There are some negative impacts also such as:

- At Bronx zoo in New York city Tiger was affected by covid-19. So, in India there is a big challenge to save wildlife from covid-19 when India has less resource and is a developing country.
- A survey release data that there is some behavioral change in the wildlife, this may be due to covid 19.
- Due to less inference of human being, in the national park some species have too much abounded in the park as like Neel gay, elephant and some other animal.
- Besides it during this period there are increasing conflict between human and animal

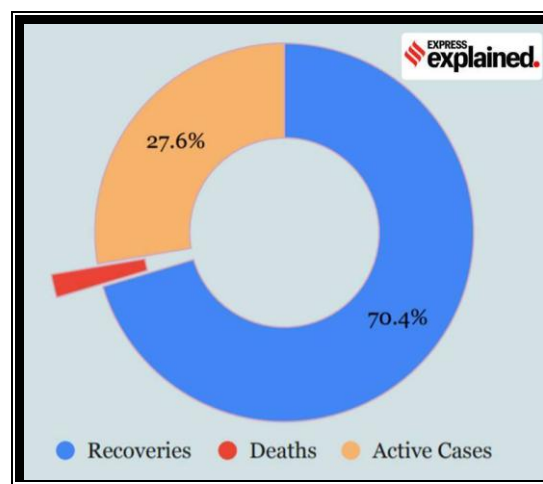
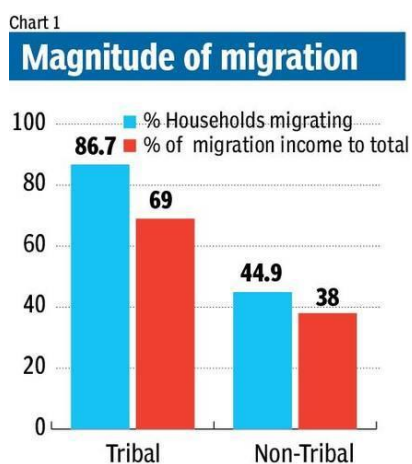


Figure1:Migration in Tribal and non-Tribal community and recovery ratio in india

Source: Ministry Social Justice and Empowerment, Gov. of india

Impact of Covid-19 On Tribes:

There are some impact on tribes as well-

- Many tribes who were migrant workers but during lockdown period they were forced go back to their village. In Orissa many tribes who work as a migrant Labouré in the metropolitan cities like Delhi, Mumbai and other, returned to their homes due to this lockdown. But to survive in this time with their family is too much difficult for them.
- In the lockdown they are facing unbearable burden of surviving without no money, food or work. Maximum tribes were working in informal sector, so they are facing a very difficult time.
- In the current time the main problem is food crisis. Currently approximately 820 million people are enduring chronic hunger.
- In the pandemic when medicine and medical treatment is very necessary but now in this time it is not available easily particularly to tribal.
- For example, in Maharashtra which has maximum COVID -19 cases in the country, there is only one government hospital per every 0.17 million people on an average.
- In this pandemic period face mask and sanitizer is too much important but now many tribes are only using leaf masks for protection. This is also because face mask is hard to find and most poor Indians cannot afford them.

Source: Indian Express News paper

- All tribal area and even tribes have poor health facility and infrastructure. This virus treatment wants high level sanitation but tribal area, don't have proper facilities.
- Tharu tribes, which are living in the Tarai region of north India and some other tribes like Bheel, Gond, Kuki, Bhatia also servings their life in very unhealthy environment which is already full of many types of diseases.
- Handwashing is key protection of this pandemic but many tribal areas there are not sufficient in and proper water resources.
- The World Health Organization (WHO) recommends at least 20 seconds of through hand -scrubbing to get rid of the novel corona virus. But roughly calculation shows that the amount of water required for this is more than what people in serval parts of the world cannot afford. This means normally in India a five-member family would need 20 liters daily only to wash hand. This is quietly impossible in present for tribal areas.
- 2017 and another 1450 in 2018.The main region of it is contamination of ground water.so in COVID-19 it become too much harmful.
- In the tribal community Women have to stay under the tree along with children and collect wood and food/fruit from forest. But in the lockdown duration when all national parks were closed, they were restricted to collect even firewood.
- Tharu women raised this issue, that they want the right to collect firewood during period of lockdown because it is necessary to for their household.

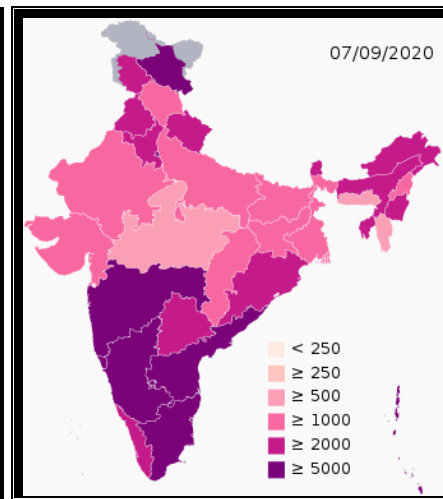
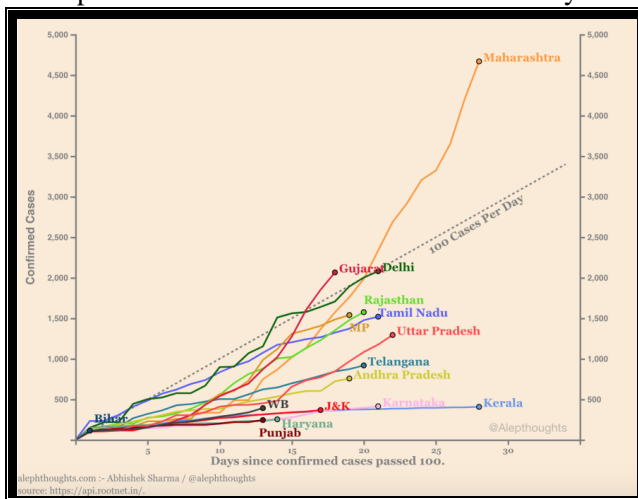


Figure3: covid 19 graph in india (MoHFW) india(MoHFW)

Figure4: covid19in states of india

Future Challenge:

This pandemic presents us many types of future challenge as-

- Firstly, for the proper management of National park and wildlife.
- Protection of wildlife in pandemic and past pandemic period is big issue as a developing country.
- To save the Tribes from this pandemic.
- To provide them medicine mask, sanitizer and any other thing which are important in future for this as solve their problem of hunger and thrust which is very important for tribal people.
- To provide them economical support and a make arrangement for their employment.

- In this time, many Tribes have lost their job so in future it can becoming determination and can enhance criminal activities among tribes.
- To minimize the COVID-19 cases in India which is increasing rapidly in many states.
- To develop the vaccine, it in the minimum possible time because it can spread without discrimination of age and gender.

Solution for this Crisis:

Social and Physical distancing measure aim to slow the spread of disease by stopping chains of transmission of COVID-19 and preventing new ones from appearing. All public health measure to stop disease spread can be balanced with adaptive strategies to encourage community reliance and social connection, protect incomes and secure the food supply. Countries should balance the possible benefits and negative consequence of each intervention and deploy strategies that can support community engagement, gain trust and limit social or economic harm. Because corona is a pandemic and a big problem of every country so it very difficult to solve it in in minimum time duration. In this way to solve the problem of national park and tribes we can suggest some points like as-

- Firstly, national park is our heritage, so it is very necessary to protect them. It is necessary to analyze the animal behavior and protect the park from invasive species.
- Because in the Newark a tiger was infected from this virus, so it is necessary to check the wildlife of this virus and analyze their behavior by using innovative technology and equipment's.
- To solve the problem of tribes, most important is to solve their economic problem.
- To let them get all the benefits of government policies.
- The union and state government initiative to send money in their bank accounts is not really helpful as many of them do not have Jan Dhana Yojana accounts; many others have their passbooks and debit cards back in their village. And in this time also it requires to empower the public distribution system.
- Availability of clean water is also a big necessity so it's very important that government to make them available clean water in the tribal area and also clean the ground water.
- Sanitization and mask are the key feature of this pandemic and purchasing of this is very costly for the tribes so government should make them available these things in free of cost to them.
- Because tribes have very base level life so collection of woods must be allowed to them because it is their basic need. In the Tarai region Tharu women raise their voice for collecting firewood from national park because it is very necessary for their routine life.
- Here is lack of hospital facilities so government should provide them temporary beds in this time, it is more useful for the tribes.

Corona Virus Vaccine:

- In this time vaccine can be prepared either based on genome sequencing of the virus or by finding out about the proteins which make up the virus.
- Some initiative taken towards this as Gilead's remdesivir, is being studied in several clinical trial around the world in china.
- Oxford university vaccine, known as chAdx1.
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- In Russia, vaccine Sputnik V is under clinical trial.

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Indigo-Movement And Social Change After First World War : A Case Study of Munger District

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The history of indigo cultivation in Bihar in general and in the district of Munger in particular is very old. European planters moved into north Bihar in the first half of the 19th century. In the 2nd half of the century the Indigo industry expanded greatly. Two systems of the cultivation of Indigo was prevalent in the northern Munger- Zeraït and Assamiwar.

Under Zeraït system the cultivation of Indigo was directly in the hands of Europeans. They engaged the farmers for cultivation. These farmers were paid low wages. No tenant had the courage to refuse it. The plough and oxen of the farmers were reserved for the Europeans. The cultivators had to harvest the Indigo crop and carry it to the factories. The author's opinion is that Indigo industry created tensions for the peasant subsistence economy but instituted no radical change. Gradually, these tensions created a strong undercurrent of peasant antipathy to Indigo cultivation.

In the last, in 1918 Srikrishna Sinha of Munger district pleaded for peasants and they got victory in this movement and stopped the plantation of Indigo. The possession of the peasant on the land was accepted and they got the relief facilities of cultivation at their own will.

Introduction

Indigo-movement was an important step in the development of Anti-colonial nationalism. Besides this it proved to be a successful tool in bringing social change after the first world war.

The history of Indigo cultivation in Bihar in general and in the district of Munger (earlier spelled as Monghyr) in particular is very old. The indigo plantation in Bihar owed its introduction to Mr. Francis Grant who was sent in 1782 to Tirhut as collector of revenue etc. etc. where he built three indigo factories.¹ More European planters moved into north Bihar in the first half of the 19th century. In the second half of the century the indigo industry expanded greatly.² The description of Indigo factory, started at Begusarai much before 1830, is available. At the time of the East India Company too Teghra and Dalsingsarai were important centres of indigo-industries.³ A parliamentary statement of 1830 shows that there were then 17 indigo-factories in Monghyr.⁴ W.W. Hunter has also written that Monghyr had for many days past become an important centre in the manufacture of indigo. In about ten thousand acres of land indigo was cultivated and about 143 tons of indigo were manufactured. In 1869 five indigo factories were working at Begusarai vis., Manjhaul, Begusarai, Bhagwanpur, Begamsarai and Daulatpur.⁵ Here indigo was cultivated in about 19,500 bighas and 1,590 maunds of indigo were prepared. The indigo factory at Begusarai was set up in 1863 by Mr. James Henise⁶ and very soon the north Monghyr became an important centre of indigo cultivation.⁷

Even as late as 1901-02 there were following factories and outworks : (1) Begamgarai with outworks at Teghra, Barauni, Nawada and Jhamtia; (2) Bhagwanpur, having outworks at Agapur, Surajpura and Kirtaul; (3) Harrakh, with outworks at Masnadpur, Mahna, Dhabauli and Mati Hasir; (4) Manjhaul, with outworks at Bishunpur, Birpur and Garhpura; (5) Sisauni

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with outworks at Bandwar, Gamharia and Kamalpur; (6) Nayagaon and (7) Sadanandpur, with outworks at Hitanpur and Samastipur. Even now the number of ruined factory buildings which one sees in North Monghyr is melancholy sight. In southern Monghyr indigo factories were at Digaon and Sangrampur.⁸

British demand for Indian indigo revived after the American source was closed on the outbreak of the War of American Independence (1875-83) and indigo became henceforth a profitable article of export of the English company from India. A large number of indigo factories consequently sprang up, particularly in different parts of Bengal and Bihar.⁹

Indigo-cultivation in Northern Munger

The cultivation of indigo in the northern Munger was carried mainly under two systems - Zerait and Assamiwar. Under Zerait system the cultivation of indigo was directly in the hands of the Europeans. They engaged the farmers for cultivation. These farmers were paid low wages. The plough and oxen of the tenants were reserved for the Europeans. Under the Assamiwar system the European planters used to get the cultivation of indigo done in the fields of the tenants themselves. Under this system the most prevalent method was 'Tinkathia' by which the planter arranged with each ryot for him to cultivate indigo on three kathas out of every twenty. When, after two or three crops, the land lost productivity, a planter would select another portion of the ryot's holding for indigo cultivation. The practice of tinkathia allowed a planter to ensure the use of the best land throughout the area under his control for the cultivation of indigo.¹⁰ No tenant had the courage to refuse it. The cultivators had to harvest the indigo crop and carry it to the factories. For all this the cultivator received a pittance in the name of payment which fell far short even of actual expenses.¹¹

In this way the tenants were victimised in many ways. Lord Macaulay having accepted this fact, had written in about 1840, "that great evil exists, that great injustice is frequently committed, that many ryots have been brought partly by the operation of the law, partly by acts committed in defiance of the law, into a state not far removed from that of partial slavery is, I fear, too certain".¹² The Pratap, a Hindi journal of Kanpur, in its issue of 29th November, 1914 wrote against the inhuman atrocities to which the cultivators and tenants were subjected by European managers of indigo factories. In another issue of the same Journal, dated December 18, 1914 a correspondent described the European planters as an instrument of oppression who considered themselves as the masters of the wealth and women.¹³ Not only this, when the indigo cultivation was affected by the invention of the artificial indigo, the farmers were put to more and more tyranny. When the Tinkathia system became difficult to continue, the farmers were oppressed through 'Sharahbeshi' and 'Tawan'. Their taxes were raised and efforts were made to compensate the loss of indigo.¹⁴ But with the outbreak of the First World War, the import of foreign indigo stopped. Hence once again the Tinkathia system was revived.

The above system as mentioned earlier was prevalent in northern Munger. Peasants here were harassed much by the oppression of the European planters. Hence they were trying to free themselves from their oppressions. Agitation was the only weapon for this. In Southern Munger the method of indigo-cultivation was different. Here indigo was cultivated on higher lands called "Bheeth". The farmers who protested were tortured in the same way as those in northern Munger and Champaran. The farmers were given indigo seed by the planters. The latter had full right over the produced indigo. The plant of indigo used to be bigger and thicker than "Arhar" plant. The indigo plant having been reaped, its remains were used as fuel.

The landlords had full possession over the land. The European-planters used to be 'Katkinadars' of the landlords who were like contractors. Hence the lands on which indigo was cultivated, were possessed by the European planters and the indigo was carried to their bungalows.¹⁵

Level of Social Change

In this way the indigo industry created tensions for the peasant subsistence economy but instituted no radical change. Gradually these tensions created a strong undercurrent of peasant antipathy to indigo cultivation.¹⁶ They willed to be free from these tyrannies. At this very moment in 1917 the peasants of Champaran decided to launch a powerful movement against the European planters. For this they decided to invite Mahatma Gandhi and acquaint him with the situation. The peasants of Munger too following Champaran determined to launch a movement. A resident of Padhwara within Tarapur thana, Sri Sinheshwar Choudhary, who was a teacher of Asarganj Middle School, blew the bugle of revolt in southern Munger. At that time indigo cultivation was carried also in the neighbourhood of the school. Close to the field the students of Asarganj school played football. Naturally their ball now and then entered into the indigo field. One day when the ball of the players entered into the Indigo field, European planters thrashed them heavily. At that time the school going students were sufficiently aged. They complained of the beating to their teachers. Sri Sinheshwar Choudhary replied to the boys that he did not like the students to come to him and complain against the English officials; rather he wanted the students to thrash the English officials so much so that the latter themselves should come and complain against the boys. In this way slowly the trouble grew. In this connection Sri Choudhary toured many villages and tried to know the oppressions perpetuated by the English officials. The villagers too complained against the Englishmen. Sri Choudhary also tried to know personally the full particulars about the indigo cultivation. He thought that if people did not plant the indigo, there would be no quarrel at all. In this way he started creating an atmosphere against the European planters. In this connection meetings were held at different places.¹⁷

Sri Choudhary was so much pained by the tyrannies perpetuated upon the peasants that he resigned his post and openly took the leadership of the movement in his hands. When in 1917 Sri Raj Kumar Shukla of Champaran went to Calcutta to invite Mahatma Gandhi, Sinheshwar Choudhary tried to invite Gandhiji having gone to Calcutta. Though Mahatma Gandhi could not go to Tarapur yet whatever he did at Champaran had an effect on all places.¹⁸

By the effort of Sri Choudhary everyday meetings were held at different places. A huge meeting was held at Rangram, a mile north of Tarapur, where important persons of the locality had come. Among the participants of the meeting Radhe Mandal of Teliya, Bhikhari Mahto of Sangrampur, Bachcha Singh of Supaur Jamua, Dasrath Jha of Kuagarhi, Kesho Thakur of Babhanchakka, Hitlal Rajhans of Degma, Chaturbhuj Singh 'Bhramar' of Nawgaon, Hiralal Choudhary of Sahora, Akali Pathak and Ram Narayan Pathak of Kalai, Shivdayal Mahto of Kahua, Teter Mahto of Ranadih, Jaimangal Singh of Ganaili, Basukinath Rai of Halkarachak, Ayodhya Singh of Sondiha, Eklal Jha of Gorgama and Harshai Mandal of Parsa were prominent.¹⁹ In this meeting problems arising out of indigo cultivation were discussed in detail. It was unanimously decided not to plant indigo. Most of the members thought that there would not be victimisation of the peasants by the English if the indigo was not planted. The peasants decided to plant other crops in place of Indigo. Sri Choudhary started organising meeting at places, touring villages and inciting people against the European planters.²⁰ In southern Munger the chief centres of Indigo movement were Tarapur,

Sangrampur, Kalai, Deghra, Nawgaon, Phajeliganj, Tetiya Bammar, Raja Rani Talab, Rangram etc. During the movement Sri Choudhary was under the strict vigilance of the government officers. The police kept an eye on him and he had become a dangerous person in the eyes of the government. The D.I.G. informed the government about all his movements and activities. Consequently, many cases were instituted against him.²¹ But in the long run he escaped punishment by the special favour of Robinson Saheb, incharge of Sangrampur Neel Kothi.

Srikrishna Sinha of Munger district too wanted to work in the Champaran movement alongwith Mahatma Gandhi. But as a result of the illness of his brother he could not go to Champaran.²² He decided to work in his own district (Munger). He and a number of others were enlisted in the peaceful army of Gandhiji at that time.²³

When in 1918 in connection with the indigo movement suits were filed against the peasants of Gauravdeeh, Barsanda, Tetiya Bammar, Kalai, Majura, Supaur Jamua, Kuagarhi etc. and about a dozen and a half workers were arrested, it was Srikrishna Sinha who took up the case of the peasant against whom suits were filed. The peasants got the decree in their favour in these cases and all were released.

The peasants got victory in this movement in the long run and they stopped the plantation of indigo. The possession of the peasants on the land was accepted and they got the facilities of cultivation at their will.²⁴

A separate movement was not started in the northern Munger. Whatever Gandhiji did at Champaran had its effect on all places. The effect of Champaran was also on Begusarai subdivision and the peasants got relief from the tyrannies of English officers. Yet, peasants of such places as ManJhaul, Samho, Bandwar, Harrakh Kothi, Sisauni etc. had started a movement against the 'Tinkathia' system.²⁵ Maulvi Ishaque Saheb is said to have been one of the leaders who had organised the cultivators in those days.²⁶

Conclusion

Thus, the history of indigo cultivation in Bihar as well as in the district of Munger is very old. Farmers were paid low wages. No tenants had the courage to refuse it. But in 1917 peasants of the District of Munger launched a powerful movement and got victory in this movement. They raised their social and economic values under the leadership of former chief Minister Srikrishna Babu, Sri Sinheshwar Choudhry & other local leaders.

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Emerging Trends of Urbanization and Sustainable Development: A Geographical Study

Shirin Hayat *

Urbanization is an ongoing phenomenon. It is the movement of population from rural to urban areas and efforts to reduce time and expense in commuting and transportation while improving opportunities for jobs, education, housing, and transportation. Living in cities permits individuals and families to take advantage of the opportunities of proximity, diversity, and marketplace competition. Urbanization is one of the greatest challenges of the present century. The rapid rate of urbanization and sustainable development has led to increasing environmental degradation. This increase has been rapid since the middle of the 19th century which has affected the quality of environment. As per 2011 Census 31.16 per cent of India's population lives in urban areas, thereby showing more than tenfold increase in total urban population from 1901 to 2011. Urbanization and Sustainable development has evinced interest from a wide range of experts. The multidisciplinary gamut of the subject invokes the interest from ecologists, to urban planners and civil engineers, to sociologists, to administrators and policy makers, and finally the common man. This is because of the multitude of activities and processes that take place in the urban ecosystems every day.

Keyword : Urbanization, Sustainable Development, Population, Education, Transportation

Introduction

Urbanization is defined as an increase in the proportion of a population living in urban areas. This phenomenon has become a rapidly growing force over the course of the past century, as an increasing number of people have begun to move to towns and cities. Over the past 25 years, the global urban population has grown from just over 2.5 billion people in 1990 to just under 4 billion in 2015, which represents an increase from 43% to 54% of the global population. During the 1990s, urban populations grew at a rate of 57 million people per year and from 2010 to 2018 that growth increased to 77 million people per year. By 2030, 60% of the global population is anticipated to reside in cities. While there are many advantages to urbanization, such as more efficient use of resources, there are also numerous challenges and threats associated with rapid urbanization and poor urban planning. A major challenge is the growth of slums, which frequently form due to rapid urbanization and a lack of affordable housing and are more vulnerable to natural disasters and crime. Another challenge is the high rate of discrimination and segregation that is commonly observed in quickly growing cities, leaving the urban poor out of the decision-making process despite their high stakes in urban planning and policymaking. Moreover, access to education and healthcare becomes a challenge in poorly planned urban areas. Middle and low-income countries have experienced the highest rate of urbanization since 1995, with continents like Africa and Asia experiencing 90% of urban growth. As the rate of urbanization has increased, the international community has increasingly sought to achieve sustainable urban development, which “strives to meet the essential needs of all, without overstepping the limitations of the natural environment.”

It is increasingly difficult to manage this growth in a sustainable way. It is recognised that over 70 per cent of the growth currently takes place outside the formal planning process and that 30 per cent of urban populations in developing countries are living in slums or

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informal settlements, i.e. where vacant state-owned or private land is occupied illegally and is used for illegal slum housing. Even in developed countries unplanned or informal urban development is a major issue. Urban ecosystems are the consequence of the intrinsic nature of humans as social beings to live together. Thus when the early humans evolved they settled on the banks of the rivers that dawned the advent of civilisations. An inadvertent increase in the population complimented with creativity, humans were able to invent wheel and fire, created settlements and started lived in forests too. Gradually, with the development of their communication skills by the form of languages through speech and script, the humans effectively utilised this to make enormous progress in their life styles. All this eventually led to the initial human settlements into villages, towns and then into cities. In the process humans now live in complex ecosystems called urban ecosystems.

An unparalleled population growth and migration, an increased urban population and urbanization are unintentional. More and more towns and cities bloomed with a change in the land use along the myriad of landscapes and ecosystems found on earth. Today, humans can boast of living under a wide range of climatic and environmental conditions. This has further led to humans contributing the urban centres at almost every corner of the earth. These urban ecosystems are a consequence of urbanization through rapid industrial centres and blooming up of residential colonies, also became hub of economic, social, cultural, and political activities.

Apart from this, perhaps the most frightening prospect facing mankind is the relentless certainty of the explosion of urban populations. Planning Commission, 2008 observes urbanization as a key indicator of sustainable development. The Eleventh Five-Year Plan argued that urbanization should be seen as a positive factor in overall development as the urban sector contributes about 62 per cent of the GDP. There is also a growing realisation that an ambitious goal of 9-10 per cent growth in GDP fundamentally depends upon a vibrant urban sector. But the trends and pattern of urbanization in India is improper. The continued concentration of the urban population in the large cities and existing city agglomeration is more as compared to the cities of intermediate size which shows a tendency to stagnate, which is not a proper indicator of urbanization as migration to metropolises is taking place from these secondary cities.

Urbanization is also contributing significantly to climate change. The 20 largest cities consume 80 per cent of the world's energy and urban areas generate 80 per cent of greenhouse gas emissions worldwide. Thus, the growing concern is that as cities grow larger environmental stress multiplies. This is because cities are where action is. Cities are the focal points of opportunities. Hence there is always a movement of population to cities. However, the implications of rapid urban growth include increasing unemployment, lack of urban services, overburdening of existing infrastructure and lack of access to land, finance and adequate shelter, increasing violent crime and sexually transmitted diseases, and environmental degradation. Even as national output is rising, a decline in the quality of life for a majority of population that offsets the benefit of national economic growth is often witnessed. Urbanization thus imposes significant burden to sustainable development.

As the 21st century begins, growing number of people and rising levels of consumption per capita, poverty, and other required infrastructure are often stressing their environmental settings beyond sustainable development. Poverty is said to be both cause and effect of environment degradation. The poor people, who rely on natural resources more than the rich, deplete natural resources faster as they have no real prospects of gaining access to other types of resources. Poorer people, who cannot meet their subsistence needs through

purchase, are forced to use common property resources such as forests for food and fuel, pastures for fodder, and ponds and rivers for water. Clean drinking water facility through taps is available to only 35 percent of urban households and 18 percent of rural households in India. Other residents use unsafe water sources like wells, ponds and rivers. Population pressure driven overexploitation of the surface and underground water resources by the poor has resulted into contamination and exhaustion of the water resources. Urban population is also using rivers to dispose of untreated sewage and industrial effluent.

According to the UN-HABITAT 2016 Annual Report, in regard to future trends, it is estimated 93 per cent of urban growth will occur in Asia and Africa and mainly two Asian Countries, India and China. By 2050 over 6 billion people, two thirds of humanity, will be living in towns and cities. Urbanization is associated with higher incomes, improved health, higher literacy, improved quality of life and other benefits. Yet along with benefits comes environmental and social ills. Urbanization affects the environment in many ways: its relation with discharge of pollutants and generation of solid/liquid/gaseous wastes, secondly, its relation with the depletion of natural resources and its relation with the social costs of population explosion, pollution, poverty and sustainable development. Waste generation has witnessed an increasing trend parallel to the development of industrialization, urbanization and rapid growth of population. The problem has become one of the primary urban environmental issues. Enormous amount of waste is generated daily and its management is a huge task. Similarly, the rapid increase in urbanization combines with desperate poverty to deplete and pollute local resource basis on which the livelihood of the present and future generation depends. Apart from these, India has major environmental problems related to industrialization also. In the pursuit for faster industrialization, the environmental factors have not been given serious consideration in the formulation of industrial policies. The cavalier attitude towards environmental degradation and adoption of environmentally less friendly technologies has resulted in air and water pollution and has made most of our major rivers impure and filthy. While the major industries are responsible for macro-environmental problems, the unchecked growth of informal manufacturing sector in most of urban centres has spoiled the micro-environments. "Nature has enough to satisfy everyone's need but has not enough to satisfy man's greed. Sadly our over-expanding greed has put us in such precarious situation. Will we realise it? The policy of industrialization had helped rich to become richer and poor become poorer. The disparity has widened. It is the democratic system followed in the country which has forced our policy-makers to think of growth for all. That is why we are hearing plans for inclusive growth. Industrialization is not without price.

According to UN, the main aim of education for sustainable development is to cover economic, socio-cultural and ecological aspects considering the global dimensions. The challenges which are value-based interpretation of sustainable development are required to represent with more emphasize. However, it is difficult to integrate the various aspects of sustainable development into higher education syllabus in the light of value-based interpretation. But, it may be simple after following the relevant professional practices and incorporating the ecological, economic, social and cultural elements of sustainable development into research and teaching of higher education professionals.

Sustainable development is a process which involves human's intelligence, decision making efficiency, planning and management skills, power of imagination, entrepreneurship, development and production with environmental safety etc. Usually, sustainable development is a human subject. The issue associated with sustainable development can be seen as one of the basics of any society. Therefore, so far its major field of concern has been for the

environment, but its applicability has been extended to wrap almost each human attempt. The discussion is a principal element in education for sustainable development. Environmental education is the fundamental education to study the sustainable development. In other words environmental education can be able to make a path for education for sustainable development. Any researcher who is working for education for sustainable development can support the mode of life explained by value based interpretation of sustainable development. In the last decade, the education for sustainable development has been accepted as a main policy which is the utmost need of the day for each state or country. Moreover, the sustainable development has gained the due attention on international forum not only by researchers or environmentalists but also by the chiefs of several countries.

Sustainable development is a pattern of using natural resources in such a way which provides regular individual requirements considering the preservation of the environment for coming generations. Sustainable development is the development which meets the needs of the present without compromising the ability of future generations to meet their own needs.

Conclusion

Urbanization is a process taking place globally intertwined with sustainable development. The urban global tipping point was reached in 2017 when for the first time in history over half of the world's population 3.3 billion people were living in urban areas. It is estimated that a further 500 million people will be urbanized in the next five years and projections indicate that 60 per cent of the world's population will be urbanized by 2030. This rush to the cities, caused in part by the attraction of opportunities for wealth generation and economic development, has created the phenomenon of 'megacities': urban areas with a population of 10 million or more. This incredibly rapid growth of megacities causes severe ecological, economical and social problems.

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The Tribals and Ethnic Diversity in Kandhamal – A Bird's Eye View

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India, a land that boasts of the world's largest tribal population, is home to several distinct tribal communities spread across the length and breadth of the nation. Tribal communities of India, that actually refer to native inhabitants or indigenous demography of the peninsular India, are believed to be the earliest settlers of this region. Also known as the aboriginal inhabitants of the country, the tribal communities of India are today one of the most vulnerable sections of the Indian society, surviving and thriving with an ecosystem that remains largely untouched by the modern civilization. With their values, customs, beliefs, and tradition protected from foreign settlers and migrants, these tribes follow and maintain a lifestyle that has negligible influence from the outside world. According to western scholars, the term "tribe" is used to denote an ethnic community of people who are geographically isolated and draw identity from a particular territory, possessing unique social, economic, and cultural practices.

The number of individual ethnic tribal groups, etc. notified as Scheduled Tribes in India as per the 2011 census is 705. Tribal India lives in the forests, hills and naturally isolated regions known as a rule by different names meaning either the people of forest and hill or the original inhabitants and so on. The popular names are 'Vanyajatis' (the castes of forest), 'Vanavasi' (inhabitants of forest), 'Pahari' (hill dwellers), 'Adimjati' (original communities) 'Adivasi' (first settlers), 'Janjati' (folk people) Adimjati (first settlers) Anusuchit Janajati (Scheduled Tribe) and so on. Among all these terms Adivasi is known most extensively and Anusuchita Janajati Scheduled Tribe is the constitutional name covering all of them.ⁱ

Ethnicity of the Tribals of India

On tracing the ethnicity of the aboriginals in India it is found that the tribals since time immemorial have been an intrinsic part of the Indian civilization. They have also considerably contributed to enrich the Indian culture. Certain factors have been taken into consideration to classify the tribes of India in order to distinguish them from the rest of the population. Although an uphill task state governments were asked by the SC and ST Commission to detect and identify the distinguishing characteristics of the aboriginal tribes of their respective states.ⁱⁱ

The governments of different states suggested various linguistic, geographical, economic and social factors as indicators. Taking the above mentioned characteristics into consideration the tribes of India may be classified on the basis of their Territorial distributions, Linguistic affiliations, Physical and racial characteristics, Occupation or economy, Cultural contact and Religious beliefs.ⁱⁱⁱ

Ethnic Composition of Tribals in Odisha:

The tribes of Odisha are aboriginals having a very primitive descent and most of them have retained their original culture and tradition till date. The tribals of Odisha are scattered over mainly two geophysical zones such as the Northern Plateau (25.5%) and the Eastern Ghat region (29.2%) out of four geophysical sections and the other two sections such as Central Table Land (24.1%) and the Coastal Belt (21.2%) having widespread tribal

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population. The districts of Odisha has large percentage of scheduled tribe population as per the 2011 Census in Deogarh (35.33%), Gajapati (54.29%), Kandhamal (53.58%), Keonjhar (45.5%) Koraput (50.56%) Malkangiri (57.83%) Mayurbhanja (58.72%) Nawrangapur (55.79%) Rayagada (55.9%) and Sundergarh (51.87%)^{iv}

Primitive Tribes of Odisha:

In Odisha thirteen tribal communities have been identified as primitive tribes. Out of these 13 Primitive Tribal Groups of Odisha ,the Birhor, Mankirdia, Hill-Kharia are divided into four techno economic stages and they are Hunter and Food Gatherers. The Bondo, Didayi, Juang, Dongaria Kandha, Kutia Kandha, Lanjia Saora, Paudi Bhuiyan are shifting cultivators. The Saora, Lanjia Saora are Terrace Cultivators. The Lodha, and Chuktia Bhunjia are settled cultivators. The tribals who have been traditionally living in hills and hill slopes with hunting, gathering and shifting cultivation as their primary means of livelihood are included in the category of primitive tribal groups.

Ethnicity of Kandhamal:

Heavily forested with impassable and inaccessible mountainous tracts, Kandhamal is a centrally located district of Odisha and is predominantly tribal . Physiographically the entire district is perched on an elevated high altitude zone providing picturesque view of a labyrinth of unraveled hilly ranges and narrow valleys tapering off like a serpentine. Kandhamal literally meaning the 'Land of the Kondhs was formed on 1st January 1994 after the bifurcation of the former Boudh- Kandhamal which was earlier known as Phulbani district

Kandhamal-Physiography:

The Kondh Hills form that part of the Eastern Ghats which is bounded on the north by the Mahanadi and on the west by its large tributary, the River Tel. To the south and west the wild country continues into the area inhabited by the Saoras and other tribes but in the east and north, the hills drop precipitously to the coastal plains of Orissa. Thus the area forms a rough rhombus consisting of a plateau about 2000 feet above the sea level broken by innumerable mountain ranges rising generally to 3500 feet and above 4000 feet in the south west. To stand at any point within that rhombus is to be surrounded on every side by a complexity of hills great and small, near and far, blocking the valleys and overshadowing the footpaths which pass over saddles from one valley to another^v

The Demography of Kandhamal:

The total population of Kandhamal as per 2011 Census is 7.33 Lakhs. The district accounts for 1.75 percent of the total population of Odisha .The population of the Scheduled Castes is 1.15 Lakhs(15.8%) and the population of the Scheduled Tribes is 3.92 Lakhs(53.6%). This shows that Kandhamal is predominantly a tribal district. Out of the 62 tribes that inhabit Odisha Kandhamal is inhabited by as many as 31 tribes. As per the 2011 census the Kandhamal district has a total tribal population of 392820 out of which Kondhs only constitute about 366784 which is 93.37 percent of the district population and tribal population constitutes 53.6% out of the total population of 7,33,110 according to 2011 census report.^{vi}

Ethnic Groups of Kandhamal:

For very long in the hoary past the Kondhs lived in complete isolation. However slowly, gradually and with much difficulty people of other castes, sub-castes and communities speaking Odia came from the plains to dwell with the Kondhs in the highlands. The Kandhamal district accommodates a number of tribes and other ethnic caste groups both the Scheduled Castes and the Non Scheduled distinguished by their respective cultural

identities thereby presenting a vivid and interesting picture. Together they present the ethnicity of Kandhamal.

The Non Scheduled Castes in Kandhamal:

Along with the Kondhs and other tribal groups inhabiting the district, there are people of other castes and communities belonging to the non-Scheduled Castes and the Scheduled Castes. The non- Scheduled Castes include Brahmins, Karan, Kshatriyas, Kumutis and Baniyas. Then there are occupational communities like Bhandari, Gauda, Dumal, Gudia, Kachera, Kamar, Kansari, Kumbhar, Teli, Mali, Sudha, Sundhi, Teli, Thodia which are also non Scheduled Castes.

Brahmans of Kandhamal belong to the Jhadua and Odia or Utkaliya group. The Bhanja rulers during the early medieval period had donated tracts of land to the Brahmins migrating from northern region of India and had helped them settle in this region. The Brahmins were instrumental in the spread of Aryan culture and traditions among the tribes of this region. They are scattered in all parts of the district. They speak Odia and use its script. Though they render their traditional *jajmani* i.e. priestly services to their clients to earn their livelihood, they depend upon land and agriculture to supplement their income. Now-a-days many of them are engaged in high positions in Government jobs.^{vii}

Kshatriya are basically warriors. In Odisha they are mainly a land owning community who were earlier zamindars. The claim of the Kshatriyas of Kandhamal is that they too belong to the warrior class. In Kandhamal they live in the areas of Mahasinghi, Katingia, Phulbani, Khamankhol, Tumudibandha, Kotagada, Sarangada, Balliguda, Sudra, Gadapur, Budaguda and Panaspadar. They are found to be using the surnames Dandasena, Dehury, Bisoi, Dalei, Patra, Singh, Singhdeo, Samanta and Bhanja.^{viii}

Karan or Karana is a forward caste of Odisha. Originally they are a writer caste or caste of scribes. In Odisha they are considered the next prominent in caste after Brahmins. They were official record keepers in the royal courts of the Princely states of Odisha. Patnaik, Mohanty and Das are their prominent surnames. Probably after 1855 when the British occupied the regions of Kandhamal, the Karans started settling to assist the British in administration. Both the Odia Karans and the Telugu Karans are settled in Kandhamal. At present, agriculture is their primary occupation. They are mainly a landowning community, while service, business and other professional activities are their secondary sources of livelihood.^{ix} The other important communities are the Kumuti or Vaishya and the Bania who are traditionally traders by profession.

Occupational Communities:

Apart from these major caste groups in the district, there are people of different sub-castes which are basically occupational communities like the Bhandari, Gauda, Gudia, Kachara, Kamaror, Kharuda, Kulta, Luhara, Kansari, Kumbhar, Sudha, Mali, Teli, Sundhi, Dumal and Thodia.

Bhandari are also known as Baja, Nai, Barik and Napita. By occupation the people of this caste are barbers. The Kanamuthia Bhandaris are found in Baliguda, Khajuripada, Phiringia and Raikia. They have surnames like Behera and Pasayat. They can be identified with a peculiar multilayered cloth bag in which they carry shaving tools. The Jhaduas live in Bandhagada, Sarangada, Dangulu and Nabaguba. They use surnames like Dakua, Barik and Behera. Telugu Bhandaris are settled in Phulbani. Their *jajmani* services are indispensable by people of all castes and communities and also the tribals of all communities during birth, death and marriage etc. They cut hair, nails, shave beard and assist the priests in rituals. During marriages they carry

the luggage of the bride and groom. Cultivation and domestic service are their subsidiary occupation.^x

Gaudas mainly follow their traditional occupation cultivation, cattle herding and dealing with milk and milk products. They are divided into groups called Jhalia, Nanda, Magadha, Mathurapuria, Suli and Suli Khandia. In Kandhamal only the Magadha Goudas are settled who claim themselves to be the descendants of Yaduvamsa, the lineage of Lord Krishna. They use surnames like Bagarti, Nag, Gocha, Ghibala, Kudei, Hansha, Kata, Guru, Mahakuda, Baga, Pradhan, Dalchhatra, Banka, Bhoi, Chandan, Jala, Dwipa, Sandha, Gahir, Jundi, Adjualli, Podha, Polia, Mahakuda, Mahar, Bagar, Selasa, Bagali and Thela.

Dumal is another caste in Western Odisha settled in Boudh, Phulbani, Balangir, Sonepur, Bargarh, Sambalpur, Cuttack, Angul and Deogarh districts. From the Dumergarh in the Athmallik region of Boudh they moved to the neighbouring areas and so they came to be known as Dumal. Their stronghold is Boudh. Their main occupation is agriculture. In Kandhamal they have mostly settled in Phulbani and Gocchapada in Phiringia Block.^{xi}

Gudia is the occupational community which traditionally prepares different kinds of sweets and snacks for a living. The term Gudia has been derived from *Gur* meaning unrefined sugar or molasses. Jhumuka and Haladia Gudias are found in Kandhamal district with the surnames Sahu, Samal, Bisoi and Khuntia.

Khadura or Kharuda is yet another occupational community of Odisha. They are metal workers. The name of the caste is derived from *khadu* (brass bangles). They make bangles, earrings, nose-pins, nose-rings, images of gods and goddesses etc. out of metal. People of this caste are settled in Tikabali, Chakapad, Balliguda, K. Nuagaon, G. Udaigiri and Raikia of this district. They use surnames like Sahu, Subudhi, Senapati, Naik, and Mahapatra.^{xii}

Kachera community of Odisha is named after their traditional occupation of making and selling glass bangles. The Kacheras of Odisha are immigrants from Bengal and scattered in the districts of coastal and central Odisha. In Kandhamal district the Kacheras are found mostly in Balliguda and Phulbani regions. They mainly deal in lac and glass bangles. They are Telugu Kacheras who have migrated from Bhanjanagar of Ganjam district. They use surnames like Dora and Rao.^{xiii}

Kansari caste make an alloy of copper. They are the makers and sellers of brass, copper and aluminum utensils. More than fifty years ago they migrated from the districts of undivided Cuttack, Puri and Ganjam. In Kandhamal district, they are mostly found in Khajuripada, Phulbani, Sankarakhol, Barakhama, Balliguda, Tumudibandha and Saitingia (Phiringia). Traditional profession of the caste is to manufacture images and household utensils of brass, bell metal and aluminum. They use surnames such as Maharana and Sahu.^{xiv}

Kamar caste also known as Lohara, Luhara, Lohar, Luuhura are scattered over undivided Phulbani, Koraput, Kalahandi, Sundergarh, Bolangir, Sambalpur, Keonjhar and Mayurbhanj districts of Odisha. Iron smelting and black smithy is their traditional occupation. The present occupation of Lohara/Luhura of Kandhamal is black smithy supplemented by marginal agriculture; share cropping, wage earning, animal husbandry and services. They trace their origin from the celestial architect Vishwakarma. Agricultural equipment like sickle, axe, spade, and crowbar are manufactured and repaired by them and supplied to the local peasants. They are divided into Kandha Luhara, Odia Luhura and Kamar bearing the titles of Bindhani, Penthua, Guru and Maharana.^{xv}

The people of **Kulta** caste are originally from Ajodhya. They use surnames as Pradhan, Sahu, Naik and Biswal. Besides, Bhoi surname is also found among them. Kultas of Kandhamal district are very clever and industrious cultivators. Agriculture is their main occupation. Mostly they are found in the village of Tikabali, Pasara, Purunagada, Kainjhar, Ratakhandi, Linepada, Khajuripada, Arapaju and Phulbani.^{xvi}

The other communities which belong to this category are the **Kumbhar**, whose traditional occupation is making earthen pots and jars, **Mali** an occupational group, engaged in gardening and supplying flowers to the Hindu temples who also sell flower and garlands. **Sudha** who are now mostly cultivators, used to serve as soldiers or Paiks, **Sundhi** the community of distillers, **Teli** whose traditional occupation is extraction of oil and **Thodia** whose traditional occupation was trading in salt and stationery articles.

The Scheduled Castes in Kandhamal:

The "Scheduled Castes" is the constitutional name collectively given to the groups which have traditionally occupied the lowest status in the traditional Indian society. The British rulers labeled this class as "Depressed Classes" which is a translation of the Indian term Dalits. Later in 1931, J.H.Hutton the Superintendent of Census, replaced the label with a more neutral and honourable one i.e. "Exterior Castes". In 1943 Gandhiji rechristened it as Harijan (God's Children) that has been widely accepted. The latest official term, Scheduled Caste was first coined by Simon Commission and incorporated in Government of India Act, 1935. Subsequently it found place in the Indian Constitution. The Scheduled Castes, popularly known as Harijans, bear a clearer identity. Their social status is determined by the persistence of the stigma of untouchability- an easily identifiable phenomenon in Indian society. Poverty and educational backwardness are related but not determinants of untouchability. Today, untouchability is prohibited and these groups are recognized by the Indian Constitution to be especially disadvantaged because of their past history of inferior treatment, and are therefore entitled to certain rights and preferential treatment. In the list of Scheduled Castes of Odisha, there are 93 communities. They constitute an integral part of the society and culture of the state.

In Kandhamal district there are 38 Scheduled Castes and as per 2011 Census their total population in this district is 1,15,544 which accounts for 15.8 percent of the district's total population. These castes are Amant or Amat, Bajikar, Bariki, Bauri, Bedia or Bejia, Bhoi, Chamar or Mochi, Dandasi, Dewar, Dhoba or Dhobi, Dom or Dombo, Ganda, Ghasi or Ghasia, Godari, Godra, Gokha, Hadi, Kandara, Katia, Kela, Khadala, Kummari, Laheri, Madari, Madiga, Mala or Jhala, Mehra or Mehar, Mehtar or Bhangi, Namasudra, Pinda, Pan or Pano, Pantali or Patial, Patikar, Patratanti, Patua, Reli, Sauntia or Santia, Siyal or Khajuria, Tanla and Valmiki. Community-wise Scheduled Castes Population of Kandhamal District from 1961-2011 clearly indicates that numerically the Pan/Pano community is the largest, followed by Hadi, Ghasi, Tanla, Dewar, Dom, and Dhoba. Interestingly, there are 26 communities whose population is below 100 among whom are 8 communities who are represented in this district by a single person in each case.

Pan or Pano is the largest Scheduled Caste community in Odisha and also in Kandhamal district. As per 2011 census their total population in this district is 87,934. "There is no clear record of the origin of the Panas. They are thought to have been Hindus but have accepted the beliefs and rituals of their hosts. For example in the Kond hills, they adopted the language, culture and beliefs of the Konds."^{xvii} According to Purna Chandra Odia Bhasa Kosha, etymologically, the word Pana is derived from *Panabika*, a drummer - a class of low untouchables. Panaba means "drum". Due to paucity of sources it has not been easy to trace

either their origin or their history. Russel and Hiralal(1975) consider that Panos are the same as the Pankas ,a Dravidian caste of weavers and labourers of Mandia, Raipur and Bilaspur. Risley (1891) has described them as “a low weaving,basket making and service caste”. The Pana community belonging to Kandhamal share the land with the Kondhs.The socio-cultural pattern and the behavior of Pans or Panos is quite different from those of their community who live in coastal belt of Odisha. They are found almost in every village of Kandhamal .Due to their having stayed since very long in the land of the Kondhs and on account of their close relationship with the Kondhs they are also commonly known as Mala Pana, Maliha Pana or Kandha Pana. They are an endogamous community. According to J.Pathy, “Existing evidence points to the immigration of this caste to Kandhamal less than 200 years ago. They came after being exiled from some of the neighbouring Hindu Kingdom for their alleged involvement in thefts and robbery. The Kondhs gave them shelter in their villages and they in turn acted as mediators between the Konds and the Oriyas, and worked as weavers and traders”^{xviii} Panos seem to have migrated to Kandhamal from Ganjam during the Bhanja rule.

The Pana community of Kandhamal district is internally divided into as many as thirteen exogamous clans which are Mahananda, Bhoina, Tandia, Dipa, Dohara, Bibhara, Bagha, Khura, Rana,Puda, Gundia, Suna, Tagdalia and Luhar. The members of the community belonging to different clans use various surnames suffixed to their names such as Digal, Sethi, Naik, Behera, Sahani, Mahananda etc. They speak Odia as their mother-tongue and can also speak Kui language fluently. In their dress and style of ornamentation, they resemble that of the local caste Hindus.^{xix}

According to a study conducted by SCSTRTI, the Pano of the Kandhamal district are immigrants of the plains who have migrated, in fact brought by the Kondhs to their country long ago to serve them as scavengers, weavers, musicians, messengers, companions, middlemen, procurers of victims for *meriah* sacrifice and to form the bulk of the labour force for agriculture. In turn, the Kondh provided them homestead land, wage for their labour and gifts in different socio-religious functions. The relationship between the Kondh and the Pano was just that of the master and the subject. The Pano of Kondhmal region who serve the Kondh and live in Kondh villages are popularly known as Kondh Pan or Mallah Pan and in course of time they have become an endogamous group. The mother tongue of the Pano is Odia but they are conversant with the Kui language of the Kondh. At present, they mainly depend upon wage earning, marginal agriculture/share cropping and petty business. In the social hierarchy they occupy a lower position than the Kondh. Traditionally, they were treated as untouchables and a polluting caste by the Kondhs and other clean caste groups living in the region. But at present the Pano suffer from the stigma of untouchability to a lesser degree than their brethren living alongside the caste Hindus in the plains. Nevertheless, the Kondh consider the Pano as a polluting and inferior caste and maintain a fair degree of social distance from them.^{xx}

However, the relationship between the two communities is very cordial and based on mutual aid to each other . Due to this social affiliation between the two, the Pana provide the Kandha with a series of services both in socio-economic and religious spheres, some of which are not only deep rooted but also have become the part and parcel of the custom of both the communities. The Pana inhabiting this region, because of their number and dominance, intelligence, better economic standard and educational level, supremacy in trading activities, intimate relationship with the Kandha (The dominant Scheduled Tribe community), do not suffer from the stigma of untouchability and social discrimination to that extent as their brethren experience in other regions of the State.

Another Scheduled Caste community which has a considerable population in Kandhamal is the Dhoba caste, also known as Dhobi or Rajaka. In Odisha the people of this caste are distributed all over the state. They are mostly a landless community whose traditional occupation is washing clothes. They go door to door and collect the dirty clothes of people of their area. They then wash and sometimes even iron these clothes after which they return the clean clothes to their owners. They get paid for this work. They also render their traditional *jajamani* services to their patrons during all the life cycle rituals from birth to death. They are found scattered in Kandhamal district. Their total population in the district as per 2011 census is 2675. They use surnames like Sethi, Behera, Naik and Budek. Three categories of Dhobas -Jhadua, Odia and Telugu Dhobas live in Kandhamal. Telugu Dhobas live in Balliguda and Phulbani town.

Doms are another Scheduled Caste. The name Domb has been derived from the word Dumba which means devil. They are popularly known as Dombo or Duria Dom in this district. The Doms are landless, and their traditional occupations are weaving, scavenging, drum-beating and sweeping. Their women are engaged in sweeping as well as in weaving mats and baskets. Their livelihood is supplemented by economic pursuits like wage earning, collection and sale of firewood, animal husbandry and poultry. A few of them are engaged in drumbeating or as sweepers in government hospitals and offices. In Kandhamal they are found making and selling various items of bamboo basketry namely Kula, Baunsia, Pachhia etc. Besides, they also work as Choukidars (watchmen), agricultural labourers, tanning leather and undertake petty trade. Cultivation is their subsidiary occupation. The Domb surnames of Domb are Sethy, Manseth, Paraseth, Badaseth, Chalanseth, Sanaseth, Naik etc. Their total population in the district as per 2011 census is 3038.^{xxi}

The **Ghasi, Hadi, Khadals and Tanla** are the other important Scheduled Castes in Kandhamal.

Scheduled Tribes of Kandhamal:

Kandhamal, the abode of the Kondhs is predominantly a tribal district. However, apart from the Kondhs, Kandhamal is home to 44 Scheduled Tribes. The total Scheduled Tribe population of the district according to the 2011 Census is 3,92,820 and they account for 53.6% of the total population of the district. Odisha is home to 62 tribes out of which 44 tribes are found to be living in the Kondh territory. These tribes are Bagata, Bathudi, Banjara, Bhattada, Bhuiya, Bhumia, Bhumij, Bhunjia, Binjhal, Dharua, Gandia, Ghara, Gond, Ho, Holva, Jatapu, Kandha Gauda, Kavar, Kharia, Kandha, Kisan, Kol, Kolha, Koli Malhar, Konda, Kora, Kotia, Koya, Kulis, Madia, Mahali, Matya, Mirdhas, Munda, Mundari, Ommanatya, Oraon, Pentia, Santal, Saora, Shabar Lodha, Sounti and Tharua.

However, there are ten tribes represented only by one person each as per the 2011 Census. These are Banjara, Bhumia, Ghara, Jatapu, Kolah, Mahali, Mirdhas, Mundari, Pentia and Sounti. The tribes which have less than five persons each as per the 2011 Census are Bagata, Bhumij, Bhunjia, Gandia, Ho, Kharia and Kotia. The tribes with significant population as per the 2011 Census are Gond (11657), Kandha Gauda (4507), Saora (3807), Shabar Lodha (754), (Munda (356) and Tharua (363).

The **Kondhs** form the largest group of tribes in Kandhamal. They belong to the Dravidian stock. Their origin is untraceable. Kandhamal is the indigenous homeland of two types of Kandhas Kutia Kandha and Desia Kandha. The Kutia Kandhas are a very primitive section and their population is also very small. They live in the Belghar hill ranges of Tumudibandha Block and some Gram Panchayats of Kotagarh Block area. The Desia Kandha are more developed and live in the foot hills and plain areas all over the district. The

other subgroups of the Kondh tribe are Malua Kondhs, Penga Kondhs, Bagada Kondhs, Nanguli Kondhs, Beni Kondhs, Sitha Kondhs and Jhudia Kondhs.

Gond is numerically the most dominant tribe of India. Next to the Kondhs, the Gonds are numerically the largest tribal community in Odisha. They call themselves Gond or Koitur. Culturally the tribe is dichotomized into the primitive group and the acculturated and Hinduised group. The tribe has exogamous totemic clan division. They speak Gondi a Dravidian language and they also speak Odia. They earn their livelihood out of agriculture, animal husbandry, seasonal forest collection, wage earning and service. In this district they are numerically a large tribe with a population of 11, 675 as per 2011 census. They are found in Balliguda, Daringibadi, G.Udayagiri, Kotgarh, Nuagoan, Phiringia, Raikia and Tikabali block areas.^{xxii}

Kandha Gaudas are found in considerable number in Kandhamal. It is said that the Kandha Gauda was born out of the union of Kandha (male) and Gouda (female).^{xxiii} The name 'Kandha Gauda' comes from the community's traditional occupation of herding the cattle of the Kandha tribe. Besides, cattle herding, they also take up forest collection, wage earning, leaf plate making and mat-making done by their women. In multi-caste villages the Kandha Gauda hamlets lie adjacent to the Kandha hamlet and the housing pattern of both the communities are similar. The community is divided into several exogamous lineage groups i.e. Pradhan, Behera, Nayak, and Bhoi etc. They are mostly found in Chakapad, Phiringia, Khajuripada, G.Udayagiri, K.Nuagaon and Tikabali blocks bearing surnames of Naik, Pradhan, Behera, Bhoi and Majhi. Numerically, they are a large tribe in this district, even larger than the Gonds and their population in this district is 4507 according to the 2011 census.^{xxiv}

Santal is the third largest tribe in India after the Gond and the Bhil. In Odisha this tribe is divided into several totemic exogamous clans. They are divided into a number of clans namely Hansada, Murmu, Kisku, Hembrum, Marandi, Tudu, Soren, Baske, Basra, Paliria, Chane and Bedia. The last three clans are not found in Odisha. Santals are basically settled agriculturists and some of them have taken up industrial labour, mining, quarrying. In Kandhamal their number is very small, i.e. only 70 as per the 2011 census.^{xxv}

Saura or Saura are an ancient folk who have been mentioned in old mythologies and Sanskrit literatures. They are rugged highlanders and they live in the remote mountains of southern Odisha. The Saura are a PTG in Odisha. There are 3807 Sauras living in Kandhamal district according to the 2011 census. They have a racial affinity with the Proto-Australoid stock. They are found in Barimunda, Balandapada, Gadheipadar, Dehaja, Katadapada, Bagh Dangeri villages of Balandapada GP, Tutumanda village of Luisingh GP and Sangujoda, Kambharkhol village of Salaguda GP, in some villages of Gochhapada GP of Phiringia Block bearing the surnames like Nayak, Bhoi, Majhi, Behera, Budek, Rauta, Tumunia, Biswal, Kalsai, Nag, Bagh, Bisi, Guru, Mallick, Sandha, Barnedia, Bhinjadaria, Hatikhajia, Parua, Barge, Sahani etc. Kandhamal Sauras claimed that they are the descendants of Jara Sabar.^{xxvi}

Munda is a major tribe of Odisha largely concentrated in the districts of western Odisha namely, Sundargarh and Sambalpur. They are also known as *Horo-hon* or *Mura* meaning the village headman. However, in Kandhamal district they are found in a small number. Their total population in Kandhamal as per the 2011 Census is 356. They believe that they are the descendants of *Sing Banga* the supreme god and the creator. Traditionally the Munda are an agrarian community. They are recognized as the first settlers (*Khunt-Katidars*) who cleared forests and established villages.^{xxvii} **Shabar Lodha or Lodha Shabar** constitute a small number in Kandhamal. There are 754 Shabar Lodhas in the district as per the 2011 Census. The tribe derived its name from the word *lubdhaka* meaning the

fowler or trapper. They claim their ancestry to Byadha or Kirata, the Savara king Viswabasu and consider Lord Jagannath as their supreme deity. They have exogamous totemic clans like Bhotda, Malik, Bag, Nayak, Dandapat, Paramanik, Ahori, Bhuria and Kotal. They practise clan exogamy. They are multi-lingual and speak languages like Savar (Mundari) and Kudmali and Odia (Indo-Aryan). They earn their livelihood out of marginal agriculture, hunting, food gathering and forest collection.^{xxviii}

Conclusion

The extensive survey of the different Scheduled Castes and Scheduled Tribes of the area along with other ethnic groups gives a glimpse of the tribal domination of the area. Hence it becomes clear that historically and ethnically this area is very important as it is inhabited by the Kondhs belonging to the Dravidian stock who are also the indigenous people of this region. Most of them still follow their traditional pattern of living while some of them got educated and are settled in different jobs, some others have taken up occupations other than their traditional occupations which are available to them in the area where they reside. The peopling of Kandhamal is an assemblage of people belonging to different ethnic groups with different ethnic frame work. The Kondhs themselves are of two types the Kutias and the Desias. Moreover, they have regional wise identity and are divided into numerous clans and Gocchis. The Kondhs form the single largest element in the population. The colonies of Kondhs are separate from the Odia settlers. The Odias from the plains are found scattered everywhere. Moreover, the number of Scheduled Castes in the district is more than the non Scheduled Castes out of which the number of Panos is very large. The number of occupational communities is also more. Ethnic groups of Kandhamal represent social components rather than racial or biological similarities. Thus there are several diverse elements in the Kandhamal district. Living in close vicinity with each other for over a long period of time they represent a rich, interesting and composite culture of Kandhamal.

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A Re-examination of Feldstein-Horioka Puzzle in India

Ruby singh*

The present paper re-examines the Feldstein-Horioka puzzle, related to the high correlations between savings and investment observed in OECD. This paper is aimed at presenting comparative analysis of relationship between Savings and investment of two different time period i.e. (1) for the period 1950-51 to 2015-16. (2) post reform period 1991-92 to 2015-16. The savings and investment series in this study are integration of order one, unit roots and ARDL models that are used to look at the relationship between savings and investment in India. Error Correction Mechanism is used for short run relation. The present analysis emphasized the changes in the relationship between domestic savings and investment in the perspective of Indian economy in realm of globalization where Indian economy is integrating with the world.

Keywords : Savings, Investment, Feldstein-Horioka puzzle, Globalization.

Introduction:

The Feldstein-Horioka puzzle is one of the six major puzzles in International Macroeconomics (Obstfeld and Rogoff, 2000). Squat capital mobility among OECD countries, implied by a high saving-investment (S-I) correlation and recognized as the Feldstein-Horioka (henceforth F-H) puzzle, has set off a vital debate in the empirical literature (S. Kumar, et al.). Feldstein and Horioka (1980) present estimates of the following equation for 16 OECD countries over the sample period 1960-1974:

$$ITY = \alpha + \beta STY + \varepsilon \quad \dots\dots\dots (1)$$

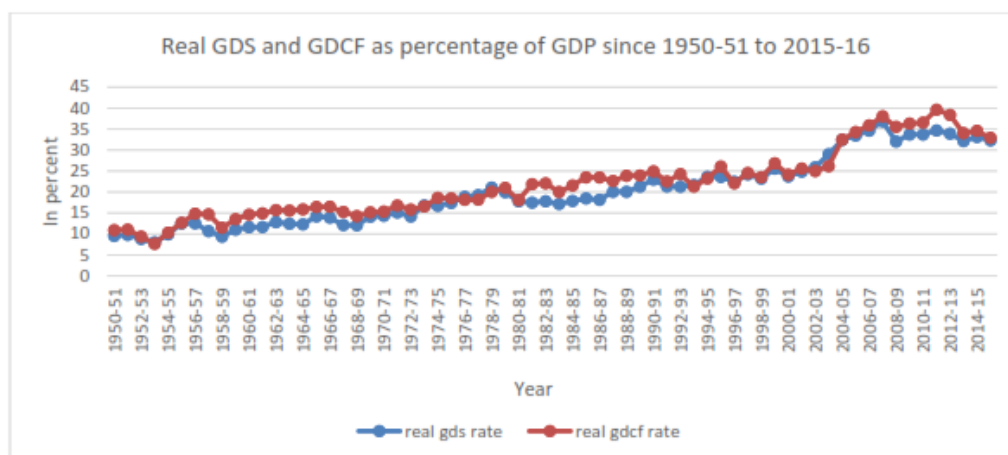
where ITY = ratio of investment to income, STY = ratio of saving to income, i and t are country and time subscripts respectively and $\varepsilon \sim N(0, \sigma)$ for all i and t . Their saving retention estimate (β) is within the range of 0.85 and 0.95, indicating low capital mobility in the sample of countries.

The objective of this paper is to re-examine the F-H hypothesis using a comprehensive, time-series econometric techniques in an attempt to identify the relative stability of results and the causal relationship between S-I for India using data for the period 1950-51 to 2015-16 and 1991-92 to 2015-16. Section 2 provides a brief history of the F-H puzzle and literature review. Section 3 presents details of the methodology employed and section 4 explains empirical results. The implications of the results are considered in a brief concluding section.

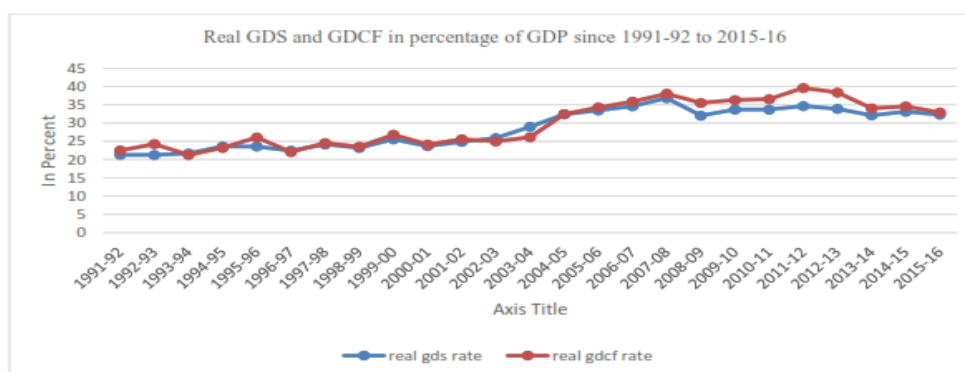
Saving and Investment in India:

Savings are the mainstay of investment as higher savings lead to higher investment and to higher growth in an economy provided that the other macroeconomic variables are advantageous and structured and thus, developed financial system exists. In India gross domestic savings and investment is high as compare to other developing and Asian countries like Srilanka, Bangladesh. In the figure 1 given below we can see that there is an upward trajectory in domestic saving and investment. Saving seems to be a follower of investment, either less or equal. But in 2001-02 investment was all time higher than saving. Household saving has the largest share among all the components of gross domestic saving.

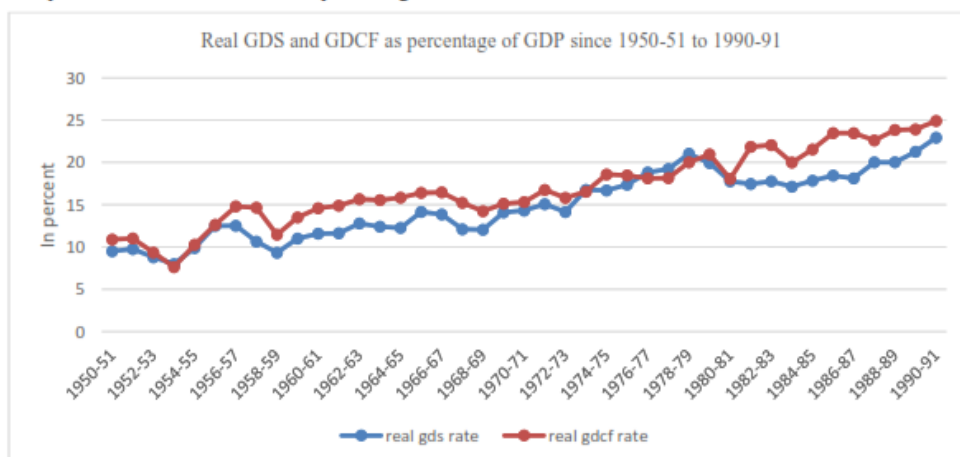
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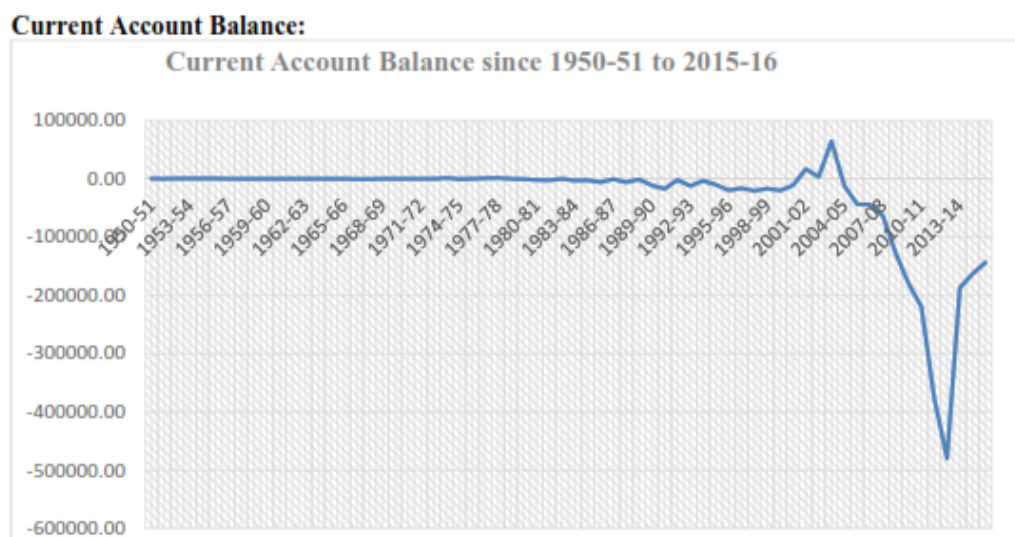
Graph.1 Real Gross Domestic Saving and Gross domestic Capital Formation as percentage of GDP



Graph.2 Real GDS and GDCF in percentage of GDP since 1991-92 to 2015-16



For whole sample we see that saving and investment in the same direction. As our economy grows, the two macro economic variables savings and investment also grow. The upward trend could be drawn by free hand. If we compare the recent post economic reform period gap between saving and investment was continuously declining but it started increasing in 2000s.



Since Independence time to days of economic reform, India was a close economy where no significant foreign investment took place. So, the current account balance looks very balanced till 1990 and domestic savings and investment are strongly attached with each other. After the economic reform, fluctuation in current account balance started taking place. Indian investment was highly determined by domestic saving. But after 1990, it became easy for domestic savings to fly to those countries where it finds high interest on it. We can observe and compare that after 1990-91 current account balance started fluctuating, ultimately going towards downward phase.

With the implication of economic reform in 1990-91, Indian economy now became more open to other countries. The current account balance trend is mentioned in chart which depicts economic reform is all time negative except 2001-02, 2002-03 and 2003-04 but it has slipped to -4.8% in 2013-14, which is lowest in the whole period.

Data and Methodology:

This study uses annual data from the RBI's Handbook of Statistics on Indian Economy for the period 1950-51 to 2015-16 and 1991-92 to 2015-16 for India. The savings rate S_t is defined as gross domestic saving as percentage of GDP while investment rate is defined as gross domestic capital formation as percentage of GDP. The time span of the analysis is determined by the availability of data. The use of gross domestic savings (% of GDP) deviates from many studies since such studies instead of using net domestic savings (% of GDP) as a measure of saving rate.

In order to investigate the relationship between savings and investment, the study employs the long-run generic model by Feldstein and Horioka (1980) with this form:

$$I_t = \beta_0 + \beta_1 S_t + \varepsilon_t$$

Where, I_t is the ratio of gross capital formation to GDP at time t , S_t is the ratio of gross savings to GDP at time t . β_0 is the constant, while β_1 is the regression coefficient for savings and investment or retention coefficient. The higher estimate for β_1 would suggest that most savings remain in the economy and are mobilized into investment while the lower estimate for β_1 would suggest that either capital mobility, the economy is poor in mobilizing its national savings or both scenarios are true. The residuals ε_t are assumed to be white noise and independently and identically distributed. However, the above specification is subject to

limitations such as I_t and S_t have unit root hence regressing variables would yield spurious regression results. Also the specification ignores the short-run dynamics between savings and investment and hence some econometric manipulations have to be done.

Econometric framework

Model Specification:

The study uses the bounds testing approach to co-integration developed by Pesaran and Shin (1999) and extended by Pesaran *et al* (2001) within the autoregressive distributed lag (ARDL) framework to investigate the relationship between domestic savings and investment in India. The use of this method is encouraged by number of reasons. First, it does not matter whether the series are not integrated $I(0)$ or the series are integrated of order one $I(1)$ or whether they are mutually integrated, also contrary to simple VAR (Vector autoregressive) models the number of variables in ARDL can be large.

Moreover, unlike the Engel and Granger (1987) two-step cointegration procedure, the bounds test approach does not push short-run dynamics into the error term, so it is possible to examine short-run dynamics also. So in order to examine this long-term relationship the following ARDL model is estimated:

$$\text{ARDL: } \Delta \text{GDCF}_t = \beta_0 + \sum_{i=1}^n \beta_i \Delta \text{GDCF}_{t-i} + \sum_{i=0}^n \delta_i \Delta \text{GDS}_t + \phi_1 \text{GDCF}_{t-1} + \phi_2 \text{GDS}_{t-1} + \mu_t$$

$$\text{ECM: } \Delta \text{GDCF}_t = \beta_0 + \sum_{i=1}^n \beta_i \Delta \text{GDCF}_{t-i} + \sum_{i=0}^n \delta_i \Delta \text{GDS}_t + \phi Z_{t-1} + \mu_t$$

We have two model in our study, one for whole period (1950-51 to 2015-16) and another for (1991-92 to 2015-16).

Results and Discussion:

ARDL gives an advantage by avoiding the classification of variables into $I(0)$ or $I(1)$ because there is no need for unit root test. According to Ouattara (2004), in the presence of $I(2)$ variables computed F-statistics provided by Pesaran *et al.* (2001) become invalid because bounds test is based on the assumption that the variables are $I(0)$ or $I(1)$. Therefore, the implementation of unit root tests in the ARDL procedure might still be necessary in order to ensure that none of the variables is integrated of order $I(2)$ or beyond.

Correlation Results between Real GDS Rate and Real GDCF Rate:

Time Period	Correlation Coefficient
1950-51 to 2015-16	0.9777
1950-51 to 1969-70	0.8996
1970-71 to 1989-90	0.7018
1990-91 to 2015-16	0.9654
1950-51 to 1989-90	0.9216

*Calculated by Author

For the period 1991-91 to 2015-16:

Stationary Results: Augmented Dicky Fuller test shows that both the series are stationary at first difference means both are integrated of first order $I(1)$ and no any series is $I(2)$. So the study utilizes ARDL model to see the short run and long run causality between the variables.

Unit root test results Augmented Dicky Fuller at level: with Intercept: at level:

$$\Delta Y_t = \beta + \mu \Delta Y_{t-1}$$

Variables	At 1% difference	At 5% difference	At 10% difference	Calculated tau	Probability	AIC	SBC	Max lag
GDCF	3.536	2.907	2.591	1.277	0.6348	1.687	1.586	10
GDS	3.536	2.907	2.59	1.073	0.7214	2.11	2.04	10

*Calculated by researcher

Unit root test results Augmented Dicky Fuller at level: Trend and Intercept: At level: $\Delta Y_t = \beta + \mu \Delta Y_{t-1}$

Variables	At 1% difference	At 5% difference	At 10% difference	Calculated tau	Probability	AIC	SBC
GDCF	4.105	3.480	3.168	4.006	0.013	1.89	1.79
GDS	4.105	3.480	3.168	3.887	0.018	2.28	2.18

*Calculated by researcher

Unit root test results ADF at first difference: At level: $\Delta Y_t = \alpha + \beta t + \mu \Delta Y_{t-1} + u_t$

Variables	At 1% difference	At 5% difference	At 10% difference	Significance level	Probability	AIC	SBC
GDCF	3.536	2.907	2.591	8.908	0.000	1.88	1.77
GDS	3.536	2.907	2.591	7.852	0.000	2.07	2.01

*Calculated by researcher

Unit root test results ADF at first difference: At level: $\Delta Y_t = \alpha + \beta t + \mu \Delta Y_{t-1} + u_t$

Variables	At 1% difference	At 5% difference	At 10% difference	Significance level	Probability	AIC	SBC	Max
GDCF	4.10	3.48	3.17	8.850	0.000	2.04	1.94	10
GDS	4.10	3.48	3.17	7.798	0.000	2.07	2.01	10

Stationarity test results suggest that both saving and investment series are non stationary at level. And both series became stationary by taking first difference and both are I(1).

Lowest value of Akaike and Schutcharz criterion suggested to adopt the four lag model.

Equation:

$$\Delta GDCF_t = \beta_0 + \beta_1 \Delta GDCF_{t-1} + \beta_2 \Delta GDCF_{t-2} + \beta_3 \Delta GDCF_{t-3} + \beta_4 \Delta GDCF_{t-4} + \beta_5 \Delta GDS_{t-5} + \beta_6 \Delta GDS_{t-6} + \beta_7 \Delta GDS_{t-7} + \beta_8 \Delta GDS_{t-8} + \varphi_{10} GDCF_{t-1} + \varphi_{11} GDS_{t-1} + \mu_t \dots \dots (1)$$

$$\Delta GDCF_t = \beta_0 + \beta_1 \Delta GDCF_{t-1} + \beta_2 \Delta GDCF_{t-2} + \beta_3 \Delta GDCF_{t-3} + \beta_4 \Delta GDCF_{t-4} + \beta_5 \Delta GDS_{t-5} + \beta_6 \Delta GDS_{t-6} + \beta_7 \Delta GDS_{t-7} + \beta_8 \Delta GDS_{t-8} + \varphi Z_{t-1} + \mu_t \dots \dots (2)$$

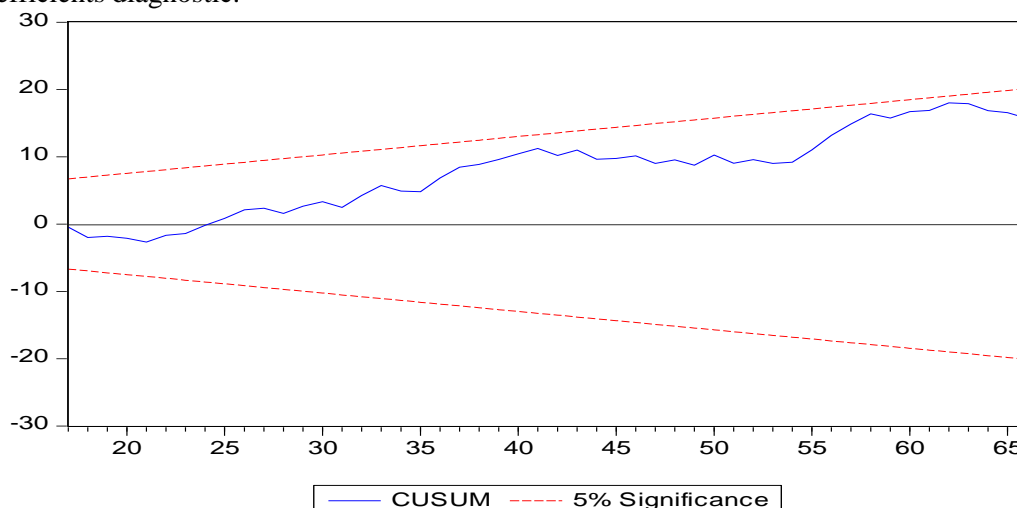
Breush-Godfrey serial correlation LM test:

F statistics	0.424066	Prob. Of F statistics	0.7905
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*Calculated by Author

At 5% level of significance we can not reject the null hypothesis that the model has no serial correlation. So our model do not have the problem of serial correlation so we can perform the CUSUM test of model stability. If the blue line is between two red lines then model is stable and we can go for further analysis. In the figure we can see that the blue line lies between the

two red lines means our model is stable and now we will go for wald bound test of coefficients diagnostic.



Wald Bound test for coefficient diagnostic: If the calculated F statistic is greater than lower and upper bound value of F, we reject the null hypothesis. And if F statistic is less than lower and upper bound value of F, we accept the null hypothesis and if F statistic is between the lower and upper bound value the result is inconclusive.

Short run coefficient diagnostic test.

Null Hypothesis: $\beta(1)=\beta(2)=\beta(3)=\beta(4)=0$

Table.1

Test Statistic	Value	df	Probability	Lower bound value	Upper bound value
F-statistic	1.110154	4, 50	0.3622	4.94	5.73

*calculated by author

Null Hypotheses: $\beta(5)=\beta(6)=\beta(7)=\beta(8)=0$

Table.2

Test Statistic	Value	df	Probability	Lower bound value	Upper bound value
F-statistic	1.899	4, 50	0.1251	4.94	5.73

*calculated by author

Calculated result of coefficient diagnostic test is shown in Table 1 and 2 shows that F statistic value is less than lower and upper bound value so we can not reject the null hypothesis and conclude that there is no short run causality exist between GDFC and GDS in India.

Long run causality test:Null hypothesis: $\varphi(10)=\varphi(11)=0$

Test statistic	Value	Degree of freedom	Probability	Lower bound value	Upper bound value
F statistic	7.82	2, 50	0.0011	4.94	5.73

*calculated by author

Calculated F statistic is 7.82 which is higher than both lower bound and upper bound value so we can reject the null hypothesis and conclude that GDCF is affected by GDS in lon run.

To calculate the speed of adjustment we calculate error correction term. Error correction term should be negative and statistically significant.

Regression results: Dependent Variable:D(Gross Domestic Capital Formation)

Variables	Coefficient value	Standard Error	T-Statistics	Probability	Results
Intercept	0.414	0.1095	3.781	0.0004	Significant
D(GDCF) ₍₋₁₎	-0.229	0.1761	-1.305	0.198	Insignificant
D(GDCF) ₍₋₂₎	0.048	0.1796	0.269	0.788	Insignificant
D(GDCF) ₍₋₃₎	0.187	0.1695	1.106	0.273	Insignificant
D(GDCF) ₍₋₄₎	0.114	0.1585	0.724	0.427	Insignificant
D(GDCF) ₍₋₁₎	0.113	0.2144	0.528	0.599	Insignificant
D(GDCF) ₍₋₂₎	-0.148	0.2059	-0.722	0.473	Insignificant
D(GDCF) ₍₋₃₎	-0.349	0.1963	-1.777	0.081	Insignificant
D(GDCF) ₍₋₄₎	-0.386	0.192	-2.009	0.049	Significant
GDF ₍₋₁₎	-0.600	0.160	-3.750	0.0005	Significant
GDS ₍₋₁₎	0.491	0.142	3.458	0.001	Significant
ECM ₍₋₁₎	-0.553	0.161	-3.422	0.0012	Significant

*Calculated by Author R Squared: 0.4449Adj R Suared: 3339

Although coefficient bound test reject for any short run causality between GDF and GDS. But the regression result says that gross domestic capital formation lag four affect D(GDCF). The long run causality from GDS to GDCF is statistically significant. Gross domestic saving with one lag is positively affecting gross domestic capital formation with 49 percent. In the long run one percent change in gross domestic saving brings 49 percent change in gross domestic capital formation in India.Error correction term value is -0.5534 and probability is 0.0012, which is less than .05 making it statistically significant. Any disequilibrium between Gross domestic capital formation and gross domestic savings is getting corrected with the speed of 55 %.

Model for the period 1991-92 to 2015-16:

Lowest value of Akaike and Stchwarz criterion suggested to adopt the four lag model.

Equation:1

$$\Delta GDCF_t = \beta_0 + \beta_1 \Delta GDCF_{t-1} + \beta_2 \Delta GDS_{t-1} + \phi_1 GDCF_{t-1} + \phi_2 GDS_{t-1} + \mu_t \dots \dots (1)$$

Equation:

$$\Delta GDCF_t = \beta_0 + \beta_1 \Delta GDCF_{t-1} + \beta_2 \Delta GDS_{t-1} + \phi Z_{t-1} + \mu_t \dots \dots (2)$$

Unit root test results Augmented Dicky Fuller test at level: only intercept $\Delta Y_t = \beta + \mu \Delta Y_{t-1}$

Variable s	At 1% differenc ce	At 5% differenc e	At 10% differenc e	Calculate d tau	Probabil ity	AI C	SB C	Max Lag
GDCF	3.737	2.991	2.635	1.366	0.58	1.87	1.77	5
GDS	3.737	2.991	2.635	1.317	0.60	2.67	2.57	5

*Calculated by researcher

At level:Trend and Intercept: $\Delta Y_t = \alpha + \beta t + \mu \Delta Y_{t-1} + u_t$

Variable	At 1% difference	At 5% difference	At 10% difference	Calculated tau	Probability	AI C	SB C	Max Lag
GDCF	4.394	3.612	3.243	2.058	0.54	1.90	1.76	5
GDS	4.394	3.612	3.243	1.442	0.82	2.63	2.49	5

*Calculated by researcher

Unit root test results ADF test: at first difference: only intercept $\Delta Y_t = \beta + \mu_t \Delta Y_{t-1}$

Variables	At 1% difference	At 5% difference	At 10% difference	Calculated tau	Probability	AI C	SB C	Max Lag
GDCF	3.752	2.998	2.638	6.508	0.00	1.88	1.78	5
GDS	3.752	2.998	2.638	5.740	0.00	2.60	2.50	5

*Calculated by researcher

Unit root test results ADF test: at first difference: Intercept and trend $\Delta Y_t = \alpha + \beta t + \mu_t \Delta Y_{t-1} + u_t$

Variables	At 1% difference	At 5% difference	At 10% difference	Calculated tau	Probability	AI C	SB C	Max Lag
GDCF	4.416	3.622	3.248	6.399	0.00	1.88	1.78	5
GDS	4.416	3.622	3.248	5.859	0.00	2.57	2.43	5

*Calculated by researcher

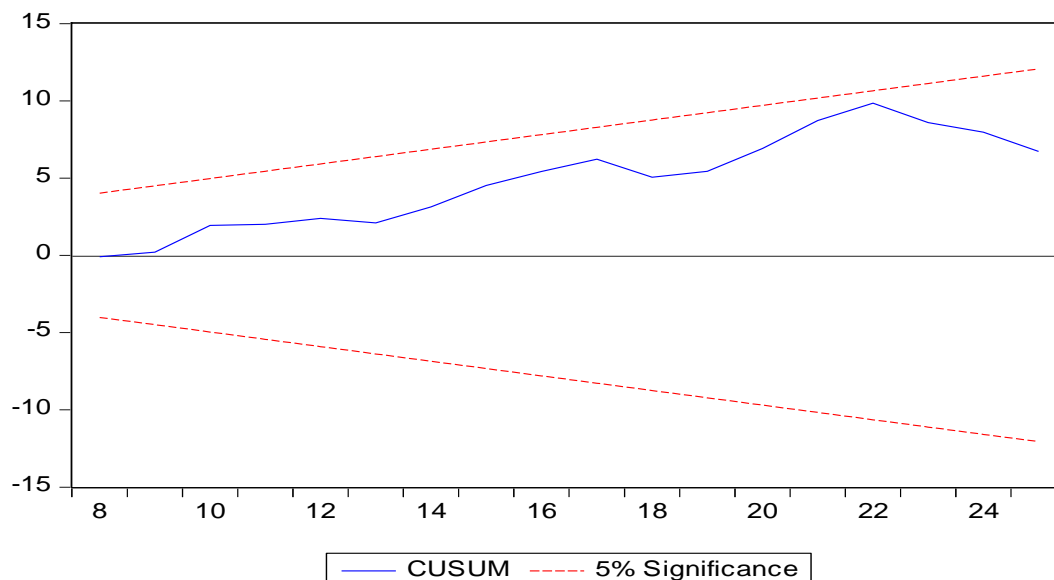
For this model, each lag length criterion suggest to adopt the model with one lag. Augmented Dicky Fuller test applied on both the series and found that both are non stationary at level but become stationary at first level. We use the same equation of (1) and (2) for this period too.

Breush-Godfrey serial correlation LM test

F statistics	3.87	Prob. Of F statistics	0.9951
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*Calculated by Author

At 5% level of significance we can not reject the null hypothesis that the model has no serial correlation. So our model do not have the problem of serial correlation so we can perform the CUSUM test of model stability. If the blue line is between two red lines then model is stable and we can go for further analysis. In the figure we can see that the blue line lies between the two red lines means our model is stable and now we will go for wald bound test of coefficients diagnostic.



Wald Bound test for coefficient diagnostic: If the calculated F statistic is greater than lower and upper bound value of F, we reject the null hypothesis. And if F statistic is less than lower and upper bound value of F, we accept the null hypothesis and if F statistic is between the lower and upper bound value the result is inconclusive.

Short run coefficient diagnostic test.

Null Hypothesis: $C(2)=C(3)=0$

Table.1

Test Statistic	Value	df	Probability	Lower bound value	Upper bound value
F-statistic	3.082	2, 18	0.0706	4.94	5.73

*calculated by author

Calculated result of coefficient diagnostic test is shown in Table 1 and 2 shows that F statistic value is less than lower and upper bound value so we can not reject the null hypothesis and conclude that there is no short run causality exist between GDFC and GDS in India.

Table.2 Null Hypothesis: $C(4)=C(5)=0$

Test Statistic	Value	df	Probability	Lower bound value	Upper bound value
F-statistic	10.615	2, 18	0.0009	4.94	5.73

*calculated by author

Calculated result of coefficient diagnostic test is shown in Table 2 shows that F statistic value is greater than lower and upper bound value so we can reject the null hypothesis and conclude that there is long run causality exist between GDFC and GDS in India. To calculate the speed of adjustment we calculate error correction term. Error correction term should be negative and statistically significant.

Table.3

Variables	Coefficient t value	Standard Error	T-Statistics	Probability	Results
Intercept	-0.320	0.2414	-1.327	-0.201	Insignificant
D(GDCF) ₍₋₁₎	-0.019	0.2588	-0.072	0.943	Insignificant
D(GDS) ₍₋₁₎	-0.540	0.4290	-1.260	0.224	Insignificant
GDCF ₍₋₁₎	-1.523	0.331	-4.603	0.0002	Significant
GDS ₍₋₁₎	1.644	0.360	4.556	0.0002	Significant
ECM ₍₋₁₎	-1.523	0.322	-4.722	0.0001	Significant

Calculated by Author R-Squared: 0.67 Adj R- Squared: 0.618

As we know that error correction term should be negative and significant. In the above table the ecm coefficient is -1.52 which shows that any disequilibrium between GDCF and GDS would be corrected with speed of 152 percent in a year. Coefficient bound test as well as simple regression results shows that there is no causality exist between GDCF and GDS in short run. But in the long run GDS is significantly causing GDCF. In full sample we found that no short run causality is running from GDS to GDCF. But in the long run GDS is strongly affecting GDCF. Comparative analysis:

Table.4

Statistics/Sample	1950-51 to 2015-16	1991-92 to 2015-16
Correlation Coefficient	0.9777	0.9654
Regression Coefficient	0.491	1.64
ECM	-0.553	-1.523

*Calculated by Author

The correlation coefficient of saving and investment is low for post reform period than full sample period. But regression coefficient from saving to investment for post reform period is greater than full sample period, proves the existence of Felstein- Horioka Puzzle in case of India. The error correction term value is also high in post reform period than in full sample period. So our analysis support the conventional wisdom of Feldestein- Horioka puzzle. Domestic savings still support domestic investment in India.

Conclusion:

Mobilization of domestic and foreign savings plays a vibrant role in capital accumulation along with national economic development. But in developing and least developed countries, the major issue of vicious circle of poverty cannot be broken. Apart from that the requirement of, and accessibility to foreign capital improves the prospects of sustained economic growth. In the context of India, sluggish growth in the decade of the 1990s has contributed relatively low savings rates that widen the gap between savings and investment. Financial liberalization policies under path changing step of economic reform of the 1990s have provided an opportunity to overcome liquidity constraints in the economy. Though FH argued that, under perfect capital mobility, there is no necessary association between domestic savings and investment, we find that the countries like India this may not be realized in long run, because of the following reasons.

1. India is mainly dominated by unorganized or informal sector, till today around 66% of the population living in rural area are away from banking facilities and no room for savings and henceforth difficult to get data on savings from these population.

2. Since 50% of the people depend on agriculture sector and this sector always suffer with crop failure, because of flood or drought, there is always a need for money. Though investment in Indian capital market gives reasonably good returns, people prefer to invest in informal capital markets because of higher returns compared to the capital market returns.

3. Because of the boom in the real estate sector most of the money is moving to that sector where market value is greater than that of the government value. The difference money is not accounted anywhere.

4. India's deficit on the current account increased throughout the period and hence pushed into greater dependence on high interest commercial loans from international banks to finance their deficits. The growth in private savings could not finance most of India's investment throughout the period except in some years, the point 2 above may be the reason.

5. The rise in savings could not finance investment even after 1990's, this might be because of the new financial innovations in the Indian economy such as GDRs, ADRs and FCCBs, infrastructure bonds etc., coupled with lower interest rates in other countries attracted Indian private as well as public sector and hence a part of domestic savings must have moved to unorganized sector.

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Agriculture Financing - An Overview

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Credit plays an important role in improving agricultural production, productivity and thus mitigating the distress of the farmers. The co-operative credit societies have been important sources of credit to the farmers. Since 1969 commercial banks have been active in giving credit to the farmers which has led to increase in rural bank branches. Government has adopted a policy of 'multi-agency approach' in agricultural credit. At present primary agricultural co-operative societies, land development banks, commercial banks and regional rural banks are financing agriculture.

Information Related to Agriculture credit Section:

The Government of India had a June, 2004 announced a package for doubling the flow of credit to agriculture and allied activities in a period of three years commencing from 2004-05 over the amount disbursed during the year 2003-04. This target was achieved in two years. Thereafter, the Government of India has been setting an annual target for the flow of credit to the agriculture sector.

Type of Agriculture credit: The financial requirement of the Indian farmers can be classified into three types, depending upon the period and another three types based on the purpose for which they are required.

Credit based on purpose: The credit requirements of farmers can be classified on the basis of purpose into the following categories.

- 1) **Productive:** all credit requirements of farmers directly affecting agricultural productivity, e.g. For buying seeds, fertilizers, manure and agricultural implements, digging and repair of wells and tube wells, payment of wages, improvements and land etc.
- 2) **Consumption needs:** In the long interval of time between two crops, farmers do not have sufficient income and need credit to meet their basic needs.
- 3) **Unproductive:** Indian farmers often borrow for unproductive purposes like celebration of marriage, birth, death, litigation, religious functions, festivals etc. from money lenders and mahajans.

Sources of Credit: there are two sources of credit available to the farmers:

- 1) **Institutional Sources:** consists of cooperatives, commercial banks, lead bank schemes, cooperative agriculture and rural development banks, regional rural banks and National Banks for Agricultural Rural Development (NABARD).
- a) **Cooperative Credit Society:** Commonly known as the primary agricultural credit society, is the grassroots level arm of the short term cooperative credit structure, dealing directly with farmers borrowers, granting short and medium term loans and also undertaking distribution and marketing functions.
- b) **The commercial banks:** They provide indirect finance for the distribution of fertilizers and other inputs and extend credit to manufacturing or distribution firms or agencies and cooperatives engaged in the supply of pump sets and other agricultural machinery on a hire-purchase basis. They finance the operation of the Food Corporation of India, the state Government and others in the procurement, storage and distribution of food grains.

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- c) **Cooperative Agriculture and Rural development:** The main function is to grant loans on the security of agricultural properties. They provide credit for a variety of purposes such as redemption of old debts, improvement of land purchase of expensive agricultural equipment, construction of wells and erection of pumps.
 - d) **Lead Banks Scheme:** One of the commercial banks performs as lead bank in a district for coordinating credit deployment in the district. The lead banks act as leaders to bring about a coordination of cooperative banks and other financial institutions in their respective districts resulting in a rapid economic development.
 - e) **Regional Rural Banks:** Their main objective is to provide credit and other facilities, particularly to the small and marginal farmers, agricultural laborers and small entrepreneurs, so as to develop agriculture, trade, commerce, industry and other productive activities in the rural areas.
 - f) **NABARD:** It is an apex financial institution constituted to coordinate the activities of all the institutions involved in financing rural and agricultural activities. It took over the functions, responsibilities and assets of Agriculture Credit Department of the RBI, Rural Planning and Credit Cell of the RBI and entire business of Agriculture, Refinance and Development Corporation. It is constituted for providing credit for promotion of agriculture and small scale industries, handicrafts and other allied economic activities in rural areas with a view to promote integrated rural development and prosperity.
- 2) **Non Institutional:** These include money lenders, traders, commission agents, relatives and land lords. There are rich farmers or land-lords, who combine farming with money lending. There are also professional money lenders whose only occupation is money lending.

Service Area Approach: National Bank for Agriculture and Rural Development (NABARD) is providing refinance to the commercial banks. In order to reduce the competition amongst the commercial banks in the rural areas, a policy of "Service Area Approach" has been adopted since 1988. As per this policy, each bank has to adopt few villages and they are required to meet credit.

National Agricultural Insurance Scheme (NAIS): The Government of India introduced the scheme from Rabi 1999-2000 season to protect the farmers against losses suffered by them due to crop failure on account of natural calamities. The scheme is currently implemented by Agriculture Insurance Company of India Limited (AICIL). The scheme is available to all the farmers, loanees and non-loanees, irrespective of size of their holding. The scheme covers all food crops (cereals, millets and pulses) and oil seeds and annual commercial/horticultural crops. The main objective of the scheme is to protect farmers against crop losses suffered on account of natural calamities such as drought, flood, hailstorm, cyclone, pests and diseases. The scheme is being implemented by the Agriculture Insurance Company of India Ltd (Ateil).

Pilot Modified National Agricultural Insurance Scheme (MNAIS): Pilot MNAIS was launched for implementation in 50 districts during Rabi 2010-11 season. Modified NAIS has many improvements over NAIS like the insurance unit for major crops has been lowered down to village/village Panchayat, minimum indemnity level has been raised to 70 per cent, threshold yield is based on past seven years' yield excluding a maximum of two calamity years, pre-sowing and post-harvest loss are covered. Besides these, on-account payment of claims during the season and payment of claims for sowing failure have also been included.

Kisan Credit Card Scheme: Kisan Credit Card is aimed at providing adequate and timely credit support from the banking system under a single window to the farmers for their cultivation.

Interest Subvention Scheme: With a view to ensuring availability of agriculture credit at a reasonable cost/at a reduced rate of 7 per cent p.a. to farmers. This scheme was implemented through public sector banks (reimbursement through RBI), Regional Rural Banks and Cooperatives (Reimbursement through NABARD) and has continued ever since with minor variations. currently, besides 2 per cent interest subvention , 3 per cent incentive is given for prompt repayment of loan reducing the cost to 4 per cent.

Extension of Interest subvention scheme to post harvest loans: In order to discourage distress sale by farmers and to encourage them to store their produce in warehousing against warehouse receipts, the benefit of interest subvention scheme has been extended to small and marginal farmers having Kisan Credit Card for further period of upto six month post harvest on the same rate as available to crop against negotiable warehouse receipt for keeping their produce in warehouses.

Bringing green Revolution in eastern India (BGRED): Financing Agricultural Investments in the Eastern Region-Concessional Refinance Support: In order to support the banking system finance such key investments, NABARD has introduced concessional refinance scheme in the year 2011-12, with an objective to accelerate investments in agriculture to enhance production and productivity of crops in the Eastern region (Assam, Bihar, Jharkhand, Chhattisgarh, Odisha, West Bengal and Eastern Uttar Pradesh) by incentivizing the banks.

Revival Package for Short Term Cooperative Credit Structure: The Government is implementing a package for revival of Short-term Rural Cooperative Credit Structure in the country . The Revival Package is aimed at reviving/strengthening the Short-term Rural Cooperative Credit Structure (CCS) and make it a well-managed and vibrant medium to serve the credit needs of rural India, especially the small and marginal farmers.

Rashtriya Krishi Bima Yojna: The salient features of the Scheme are:

- It is available to all the farmers irrespective of their size of holding.
- The scheme will be compulsory for loanee farmers and optional farmers.
- The Scheme is expected to be a critical instrument of development in the field of crop production. It not only provides financially support in the event of crop failure but also would stimulate farmers to adopt progressive farming practices, high value inputs and higher technology in farming.

Conclusion: Role of credit to agriculture cannot be viewed just as a support to food-producing activity but it should focus on the "need to improve the overall income and economic well-being of the farmers" as agriculture has been the basic requisite for national sovereignty. Over the years there has been a significant increase in the access of rural cultivators to institutional credit and simultaneously, the role of informal agencies including moneylenders, as a source of credit has declined. Available data suggests that agricultural credit has been rising in recent years as a share of both the value of input and the value of output.

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Identifying Eating Habits and Nutritional Status of Children: A Study among children of Delhi Public School Dhanbad Jharkhand

Dr Sarita Sinha *

As of now, nations overall are zeroing in on cultivating a sound eating routine and good dieting propensities, which are significant determinants of wellbeing and sickness (Sofi Et al 2010). Dietary inclinations and children eating behaviour have strong effect on nourishing status of youngsters. The target of the investigation was to discover eating conduct of elementary younger students of Delhi Public School Dhanbad in a urban space of Jharkhand utilizing Child Eating Behaviour Questionnaire and to decide relationship of weight record (BMI) with eating conduct.

Methodology: It was an organization-based observational investigation with cross-sectional design done from July to August, 2019. The study was done among 162 children studying at our junior wing of Delhi Public School Dhanbad at Dhanbad. Children aged between 6 to 9 years were selected for the study. Eating conduct of children was evaluated utilizing Child Eating Behaviour Questionnaire (CEBQ).

Results

The extent of under-nutrition and over nutrition was 8.0% and 29.0%, separately. Food fastidiousness was essentially connected with slenderness [BMI beneath (-2SD)]. Happiness regarding food, satiety reaction was altogether connected with over nutrition [BMI over (+1 SD)]. Food aversion subscale was essentially connected with slenderness and this subscale was defensive for overweight.

Conclusion

This investigation showed relationship of BMI with kid eating conduct. Accordingly, mindfulness among guardians ought to be made to change dangerous eating of their youngsters which would additionally assist them with accomplishing normal Body Mass Index.

Keywords : Body mass index, CEBQ, children, nutritional status, Eating behaviour.

Introduction

Childhood is the most excellent period to decide the nutritional status and take action consequently since this is the most valuable age of child's life when establishing proper nutritional behaviour and dietary advices will facilitate them throughout their life and will also improve the entire health of a child as well as the upcoming adult population of our nation. Because of the pandemic of youth heftiness, the dietary patterns of kids and young people are of specific significance, as undesirable dietary patterns in youth/pre-adulthood can endure and cause unfavourable wellbeing results in adulthood. Various studies suggested that the principle dietary worries among Indian children's are low utilization of leafy foods and intense usage of sucrose-rich beverages and snacks. It was measured that beverages and foodstuff consumed between meal supplies as much as 46 percent of entire every day energy intake, and the standard of these foodstuff is of concern. Analogous results have been reported in children amongst whom every day consumption of fruits

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And vegetables were low, and consumption of junk food and sugar-sweetened soft drinks was preferred. On average, the consumption pattern of children is very picky and hardly fulfilled less than half of the Indian Nutritional guidelines. The regular every day India food design incorporates breakfast, a warm lunch, a warm supper, and two snacks. Early childhood period is presently perceived as a vital target for the counteraction of underweight, overweight, and heftiness, and the propensities that kids gain as of now about food, appropriate eating conduct, and its medical advantages can impact their dietary decisions and inclinations in later life. Prior investigation had suggested that the differences in weight of children can, to several degrees, be described by their personality differences in eating behaviour. Eating habits of a child develops in infancy, and the different influencers are hereditary inclinations of the kid, normal food reactions and taste inclinations affected by the exposure to food varieties and variable parental feeding practices. Perhaps the most thorough instruments currently present for the researcher is the Children's Eating Behaviour Questionnaire (CEBQ) to quantify eating conduct of children's. CEBQ was created by Wardle et al. The CEBQ instrument was additionally approved in prior investigation. Early recognition of strange dietary patterns at youthful age additionally helps kids and their folks to receive smart dieting propensities with less exertion.

Method

It was an organization-based observational investigation with cross-sectional design done from July to August, 2019. The study was done among 162 children studying at our junior wing of Delhi Public School Dhanbad at Dhanbad. Children aged between 6 to 9 years were selected for the study. Eating conduct of children was evaluated utilizing Child Eating Behaviour Questionnaire (CEBQ).

Results and Discussions

From CEBQ, it was tracked down that 63.7% children's told that they love food.

Table 1
Showing Eating Habits of children

category		Response
Soft drink	Less than once a week	27.3 %
	Almost once a week	47.8%
	5–6 times a week or more	24.9%
Fresh juice	Less than once a week	9%
	1–4 times a week	32%
	5–6 times a week or more	59%
Cooked vegetables	Maximum once a week	12%
	Almost once a day	46%
	Several times a day	42%
Pizza	Not at all	41%
	Less than once a week	13%
	At least once a week	46%
Sweet pastry/ Ice cream/ Biscuits/ cookies	Less than once a week	3%
	Once a week	54%
	more than once a week	43%

Conclusion and Recommendations

Suitable parental education is essential to build up a healthy consumption practice of children from childhood. Appropriate supervision is crucial to modify any problematic consumption behaviour of children. Appropriate eating habit also leads to a healthy dietary pattern which can prevent infectious diseases in future. Awareness must be formed amongst school children concerning these types of information. Healthy childhood eating habit is imperative in preventing and combating against undernourishment and determining the progress and growth of kids. Proper consumption manners of a child possibly will lead to a healthy and fully developed adult in future. Early recognition of unacceptable eating manners in prime health care situation may proffer the parents to change the unsatisfactory eating behaviour of their children with several suitable interventions.

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Planning of Agro- Based Industries in Vaishali District

*Devendra Prasad Sah**

This research paper is an humble attempt of the researcher to present planning prospects for agro - based industries in Vaishali District as well as to examine their role in rural development of the district . The agro based industries may be regarded as an extensive areas of agriculture and it is the only hope for the economic and industrial development of Mithila Plain in general and Vaishali District in particular.

Key Words : Agro-based Industries, rural development economic and industrial development, Mithila Region

1. Introduction :

The present research paper aims at throwing light on the planning prospects of agro- based industries and their prospects for integrated area development of Vaishali District, one of the districts of Mithila Plain which has been equipped with potentialities of agro- based industries specially the processing of rice, maize, processing , litchi processing, banana ripening and processing , makhana processing , vegetable processing and fruit processing industries . This paper is an humble attempt in this direction.

2. The Study Area :

Hemmed in between latitudes 25⁰ 4' N to 26⁰ 10' N and longitudes 85⁰ 57' E to 86⁰ 26' E on an area 2536 km², under Tirhut Division . This is a part of Middle Ganga Plain in general and Mithila Plain in particular as per regional classification by Prof. R.L. Singh (1971) in his famous book "India : A Regional Geography" As per 2011 census Vaishali district has total population 3,495,249 including 1847,058 males and 1648191 females thus registering a low sex ratio of 892 and high density of 1717 persons per km² . It has registered 28.58% decadal growth rate . The total literacy is 68.56% including 77% male literacy and 59% female literacy . The district has three subdivisions i.e. Hajipur, Mahnar and Mahua and 18 C.D. Blocks i.e. Mahnar, Vaishali, Vidupur, Goraul, Raghapur, Lalganj, Hajipur, Mahua, Jandaha, Fatehpur, Shadebujurg, Rajapakar, Bhagwanpur, Chehrakala, Prenraj, Fatehpur, Belsari & Desri" The important crops are wheat , rice, Maize and tobacco and the famous horticulture products like banana, litchi and mango which are raw materials for agro- based industries .

3. Main Objectives of Research :

The main objectives of this research are

- (i) to trace out growth potentials for the development of agro- based industries of the district and

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(ii) to identify representative industries which may be promoted in different areas of the district and finally

(iii) to examine their role in rural development of Vaishali District.

4. Research Hypothesis :

Research Hypothesis helps to explain facts . The hypothesis is precisely defined as a tentative or working proposition suggested as a solution to a problem . As per J.W. Best (2004).

"Hypothesis is a shrewed guess or inference that is formulated and provisionally adopted to explain observed facts or conditions and to guide in further investigations."

In this research work, this hypothesis has been elaborated and tested that proper planning of agro based industries specially the food processing, fruit and vegetable processing industries may be helpful in integrated rural development.

5. Planning of Agro- based Industries :

The following planning strategies may be helpful in developing agro-based industries in Mithila Plain in general and Vaishali district in particular .

5.1 Rice Processing : Mithila plain is also one of the largest market rice. In fact, installed capacity of rice milling is not enough to meet the existing demand and existing mills also require expansion and modernization. Thus, there is a large scope for setting up new modern rice mills in the plain which can make variety of rice produce. There are also significant opportunities in utilization of by products for making starch, born oil etc.

Finally, the large paddy production also offers opportunities for setting up husk based power generation in the plain. The present productivity level at around 15 Quintal/Hectare is expected to increase to around 25 by 2011-12 Qtl/Ha bringing in further opportunities for potential entrepreneurs.

5.2 Maize Processing : Around 8 lac MT of maize produced over a area of around 2 lac Ha. Major producing districts are Khagaria, and Begusarai and Winter (Rabi) maize is cultivated mainly in Vaishali District with a production of 0.74 million MT. about 40% of the total production. This gives unique position to the plain in National maize market with most of maize processing nits in north,m India, depending highly on maize from the State for a significant roled of time. With state productivity much higher than national productivity level and area under cultivation expected to rise, the availability to good quality maize offers significant opportunities for entrepreneurs in the plain.

However, the level of processing in the plain in presently quite insignificant. There is thus a large opportunity for maize processing units which can be up (for making a range of products like starch, corn oil, com, flakes, corn flour poultry feed etc.

5.3 Litchi Processing :

At around 2 lac MT of production, Mithila Plain accounts for almost 75% of national production of this delicious fruit.

Most sought after produce of the plain in both state and national market, Litchi offers an unparalleled range of processing opportunities. This highly perishable fruit requires a specific climate and soil condition, found in the area around Muzaffarpur and Vaishali district which remains focal points of litchi production in the country.

The Brand "Muzaffarpur & Vaishali-Shahi Litchi commands a special respect in the fresh as well as segments.

Limited period of litchi makes it imperative for all litchi processors to have their facilities near to production centres in the State which are also well connected to major markets over the years. Litchi is amenable to processing of various levels and entrepreneurs may choose to set up units for Pulp, juice, nectar, beverage, jam, jelly, pulp slabe etc. Litchi processing industry may be set up at Hazipur.

5.4 Banana Ripening And Processing

Around 10 lac MT of Banana production over 28 thousand ha to land. Two major production clusters, around Bhagalpur and Vaishali, account for almost 50% of state production. With hub at Naugachia, sub of Bhagalpur region produces more than 2 lac MT of Hari Chaal and Rbusta varieties. The second cluster around Vaishali region produce more than 2.5 Lac MT of Muthia and Chinia varieties.

Banana offers significant opportunities for both fresh and processed food market. There are opportunities of setting up modern ripening chambers for catering to premium national and international market.

There may also be scope for processing units at Hazipur for making pulp, baby food, banana fibre, packing, material, banana flower vegetables (Ready to eat), banana trunk vegetables & pickles, processed Banana is picking up fast with the South India market. New markets are emerging in gulf countries and middle east.

In terms of diversification, Banana Fiber (trunk and leaves) has a scope as well as a good market as one of the diversified textile fibres. Vaishali an added advantage for setting up fibra extraction and yarning units, over and above food processing.

5.5 Mango Processing :

Mithila Region is famous for the production of fine quality of mango. The bombay, maldah and kapuria are the famous varieties. But at the time mango ripening season, the mangoes are exported to Kolkata, Patna, Jamshedpur by the brokers and plenty of mangoes are devastated. Hence, as per direction of the scientists of Rajendra Agriculture University, PUSA, there is enough potential for mango processing industries at Vaishali, Muzaffarpur, Madhubani, Samastipur and Darbhanga which may benefit the mango grower farmers and may create extra job opportunities for the unemployed youth .

5.6 Makhana Processing :

Makhana pop production in the plain is estimated at around 20,000 MT, with major producing districts being Darbhanga, Madhubani and Vaishali district. An almost exclusive offering from the plain having more than 90% production of the nut in the country, this highly nutritious crop is traditionally used in roasted form as snacks and for kheer making.

As Makhana is now increasingly accepted as a health food all over the country., it offers significant opportunities for value addition through limited investment in primary processing and packaging facilities. Further research and development efforts for this product also give hopes for variety of processed makhana products, and there is scope for establishing Makhana processing in district at Madhubani, Darbhanga & Hazipur.

Growing popularly, unique positioning and being a product adored by masses as well as classes proves its potential to become a major attraction in the processed food segment. Hence, recently state Govt. has tagged Makhana with Mithila.

6. Conclusion :

From the above discussion, it is apparent that Vaishali district has enough potentialities for agro- based industries related to the processing industries of rice, maize, mango, litchi, banana, makhana and vegetable processing which may be helpful in creating extra job opportunities for the unemployed youths and checking out- migration of labour. Thus, the proper planning strategies for agro-based industries may be helpful for integrated rural development of the study area - Vaishali District.

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Ademographic characteristics socio-economic set up and literacy level of s.c. Population of rural service centres of cheria bariarpur block , begusarai district

*Indradeo Ram**

This research paper is an humble approach of the researcher to trace out the socio- economic set up and literacy level of S.C. Population of selected case study rural service centres of Cheria Bariarpur Block of Begusarai District, the Study Area . Attention has been paid to throw light on the demographic characteristics, literacy level and occupational structure of fine rural service centres which are S.C. population dominated .

Key Words : Rural Service Centres, Demographic Characteristics , Occupational Structure, Literacy Level

1. Introduction :

"Rural Service Centres are basically those villages which provide vital social services to the rural population of the surrounding villages, Each centre provides development services to nearby villages so they will be the entry points for dynamism and growth in the rural area."

U.S. Dept . of Health and Human Services

In this research paper an attempt has been made to throw light on the demographic characteristics, literacy level and occupational structure of five S.C. population dominated rural service centres of Cheria Bariarpur Block of Begusarai District.

The consciousness for upliftment through educating scheduled caste people emerged during the 20th century and is still going on. But the literacy level of scheduled caste population in Bihar is still very low. Worst is the case of Literacy level of S.C. population in North Bihar having only 15.99% including 25.75% male literacy and only 5.23% including 25.75% male literacy and only 5.23% female. Hence, this research project may prove a modest attempt to raise this burning problem of Begusarai district of North Bihar the study area

Literacy reflects the socio-economic and cultural set-up of a nation, ethnic group or communities and is the most important component of human resource development. As per the concept of the population commission of the united nations, literacy generally refers to the minimum level of literacy skills i.e. the ability to read and write with understanding (Hussain, 1994). As per basic census concepts and definitions coined by Primary Census Abstract, Census of India, 2001, "A person aged 7 years and above who can both read and write with understanding in any language has been taken as literate. It is not necessary for a person to have received any formal education or passed any minimum educational standard for being treated as literate. People who were blind and could read in Braille are treated literates.

A person, who can neither read nor write or can only read but cannot write in any language, is treated as illiterate. All children of age 6 years or less, even if going to school and have picked up reading and writing are treated as illiterate. (Census of India, 2001)

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Literacy is essential for eradicating poverty and mental isolation for cultivating peaceful and friendly international relations and free democratic processes. Illiteracy, on the other hand, takes away from man his dignity, perpetuates ignorance, poverty and mental isolation and hampers social advancement, economic growth and political maturity. (Chandra, 1980).

Further, literacy and level of education also influence attributes of population like fertility, morality, mobility, occupations etc. Secondly, the educational status is undoubtedly one of the best indicators of population quality as the amount and quality of schooling received by children are measures of the extent to which society is investing in the well being of future generations." (Finch & Trewarta, 1957). Education plays a crucial role in the development process and acts as a powerful instrument for social, economic and cultural transformation. It is absolutely necessary for the realization of national goal. (Singh, 1985). It is being increasingly believed that it can be a powerful means to ameliorate the suffering Harijans and for overcoming the social, physiological and economic barriers under which they have been since long. (Goyal, 1981). The consciousness for upliftment through educating Harijans or scheduled caste people emerged during the nineteenth century and is still going on. But the literacy level of scheduled caste population in Bihar is still very low. The Primary Census Abstract, 2001 have revealed certain illuminating facts regarding the literacy level of Bihar in general and of Scheduled Castes population of North Bihar in particular. National literacy rate in 2001 is 65.38% while it is 47.53% in Bihar and only 33.58% in North Bihar.

2. Objectives of Research :

The main objectives of research are to trace out the demographic characteristics, literacy level and occupational structure of 5 selected rural service centres i.e. Manjhaul (5643 S.C. Population), Bikrampur (2,695), Basahi(2055), Khanjahanpur (2023) and Siripur (1535) for suggesting planning measures for integrated rural development.

3. Research Hypothesis :

The main hypotheses formulated and tested in this research include:

- (i) Low level of literacy rate in S.C. population of the rural service centres has negative impact like poverty and indebtedness;
- (ii) Low Literacy in S.C. Population are associated with high birth rates

4. Research Methodology :

The interpretation of the socio economic set up and literacy level of S.C. Population of the selected rural service centres of Cheria Bariarpur Block of Begusarai District is based on methodological approach including collection of data from primary source with the help of questionnaires, schedules and interviews of ten families of each service centre as well as from the secondary sources like Census Handbook, Libraries and statistics Department of the Begusarai Collectorate .

The collected data have been tabulated and analysed systematically with the help of selected statistical methods like co-efficient correlation method, rank analysis method etc and then maps were prepared and analysed .

5. Analysis and Findings : On the basis of the systematic analysis of the tabulated data and their interpretation, the following are the main findings:

1. Rural Service Centre Manjhaul : Manjhaul (601) village No. is located in the south eastern part of Cheria Bariarpur Block approximately five kilometer east of State Highway running from Manpur to Khuda Bandpur through Cheria Bariarpur . Manjhaul is the most important service centre not only of Cheria Bariarpur Block but of Begusarai

district. Manjhaul is also educational and administrative service . R.C.S. College is located is Manjhaul which imparts co-education to at least 10,000 boys and girls up to degree level and is an constituent unit of L.N. Mithila University, Darbhanga . It has to +2 High School, 1 Kasturba Vidyalaya and several Middle & Primary Schools. Manjhaul has 7,372 households and total population 35,905 including 19021 males and 16884 females per 2011 census . Total literate persons are 18,482 including 10,827 males and 7,655 females . Total S.C. population are 5,643 including 2, 951 males and 2,692 females . So far as occupational structure of rural service centres 2011 are concerned Manjhaul has 11,612 total workers including 9085 males and 2527 females . Total workers may further be classified into main workers and marginal workers . Out of the total workers 11,612 the main workers are 9,685 and 1927 marginal workers . The main workers 9685 include 7916 males and 1769 females . Out of total population 35,905; total workers are 11,612 (32.34%) and total non- workers are 24,293 (67.66%) That clearly means that 67.66% of non- workers are dependent on 32. 34% which shows a sign of lagged - behind economy of Manjhaul . It provides service to villages No. 599, 600, 594, 596 and 595 and several small villages .

2.. Bikrampur: Village No. 582 Bikrampur is located in the western part of Cheria Bariarpur C.D. Block encircled by Korjana (581). Basahi (577) and Aesre (580) villages in north , Siripur (584) in the east, Bhagwanpur Block in south and west . State Highway crosses the village in the middle and it is located just on the S.H. There is one post office and +High School also .

The demographic characteristics of Bikrampur is also distinct . It has 1595 household inhabited by 7,520 total population including 3824 males and 3696 females , thus showing a balanced sex ratio of 966 females per 1000 males . So far as the level of literacy is concerned . Bikrampur has 1434 total literate persons including 815 males and 619 females . Bikrampur is a S.C. dominated village having 2695 persons including 1374 males and 1321 females showing a sex ratio of 961 almost balanced ratio. If we consider the occupational structure of Bikrampur, it is clear that out of total population 7520 persons , there are 2198 total workers (29.22%) only and 5322 non- workers i.e. 70.78 . This shows very disproportionate ratio, and heavy burden of non-workers covers workers .Out of total workers 2198, total main workers are 1961 (89.22%) and only 237 marginal workers i.e. 10.78% and .

3. Rural Service Centre Basahi : Village No. 577 Basahi is encircled by Khudabandpur i the north , Sakarbasa (579) in the east, Korjana (581) and Aure (580) in south and Gopalpur (573) in the west and this rural service centre provides educational and health services to all the surrounding village. Basahi is located just on the east of state Highway.

The demographic characteristics of Basahi may be underlined as under :

- (i) Basahi has 1497 households inhabited by 7085 total population comprising 3651 males and 3394 females showing a sex ratio of 930 only .
- (ii) So far as literate level of Basahi village is concerned its total literate persons are 1632 including 937 males and 695 females .
- (iii) Basahi village has total 2055 S.C. population including 1057 males and 998 thus showing a sex ratio of 944.
- (iv) Occupational structure of village Basahi reveals that out of total population 7045, total workers are 1959 and 5086 non- workers .
- (v) Out of the total workers 1959, the main workers were 1579 and only 380 marginal workers .

4. Rural Service Centre Khanjahanpur :

Village No. 598 Khajahanpur is located in the north eastern part of Cheria Bariarpur just on border of Chhorahi Block. It has Sakarbasa (579) in north , Aure (580) in west and Karor (586) in south and Chhorahi Block in the east . It is approximately 4 km east north of State Highway.

Khajahanpur has 2276 households and a total population of 11,069 persons including 5807 males and 5262 females showing a sex ratio of 906. The literacy level of the Block show 5,610 total literate persons including 3304 males and 2304 females . Its total S.C. population stand 2023 including 1057 males and 966 females . It has total 3383 total workers and 7686 total non- workers . Total workers include 2776 main workers (82.05%) and 607 marginal workers (17.95%). Total main workers (2776) include 2237 males and 539 females .

5.4.4 Karor : Village No.

5. Rural Service Centre Siripur : Siripur is located in the middle of Cheria Bariarpur Block approximately three km. from Block headquarter and two km. north of State Highway. Siripur has one + High School, one Post Office, One health centre and it provides service to village No. 583, 585 and 586 and several small village. Siripur has 2,325 no. of households. Total population of Siripur village as per 2011 census is 10,451 persons including 5,523 males and 4,928 females . So far as literacy level is concerned , it has 2707 literate persons including 1545 males and 1162 females . It has 1535 S.C. population including 798 males and 737 females . Among total population 10,451 it has 3467 total workers including 2683 main workers and 784 marginal workers.

Total workers constitute 33.17% of the total population . Total workers (3,467) include 2558 males and 909 females only, whereas main workers (2683) include 2282 males and only 400 females , and marginal workers (784) include 275 males and 509 females . Out of the total population 10,451 total workers are 3467 while non- workers are 6984 which is 33.17% and 66.83% respectively. This means 66.83 are dependent over 33.17% population i.e. approximate 1:2 Ratio .

6. Conclusion :

From the above discussion the following main concluding points may be outlined :

(i) In Begusarai District, Cheria Bariarpur C.D. Block is one of the S.C. dominated Blocks in terms of population and then in Cheria Bariarpur Block, the important rural service centres are Manjhaul (5,643 S.C. population as per 2011 Census), Bikrampur (2,695), Basahi (2,055), Khanjahanpur (2023) and Siripur (1535) respectively, S.C. dominated villages .

(ii) The literacy level of the S.C. families of the above mentioned village are deplorable and that needs important with the efforts and aids by the central government as well as the state government and Panchayati Raj System in the ground level . The helps by NGO's are also cheritable .

(iii) From the abovementioned S.C. dominated villages Manjhaul, Cheria Bariarpur, Siripur, Shahjahanpur, Karor, Parba, Bikrampur and Kumbhi are major rural service centres which provide vital social services like education, postal service, telecommunication , health services, marketing services and so on in the nearby villages . Hence , these service centres may prove entry point for dynamism and growth in the rural areas of Cheria Bariarpur Block of Begusarai District.

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Impact of COVID-19 on IT SECTOR (TCS AND INFOSYS)

*Dr. Rasmeet Kaur Malhi**

The Novel Coronavirus (COVID-19), which originated in Wuhan, China in the end of December 2019 has spread its tentacles around the world, wreaking havoc on all sectors of society, including the information technology industry which has suffered massive financial and human resource losses. India is a global center for information technology enablement services. Companies in the service sector are also likely to be affected directly by the pandemic's control measures, such as extended lockdown and mobility limitations. The presented Research paper is based on the mixed qualitative and quantitative approaches. The data has been taken from both primary and secondary sources through questionnaires particularly from TCS and Infosys, published research papers, different articles and newspapers as mentioned in the paper. Study on the research says that initially IT sector was facing a decline in the economy as a lot of companies and organization were asked to do work from home.

INTRODUCTION

According to the National Association of software and service companies (NASSCOM), India's software and services exports will increase by 8.1percent \$ 147 billion in fiscal year 2020. (Mandavia & Chandrashekhar, 2020)

The sudden growth in Corona cases at the beginning of the year prompted governments and law enforcement agencies in many places, included India, to introduce lockdown. This raised a dual challenge for Indian companies in order to ensure business continuity while ensuring the safety of their own employees and also to maintain safety while dealing with customers. This pandemic created a sense of urgency, as well as the need of technology and life Sciences to cooperate and combine their strengths for the betterment of society.

COVID-19 threw some curveballs this year, but the \$ 191 billion Indian IT sector has shown strength, and 2021 promises more growth opportunities as digital expenditures will rise to meet the challenges of the new normal.

Despite the country's lockdown, the Indian government, which has always relied on technology to provide services to its citizens, has continued to rely on mobile and other technologies to provide people with access to free food, medical care and other essential services. 2020 has been a year of significant change and uncertainty, but technology is no longer viewed as merely an enabler, it has now become much more essential (PTI, 2020)

LITERATURE REVIEW

Vivek Kumar investigates the COVID-19 outbreak and its impact on the global economy and businesses in a variety of sectors worldwide. Although the impact in India is relatively low, as compared to other countries. COVID-19 has a significant impact on the country's business is an economy. Over the last decade, the IT industry has been India's leading industry. Electronics imports from China decreased from 55 percent to 40 percent. According to the National Association of Software Services Companies (NASSCOM), India's software and services exports increased by 8.1% to U.S. \$147 in fiscal year 2020. India's top software importers such as Tata Consultancy Services, Infosys and as HCL technologies have been mostly affected by reduced technological investment from clients in the United States and Europe due to global lockdown. According to his research, customers are expected to reduce IT spending due to uncertain economic conditions. Due to cities and countries lockdown and closure, several Indian businesses have recently had several projects cancellation by clients all over the world. (Kumar, 2020)

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Rohan Chinchwadkar and VinishKathuria studied the post-COVID-19 issues in the Indian IT industry. Since 1980s the IT industry has been a defining feature of Indian growth. The IT sector highly depends on non-home markets for demand and services and it cultivates deep global connections through co-location with clients, which is facilitated by international travel and temporary on-site migration, and it serves as a key mechanism in developing cognitive proximity. This article discusses one such challenge in the context of the IT industry, which may have a long-term impact on the Indian economy. However, the covid-19 pandemic is likely to make international travel and tourism more difficult and expensive for a long time. The paradigm shift creates major barriers for IT firms to sustain cognitive proximity with their customers and can also have a negative effect on global competition. The sector that contributes to the digital economy appears to be in turmoil in short term, but businesses will prosper in the long term as digital projects accelerate and cloud and AutoNation services are embraced. (Chinchwadkar & Kathuria, 2020)

OBJECTIVES

1. To know the impact of covid-19 on IT SECTOR-
 - 1.1 Nationally
 - 1.2 Internationally
2. To know the impact of covid-19 on HUMAN RESOURCE of IT SECTOR.
3. To list out the potential new normal after the pandemic situation.

HYPOTHESIS

H0: There is no significant difference between the difficulty level faced by the employees of TCS and INFOSYS while shifting to online mode entirely.

METHODOLOGY

This research is primarily descriptive in nature. Both primary and secondary sources of data have been used. Data has been collected from the sources like telephonic interviews, questionnaires, newspapers, and websites.

IMPACT OF COVID-19 ON IT SECTOR

Nationally

Due to the sudden rise in Covid cases, the government enforced lockdown in our country. This created dual challenge for Indian IT firms in respect of assurance of business operations for customers as well as safety of their own employees.

IT firms like Wipro, Tech Mahindra and Infosys brought back their employees from abroad and almost overnight, IT companies started work from home. There were some ups and downs but almost 98% of the IT workforce was working from home at the peak of lockdown in India (PTI, 2020)

As the new fiscal year started, Infosys, TCS and Cognizant offered a vigilant outlook. They said that all campus offers would be honoured but pay hikes and promotions were put on hold.

POSITIVES

Unlike the 2008 financial crisis, where technology and the economic crisis were interlinked, 2020 saw technological advancement grow much faster than the economy and business. The correlation between technology and economic downturns has been decoupled. This confirms that technology will be an indispensable part of future growth.

Industries such as healthcare and education are driving digital adoption today. With schools and colleges shut down and hospitals with a vast number of coronavirus-infected individuals, these institutions have adopted technology to help students attend classes via smartphones, and patients get digital consultation for non-emergency ailment.

NEGATIVES

While we cannot deny that technology-driven market models are the path ahead, it is impossible to neglect the other side of the coin. The integration of technologies and business concepts has also resulted in some pitfalls.

For instance, there has also been a significant spike in cyber-attacks incidents like data theft, privacy concerns and many more which demonstrates the need for businesses to improve their IT infrastructure as such risks could have an effect on consumer service and brand reputation.

EXAMPLE

With 2020 being a challenging year, businesses like Infosys and Wipro have closed multi-million and even billion-dollar contracts. TCS recently purchased 100% of the shares of Postbank Systems AG (PBS) from Deutsche Bank AG for one euro, with around 1,500 PBS staff switching to TCS.

Internationally

COVID-19 is having a big impact on the technology market, affecting the availability of raw materials, disrupting the value chain of electronics and generating an inflationary risk for goods. More positively, the disruption prompted remote work to intensify and a rapid focus on assessing and de-risking the end-to-end value chain. Furthermore, possible reductions in carbon emissions may result in a renewed emphasis on sustainable practices. (Sallomi, 2020)

POSITIVES

Artificial intelligence, big data, augmented reality, and virtual reality, among other technologies would boost demand.

In the IT industry, opportunities are developed, such as the need for 5G technology, which helps to provide strong internet connection without buffering and also facilitates remote interactions.

The IT industry's economy is projected to boom from 131 billion to 295 billion in the next five years by 2025. The main reason behind this increase is the rise in demand for sites such as Google Hangouts, Zoom, Microsoft teams for apps and social media

Staff was eligible to take advantage of the tax related expenses because of working from home. Employees felt more energized and spent more time with their families, so that's why they don't take more no of leaves and more importantly when whole world was facing financial crisis only IT sector was able to balance its finances because of work from home.

EXAMPLE

In response to the challenges of ensuring smooth connectivity on the ground, a recent increase in its technological services, which include video conferencing, artificial intelligence, and wireless network coverage across Asia Pacific.

NEGATIVES

According to international data corporation (IDC), global IT sector investment is predicted to decrease by 3 - 4% by the end of 2020. (Oberoi & Singh)

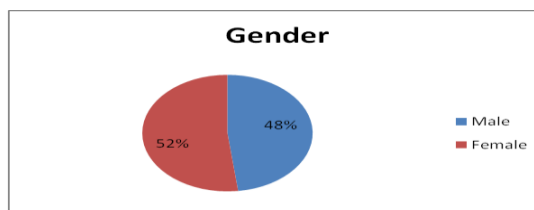
IT industry is facing a decline in the economy, as a lot of businesses are forced to ask their workers to work from home (remotely) holding in the account of the public health concerns. There is a significant lack of opportunity for many businesses that have foreign dealers because of this.

Conference calls were postponed, which might have been a successful opportunity for many businesses to expand their business relationships. Due to the cancellation of these major tech conferences, there is an estimated loss of US\$ 1 Billion.

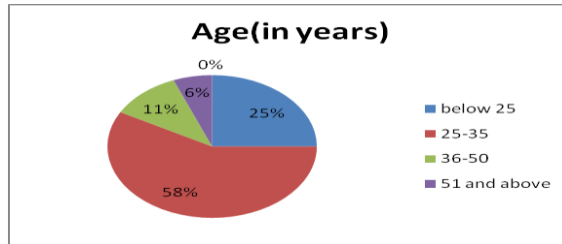
EXAMPLE

Owing to the lack of availability of iPhones in the industry, Apple Inc. is expected to have at least a 10 percent decline in its shares. IT is supposed that the parts needed to create the iPhones come from China, and it is facing a big lockdown. (Impacts of COVID-19 on the Information Technology (IT) industry , 2020)

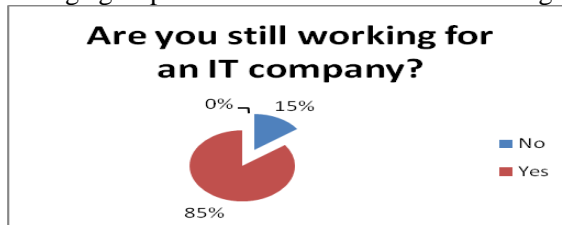
Impact of Covid-19 on Hr of It Sector Graphical Representation And Interpretation



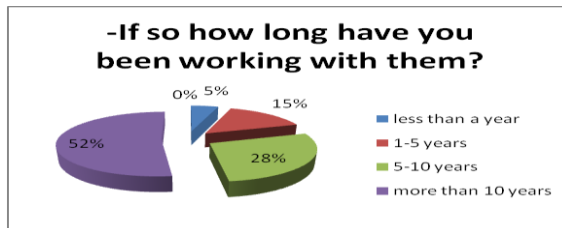
52% of the respondents are females and 48% of them are males.



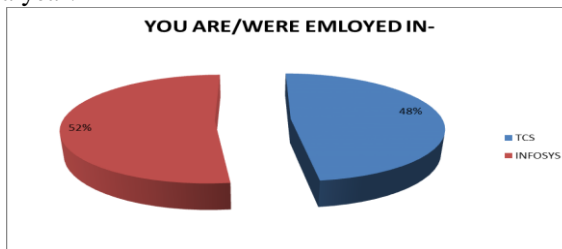
25% of the respondents come under the age group of below 25, 11% come under the age group of 36-50, 58% come under the age group of 25-35 and rest 6% are of the age group of 51 and above.



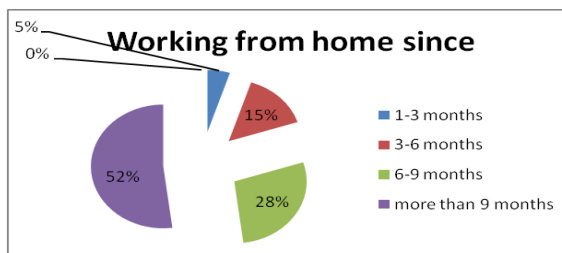
85% of the people are still working for an IT Company whereas 15% of them are not currently employed in an IT sector.



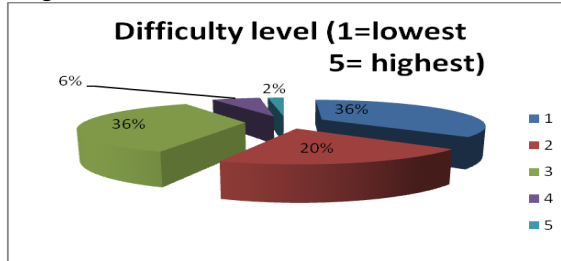
52% people have been working with an IT Company since more than 10 years. 28% of them are working from last 5-10 years. 15% of them are working from last 1-5 years and 5% of them are working from less than a year.



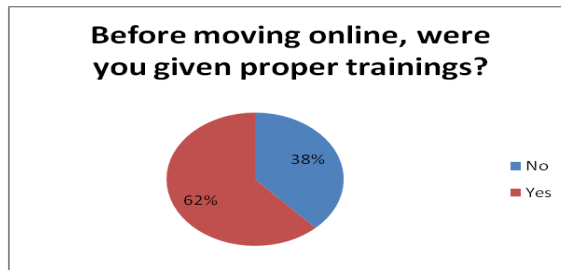
48% of the respondents are employed in TCS (Tata Consultancy Services) and 52% are employed in Infosys.



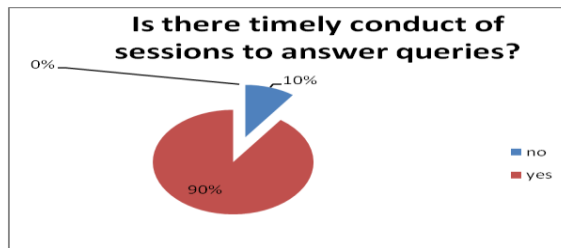
52% of people have been working from home since more than 9 months. 28% of the people are working from home from for 6-9 months. 15% of people have been working from last 3-6 months and 5% of them are working from home for 1-3 months.



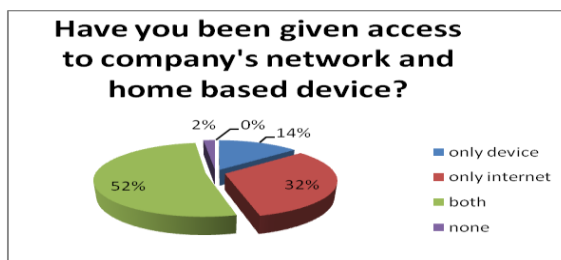
When asked about the difficulty level faced by the employees on the scale of 1-5 (1 being the lowest, 5 being the highest) while shifting towards online mode entirely, 36% of the respondents chose the scale to the lowest that is one. 20% of them chose the difficulty level as 2. 36% of the respondents chose the difficulty level as 3. 6% of people choose the scale at 4 and only 2% people choose the difficulty level as 5.



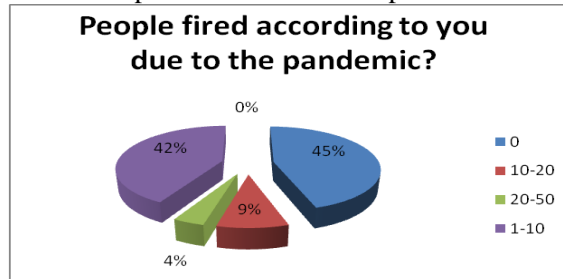
Before moving online 62% of people were given proper training while 38% of people were not trained properly.



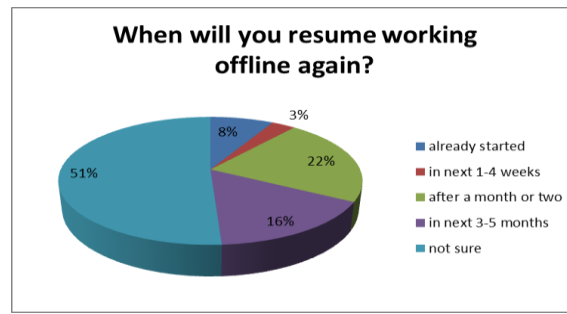
90% of people said that there was timely conduct of session to answer their queries whereas 10% of the people said there wasn't particular sessions to answer their queries.



14% of the respondents were provided with company’s device .32% of the respondents were given company’s internet connection. 52% respondents were provided with both company’s device and internet connection whereas 2% respondents were neither provided with internet nor device

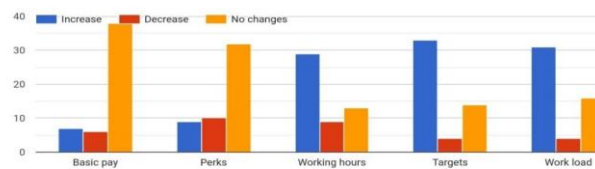


45 % of the respondents said that no one was fired from job due to pandemic in IT sector. 42% of the respondents said that 1 to 10 of their colleagues and relatives were fired. 9% of the respondents said that 10 to 20 people were fired and only 4% of the respondents said that 20 to 50 people were fired.



51% of respondents are not sure that they will resume work offline again. 22% of respondents will resume their work offline again after a month or two. 16% of respondents will resume their work offline again in next 3-5 months. 8% of respondents have already working started offline and 3% of respondents will resume their work again in next 1-4 weeks.

Did you face some kind of modifications in the following because of the pandemic?



There has been no change in basic pay and perks whereas there is increase in working hours, targets and work load due to pandemic

DATA ANALYSIS

T- Test

Group Statistics											
2. You are/were employed in which of the following firms-		N	Mean	Std. Deviation	Std. Error Mean						
6. On a scale of 5 how would you rate the difficulty level faced by you while switching to online mode entirely? (1 being the lowest, 5 being the highest) [Difficulty level]		TCS	48	1.88	1.196	0.173					
		INFOSYS	52	2.46	0.828	0.115					
Independent Samples Test											
Levene's Test for Equality of Variances t-test for Equality of Means											
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
6. On a scale of 5 how would you rate the difficulty level faced by you while switching to online mode entirely? (1 being the lowest, 5 being the highest) [Difficulty level]	Equal variances assumed	8.916	0.004	-2.870	98	0.005	-0.587	0.204	-0.992	-0.181	
	Equal variances not assumed			-2.829	82.805	0.006	-0.587	0.207	-0.999	-0.174	

RESULTS

An independent sample t test was conducted to check if there was significant difference between the difficulty level faced by the employees of TCS and INFOSYS while shifting to online working mode.

There was statistically significant difference between the mean difficulty level faced by employees of TCS (n=48, M=1.88, SD=1.19) and INFOSYS (n=52, M=2.46, SD=0.82), $t(83) = -2.9$, 'p' = 0.006 while shifting to online mode entirely. Since 'p' < 0.05, therefore the variances between the two variables are not assumed to be equal and hence we will use the 'equal variances not assumed'. The 95% confidence interval was – 0.99 to – 0.17. So will reject the null of Levene's test and conclude that there was significant difference between the employees of TCS and INFOSYS on the basis of difficulty level faced while shifting to online mode entirely.

THE NEW NORMAL

The Covid -19 epidemic strained above all to engage in the largest remotely running practice in the world. We're learning to accept and deal with this unpleasant situation like economic crisis, health issues and the financial problem of the epidemic as it is happening out of control all over the world.

Work from home is not only a fantasy, but a reality that is feasible. Homes turned into workplace. They welcomed the adaptability with more efficiency that is provided by remote work. Advancement of technology and change in work style is the need of the hour. HR Department should arise with the plan of action that will maintain the continuity of the business with workforce's wellbeing and satisfaction. (Life after covid: The new normal, 2020)

People are likely to respond to their unemployment and by not meeting their financial demand by not taking and expending but instead save them.

HR should ensure that its employees should be safe and are working in healthy environment. This is a growth that increases the purpose of HR, not only by recruiting the employees and hiring them but also a storehouse of best method and vision.

CONCLUSION

The outbreak of this deadly coronavirus epidemic has had a major impact on almost every industry. However, IT sector managed to strike a balance between resources and job security. The data has been collected from the employees of TCS and INFOSYS through structured questionnaire and the data was analyzed using SPSS software. According to our study 85% of the total respondents are still working with an IT company out of which 48% employees are in TCS and 52% are employed in INFOSYS. 90% of the respondents concluded that there is timely

conduct of sections to answer queries and most of them were provided with company's device and net installations to operate from home.

This research indicates that there is significant relationship between employees of TCS and INFOSYS on the basis of difficulty level faced by them while shifting to online mode entirely.

And talking about the new normal; advancement in technology and prioritizing the new age data skills specifically in the areas of block chain, AI, security, AR/VR,IOT and data analytics is need of the hour.

Companies have already started taking care of every necessity to ensure the continuity of work. Work from home is no longer an option, but rather a part of work traditions.

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Relevance of Major Provisions For Quality School Education in National Education Policy-2020

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Education is the process by which a person becomes able to develop their inherent capabilities and achieve to self- realization stage in their life. It is also cater the various needs of a person, society and nation as well. Due to change in time the needs of various stakeholders change according to diverse demands of time. In these circumstances it becomes necessary to change Educational System according to changing needs of a person, society and nation. The National Education Policy-2020 is an effort to cater diverse need of various stakeholders of Educational System. There are lots of changes in the school education incorporated by this policy and in this continuation our existing structure of school education is going to change. In this paper the researcher has attempt to discuss the various structural change in present school education and their relevance for better school education.

Keywords : National Education Policy-2020, School Education, Re-structuring School Educational System, Various provisions for School Education and Relevance of Structural change in School Education.

Introduction: There are various kinds of organism in the nature but human beings are assume most powerful and intelligent organism among them because they have a special ability to adjust in diverse situation due to their knowledge, skills and experiences. Each and every Individual has some inherent and inborn capacity which ensures their special contribution to Societal and National development but lack of proper and responsive environment the inherent capability of an Individual rest underdeveloped. It is responsibility of the Society and Nation to provide such environment

where the person becomes able to develop their inborn capability in holistic way. There are two types of such environment first one is informal and second one is formal environment. The informal environment or informal education is unorganized and accidental which starts from birth and carry on till end of the life. The systematic and organized environment is called formal education which attempt to develop the inherent capability of a person in a particular duration of time. In such system the government attempt to facilitate their citizens by providing those facilities which are necessary for all round development of inherent capacity of a child. It is also necessary for a Country to develop a healthy and responsive environment according to diverse needs of learners. There are various needs of a person, society and nation which expected to fulfil by educational system. The person wants to develop knowledge, skill and attitude which are necessary to adjust in personal, family, social, vocational and national life. Society wants to transfer their culture and tradition to next generation like this a nation wants to develop good citizens which shows faith and devotion to national symbols and constitutions. The educational system of any country tries to cater these expectations. So that educational system plays a vital role in the life a person, society and nation as well. To make educational system responsive and appropriate to diverse needs of various stakeholders the nation tries to improve and reform their educational system time to time. After independence various commissions, committees and policies has been set up by government to improve educational system in the light of diverse needs of its stakeholders.

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Recently Government of India announced its New Education Policy which is based on the recommendations by an expert committee headed by Dr. Kasturirangan, Former Chairman of the Indian Space Research Organization (ISRO). Various innovations and predicted implications of National Education Policy 2020 on the Indian Educational System along with its merits are discussed. There are various changes that occur in the area of school system. This paper tries to discuss various provisions and changes announced for the improvement of school education and compare them with the currently adopted system and also discuss the relevance of these provisions for the transformation of present school education.

Objectives of the Study: The National Education Policy-2020 has lots of initiatives and provisions to improve the quality of the School Education in India. The objectives of this study are as follows:

1. To highlight the present status and limitations of School Education of India.
2. To discuss the various initiatives and provisions made by National Education Policy-2020 for School Education.
3. To discuss the relevance of various provisions made by National Education Policy for improvement of School Education.

Methodology of the Study: This paper is based on conceptual discussion on provisions of the National Educational Policy-2020 for improvement in present School Education with focus group. The researcher has collected factual data and relevant information regarding various provisions and initiatives related to school education from final draft of National Education Policy-2020.

Present Structure of School Education in India: Present structure of Educational System (10+2+3) was adapted on the recommendations of Education Commission headed by Dr. D. S. Kothari (1964-66) by National Education Policy-1986. According to Vinothkumar (2018) 'The school education is classified as primary education from standard one to five, elementary education from standard six to eight, secondary education from standard nine to ten, higher secondary education from standard eleven to twelve.' There are three tiers in present educational system namely Elementary, Secondary and Higher Education. In the 10+2 school system there are 10 years of school education and 2 years of higher secondary education. The 12 years of Education further divided into four subdivisions namely 5 years of primary education, 3 years of upper primary education and 2 years of secondary education and after these 2 years of higher secondary education. The higher secondary education is work as connecting link between school education and higher education. It also provides foundation for further or future education.

Major Issues and Challenges of Present School Education of India: The present school education of India is facing lots of problems. According to Tiwari and Yadav (2020) the major problems at elementary level are shortage of schools, shortage of teachers, reduction in infrastructure, poverty and child labour and reduction in the quality of education in rural areas and secondary level are lack of schools, lack of teachers, lack of course choices, high rate of drop outs after elementary education and suicidal tendencies among students. Athawar (2015) has pointed out some points to take into consideration to improve the Education system and society which are; Shift from imparting theoretical knowledge to practical knowledge, Foster team spirit through various programs, Bring awareness about culture and religion and social thinkers, Focus equally on mental, physical and spiritual growth, Reduce class strengths so that teachers can give proper attendance to each and every kid and Children should be comfortable enough to share their fears and concerns. Gulcihan and Pinar (2014) also reported

that “Teachers need to be given both pre-service and in-service training about subjects such as instructional adaptations, arranging teaching environments, collaboration and educational support services, IEP preparation-monitoring-assessment, and classroom management with respect to students with special needs.” On the basis of these observations we can conclude that the major issues and challenges are as follows:

- ❖ High dropout rates at elementary and secondary stages.
- ❖ Lack of schools, infrastructures and trained teachers.
- ❖ Lack of political commitment for school education.
- ❖ Lack of social and community awareness towards education.
- ❖ Decreasing Quality of School Education.
- ❖ Decreasing Credibility of School Education and Teachers.
- ❖ Discrimination among diverse learners in the Schools.
- ❖ Lack of Monitoring and Good Governance at School level.

Major Provisions for School Education: There are various provisions suggested by National Education Policy-2020 for betterment of current School Education of India. Some major provisions of them are as follows:

1. Provisions for Universal Access in School Education: The major provisions regarding universal access to school education are as follows:

- ❖ Ensuring 100% enrolment and retention by 2030 with the help of Samagra Shiksha.
- ❖ Empowering Schools by providing effective and sufficient infrastructure.
- ❖ Re-establishing the credibility of School Education and Teachers.
- ❖ Providing equitable and quality School Education to all.
- ❖ Strengthening the Open Learning and Open Schooling.
- ❖ Increasing community participation by using local resources and talents in teaching support and guidance at school level.
- ❖ Setting norms and standards for school teachers for ensuring quality of school education.
- ❖ Restructuring the governance and monitoring system at school level.
- ❖ Ensuring academic achievement of learners by NAS and SAS.
- ❖ Re-framing the School Curriculum for Holistic development.

2. Provision for Curriculum and Pedagogy: The major provisions regarding Curriculum and Pedagogy for school education are as follows:

- ❖ Restructuring School Curriculum according to 5+3+3+4 pattern.
- ❖ Developing School Curriculum for holistic development of learners.
- ❖ Reducing curriculum content to enhance essential learning and critical thinking.
- ❖ Promoting experiential learning and innovative pedagogy.
- ❖ Empowering students through flexibility in course choices.
- ❖ Promoting multilingualism and power of language by using three language formulas.
- ❖ Ensuring home language instruction up to grade 8 if possible.
- ❖ Ensuring Curricular Integration of Essential Subjects, Skills and Capacities by promoting scientific temper and evidence-based thinking.
- ❖ Developing National Curriculum Framework for School Education (NCFSE) by 2020-21.
- ❖ Developing National Textbooks with Local Content and flavour through NCERT and SCERTs.

3. Provision for Holistic Assessment and Evaluation: The major provisions regarding holistic assessment and evaluation in school education are as follows:

- ❖ Holistic, 360 degree and multidimensional Assessment reflecting Cognitive, Affective and Psychomotor domain of personality.
 - ❖ National Testing Centre, PARAKH (Performance Assessment Review and Knowledge for Holistic Development).
 - ❖ Board exams for grade 10 and 12 will be continued.
 - ❖ Assessment will start from grade 3 and all the stakeholders will be participate in Assessment process.
- 4. Provision for Effective and Competent Teacher :**Themajor provisions regarding effective and competent school teachers are as follows:
- ❖ SCERT and NCERT will develop the NCFTE- 2021.
 - ❖ Qualification of Aganwadi workers will be 10+2 and existing Workers will be trained.
 - ❖ Continuous Professional Development of Teachers will be ensured.
 - ❖ National Professional Standard for Teachers will be established.
 - ❖ NCTE will change in Professional Setting body for Teachers.
 - ❖ Four years Integrated Teacher Education program will be start.
 - ❖ Availability of Special Educators will be ensured for the diverse Learners.
 - ❖ TET will be compulsory for all School Teachers Recruitment.
 - ❖ The service environment and culture of School will be change in to responsive and pleasant conditions.
 - ❖ Promotion of School Teachers will be made on basis of their Academic performance not experience.
 - ❖ Ensuringadequate number of Teachers at all levels of School and all subjects.
- 5. Provision for Quality School Education:**Themajor provisions regarding quality school education are as follows:
- ❖ State School Standard Authority (SSSA) will be established.
 - ❖ Quality of School Education will be Assured by School Quality Assessment and Accreditation Framework (SQAAF)
 - ❖ National and State Level Achievement Survey will be ensured the Learning levels of School Students.
 - ❖ All functionaries will be responsible to ensure that this development, performance and accountability system in run with high integrity.
- 6. Provision for Good and Effective Governance:**Themajor provisions regarding good and effective governance for school education are as follows:
- ❖ Department of School Education will be responsible for overall monitoring and policy making at State Level.
 - ❖ Directorate of School Education (DSE), District Education Officer (DEO) and Block Education Officer (BEO) will be responsible for implementing policy regarding Educational Operations and Provision.
 - ❖ SMC and CSMC will be work at Village level School Education.
- 7. Provision for Equitable and Inclusive Education for all Learners:**Themajor provisions regarding equitable and inclusive school education are as follows:
- ❖ Socio- Economically Disadvantaged Groups (SEDG) such as SC, ST, OBC, Minorities, Female, CWSN etc. will be facilitate.
 - ❖ Special Education Zone will be identified as Educationally Backward Regions.
 - ❖ Government of India will constitute Gender- Inclusion Funds for Female & Transgender and Inclusion Fund for SEDG.
 - ❖ Providing Special Incentive and Scholarship for SEDG and High Achievers.

- ❖ The School Curriculum will include human values, empathy, tolerance, human rights, gender equality, non- violence, global citizenship, inclusion and equity.
 - ❖ Developing clear, safe and efficient mechanisms for checking drug abuse, various forms of discrimination and harassment including violence.
 - ❖ Provide barrier free and responsive environment for diverse learners.
- 8. Other Provisions for School Education:** The major other provisions regarding school education are as follows:
- ❖ Existing Sarva Shiksha Abhiyan will be replaced by Samagra Shiksha Scheme.
 - ❖ Compulsory Education up to Secondary Level will be ensured by enhancing the jurisdiction of RTE.
 - ❖ Education will be Public Service and Commercialization of Education will be checked by regulating the School fee Structure.
 - ❖ The School Climate and Culture will be responsive to diverse learners and their various needs.

Structural change in School Education:

Existing 10+2 structure of school education system will be re-structured by 5+3+3+4 school education system. There will be four stages in school education namely foundational, preparatory, middle and secondary stage. According to latest guideline about implementation of National Policy on Education-2020 decided by Honourable Education Minister, Government of India, Dr. Ramesh Pokhriyal Nishank the school education will re- design as following manner.

1. **Five years of Foundational Stage:** This will consist following grades of schooling.

- Nursery.....at 4 years of age
- Junior KG.....at 5 years of age
- Senior KG.....at 6 years of age
- 1st standard.....at 7 years of age
- 2nd standard.....at 8 years of age

The Foundational Stage will consist of five years of flexible, multi-faceted, multi-level, play-based, activity-based, and inquiry-based learning, comprising of alphabets, languages, numbers, counting, colours, shapes, indoor and outdoor play, puzzles and logical thinking, problem-solving, drawing, painting and other visual art, craft, drama and puppetry, music and movement. It also includes a focus on developing social capacities, sensitivity, good behaviour, courtesy, ethics, personal and public cleanliness, teamwork, and cooperation. The overall aim of ECCE will be to attain optimal outcomes in the domains of physical and motor development, cognitive development, socio-emotional-ethical development, cultural/artistic development, and the development of communication and early language, literacy, and numeracy.

2. **Three years of Preparatory Stage:** This will consist following grades of schooling.

- 3rd standard.....at 9 years of age
- 4th standard.....at 10 years of age
- 5th standard.....at 11 years of age

The Preparatory Stage will comprise three years of education building on the play, discovery, and activity-based pedagogical and curricular style of the Foundational Stage, and will also begin to incorporate some light text books as well as aspects of more formal but interactive classroom learning, in order to lay a solid groundwork across subjects, including reading, writing, speaking, physical education, art, languages, science, and mathematics.

3. **Three years of Middle Stage:** This will consist following grades of schooling.

- 6th standard.....at 12 years of age
- 7th standard.....at 13 years of age
- 8th standard.....at 14 years of age

The Middle Stage will comprise three years of education, building on the pedagogical and curricular style of the Preparatory Stage, but with the introduction of subject teachers for learning and discussion of the more abstract concepts in each subject that students will be ready for at this stage across the sciences, mathematics, arts, social sciences, and humanities. Experiential learning within each subject, and explorations of relations among different subjects, will be encouraged and emphasized despite the introduction of more specialized subjects and subject teachers.

4. **Four years of Secondary Stage:** This will consist following grades of schooling.

- 9th standard.....at 15 years of age
- SSC standard.....at 16 years of age
- FYJC standard.....at 17 years of age
- SYJC standard.....at 18 years of age

The Secondary Stage will comprise of four years of multidisciplinary study, building on the subject-oriented pedagogical and curricular style of the Middle Stage, but with greater depth, greater critical thinking, greater attention to life aspirations, and greater flexibility and student choice of subjects. In particular students would continue to have the option of exiting after Grade 10 and re-entering in the next phase to pursue vocational or any other courses available in Grades 11-12, including at a more specialized school, if so desired. There will be four semester in secondary level of school education and board exam will conduct at final year of secondary education. There will be no any board exam at 10th grade of schooling. A national Educational Scientific Forum (NESF) will be started.

Relevance of New School Education Structure Adapted by National Policy on Education-2020: As we know that educational system of any country fulfils the various expectations of a person, society and nation and the needs of these stakeholders change due to time and socio-cultural-political-economic and global forces. The present education policy has come after a long time interval. Hence the expectation of various stakeholders from this policy has increase accordingly. The present Indian Educational System is passing various challenges and problems. The school education is a part of Indian Educational System so that it is also facing these issues and challenges. School education is foundational stone of Indian Education System because it provide a base for further education and

And provide responsive environment to develop inherent capabilities of a child which ensure their unique adjustment with themselves and others. There are various diversions in terms of vision, mission, goals, ethos and mode of learning of school education which waited for paradigm shift in present educational system. The various provisions of National Education Policy-2020 may be play a vital role to improve and reform school education in accordance with various expectations of its stakeholders. According to Jaya Chetwani (2020) 'National education policy to meet the changing dynamics of the population's requirements with regards to quality education, innovation and research, aiming to make India a knowledge superpower by equipping its students with the necessary skills and knowledge this new National education policy becomes successful this will be a great boon to Indian education system.' The relevance of major steps taken by National Education Policy-2020 regarding inclusive, compulsory and quality school education may be convey with the help of following points:

- ❖ The provisions of National Education Policy-2020 will be helpful for developing an effective school education system which will be able to cater the various social, national and global needs.
- ❖ The provisions of National Education Policy-2020 will help to develop a child as a global citizen which will be a drastic change in our vision of education and demand of global and social change.
- ❖ The National Education Policy-2020 going to increase the coverage of Right to Education act which will be helpful in providing equitable, inclusive, quality, free and compulsory quality school education to all children of certain age group.
- ❖ The National Education Policy-2020 assume that more than 85% of child brain develop prior to age of 6 so that the Early Childhood Care and Education (ECCE) becomes most crucial for the cognitive and physical development of a child. Hence ECCE should be empowered and facilitated to all children.
- ❖ The National Education Policy-2020 going to redesign the present structure of school education which will provide an effective and responsive educational environment to all children where they can develop their inherent capabilities in full swing.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in achieving goal-4 of Sustainable Development Goal which is Inclusive and Quality Education to all.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in making educational measurement and evaluation comprehensive and multidimensional which is necessary for all round development of learner's personality.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in increasing credibility of educational institutions and teachers which is essential for making school attractive for children.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in promoting responsible and transparent monitoring and administrative system of school education.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in promoting and developing our Indian Society in accordance with Indian tradition and ethos.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in promoting flexible and relevant curriculum which will be able to cater the local and global needs.
- ❖ The provisions of National Education Policy-2020 regarding school education are in accordance with various stages of human personality development which is necessary for all round development of a child.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in professional development of teachers which is most important for promoting effective learning environment in schools.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in maintaining quality of school education and promoting vocational capability of students.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in decreasing the rate of dropouts and educational wastage.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in promoting employment among youth and developing self-dependent Indians.

- ❖ The provisions of National Education Policy-2020 regarding school education will help in promoting contributions of citizens in social and economic development of Nation and World.
- ❖ The provisions of National Education Policy-2020 regarding school education will help in making India as knowledge super power.

Conclusion: In the present emerging educational scenario it became most important that our ongoing educational system must be change in accordance with changing social, cultural, economic, political and global perspectives. The National Education Policy-2020 is an effort in this regard. The policy makers have study the various issues and challenges of current educational system and match it with various expectations of Individuals, Society, Nation and World from educational system. The Sustainable Development Goal also has pay attention to the equitable and quality school education to all citizens. The present policy on education has various provisions for equitable and quality school education which will develop an effective and responsive learning environment where all the children have opportunity to develop their inherent capability and be a productive and responsible global citizen. No doubt the provisions of policy on education are so good but the future of present education will depends upon the implication of those provisions in effective manner. If it will be success in implementing those provisions in effectively then our future educational system can be able to cater all the expectations of its various stakeholders.

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Synthesis of 1-phenylethanol by fungal mycelia of *Lenzitesbetulina* MTCC-1183

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Dr. Vinod Kumar Yadav **

Abstract:

The synthesis of 1-phenylethanol from ethylbenzene using fungal mycelia of *Lenzitesbetulina* MTCC-1183 has reported here. We have stabilized one standard methodology for the biotransformation of methylbenzene to 1-phenylethanol with 67% yield at 25^oC temperature. The mycelia also transform methylbenzene is converted to benzylalcohol in 98% yield. Thus the mycelia of *Lenzitesbetulina* MTCC-1183 hydroxylate at least methylbenzene and ethylbenzene at the benzylic positions hydroxylation of which are not convenient by chemical routes. This method is eco-friendly for environment.

Key words: Biocatalyst, *Aspergillus flavus*, benzylic hydroxylation, (R)-1-phenylethanol, (R)-1-phenylpropanol.

Introduction:

Oxygenases (1, 2) are a group of oxidoreductases enzymes which introduce oxygen atom/atoms in organic and inorganic molecules. These enzymes can be divided into two broad classes – mono-oxygenases (E. C. No. 1.13.12.....) and dioxygenases (E.C.No.1.13.11.....). Mono-oxygenases incorporate one oxygen atom from molecular oxygen into the substrate, the other is reduced at the expense of a donor to form water (3, 4, 5). Dioxygenases (6) simultaneously incorporate both oxygen atoms of oxygen molecule in to the substrate. Regio and stereo selective addition of oxygen atoms at a non-activated carbon bond by a pure chemical procedure is difficult (7). Biotransformation systems are often used for this purpose in organic synthesis (8). A huge class of mushroom flies have been accounted for to be drawn in towards 1-phenylethanol in field tests (9). In this manner optional alcohols go about as pheromones too. The substance techniques for their union are not helpful and enantiomeric abundances are by and large low (10). One the otherhand, biocatalytic techniques are advantageous and enantiomeric abundance are high. We have developed a potentially new methodology for the microbial transformation which helpful in industrial catalyst synthesis of chiral alcohols. In this manuscript we have reported a new fungal strain namely *Lenzitesbetulina* MTCC-1183 which have capable biotransformation of methyl benzene and ethylbenzene to benzoic acid and 1-phenylethanol with 97% and 67% yield, respectively.

Materials and Methods:

Chemicals: Methylbenzene, Ethylbenzene, 1-phenylethanol and (R)-1-phenylpropanol were from E. Merck (India) Ltd., Mumbai. All other chemicals were either from s.d. fine-chem Ltd., Mumbai or from Qualigens Chemicals, Mumbai.

Fungal strains: The fungal strain *Lenzitesbetulina* MTCC-1183 was procured from the MTCC Centre and Gene Bank Institute of Microbial Technology, Chandigarh and was maintained on Bennett's agar medium [9], consisting of 1% (w/v) glucose, 0.5% peptone, 0.2% yeast extract, 0.2% Ehlrich's beef extract and 1.5% agar in tap water.

Preparation of Mycelia

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The fungal strain was cultivated in 100 ml of BM1 (Basal medium) containing 1% (v/v) ethylmethylketone in a 250 ml Erlenmeyer flask at 30°C on a rotary shaker at 150 rpm for three days. The culture medium BM1 contained per liter of deionised water, 10g of NaNO₃, 2g of NH₄Cl, 2g of KH₂PO₄, 3g of K₂HPO₄, 2g of NaCl, 0.2 g of MgSO₄·7H₂O, 0.5 g of yeast extract and 2 mL of metal solution pH 7.0. The metal mixture consisted of per 100 ml of deionized water, 400.0 mg of MnCl₂·2H₂O, 350.0 mg of FeCl₂·4H₂O, 200.0 mg of ZnCl₂, 20.0 mg of CoCl₂, 20.0 mg of CuCl₂·H₂O, 10.0 mg of NaMoO₄·2H₂O, 10.0 mg of Na₂B₄O₇·10H₂O, and 2.0 ml of concentrated HCl. The mycelia were collected by filtration on ordinary filter paper, washed twice with 50 ml of 25 mM potassium phosphate buffer (KPB) pH 7.0 and were used fresh.

Reactions suspend

The Biotransformation reaction was performed using the method reported by Uzura et al. [9]. Wet mycelia 0.5g was suspended in 2 ml of 25 mM KPB in 17 X 150 mm test -tube and 200 µmol of ethylbenzene (21µl) was added. The test tube were closed with stoppers and incubated at 30°C on reciprocal shaker at 200 rpm. After 24 hrs, the reaction mixture was acidified by adding of 0.2 ml of 6N HCl and extracted with 2 ml of n-hexane. The extract was analyzed for (R)-1-phenylethanol by Waters HPLC Model 600E using Spherisorb, C₁₈, 5µV, 4.5mm X 250mm column and methanol water solvent (50/50 v/v) at a flow rate of 1 ml/min. 20µl of the extracted product was injected and detection was made using UV detector model 2487 at 254 nm. For the biotransformation of methylbenzene and propylbenzene, similar procedures were adopted. The identity of the biotransformation product 1-phenylethanol was determined by IR, ¹H and ¹³C NMR and mass spectrometry.

Results and Discussion:

Biotransformation of methylbenzene:

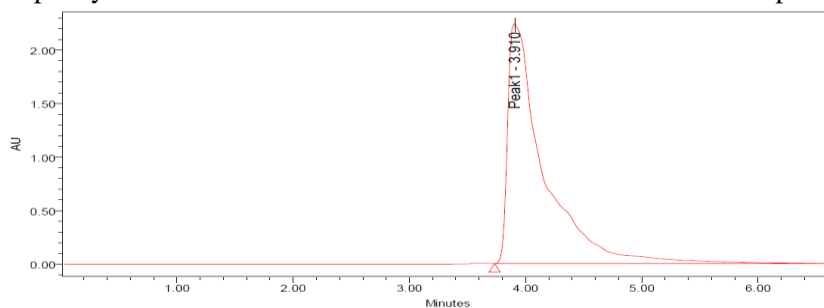
The bio transformed product was confirmed by HPLC analysis on the basis of retention time of standard compound comparison with product and starting material. The peak of methylbenzene, standard benzaldehyde and product were obtained at 3.910 minutes, 2.924 minutes and 2.972 minutes, respectively. Yield was obtained 98%. The HPLC data have been given in figure 1. No any peak was present at the peak of standard methylbenzene in HPLC analysis of product, so this indicates conversion was 100%. But one peak was obtained at 2.79 minutes with 2% yield, this may be impurity.

¹H NMR (400 MHz, CHLOROFORM-D) δ=7.64 (t, 2H Ar) δ=7.89 (d, 2H Ar) δ=7.73 (t, 1H Ar) δ=9.88 (s, 1H CHO), ¹³C-NMR (101 MHz, CHLOROFORM-D) δ=191.0, 136.9, 129.9, 129.2, 134.5; Mass 106.04 (M+1).

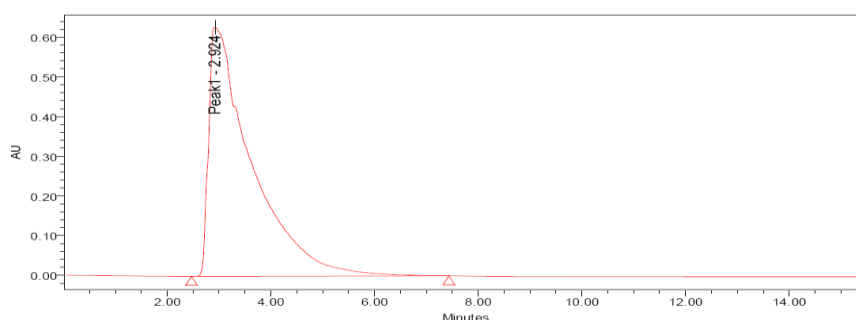
Biotransformation products of ethylbenzene:

The results of HPLC analysis of the starting material ethylbenzene, biotransformation products of ethylbenzene and standard sample of (R)-1-phenylethanol are shown in figure 2 (a), (b) and (c) respectively. The starting material ethylbenzene was eluted with retention 3.4 minutes [figure 2 (a)] and no peak corresponding to this retention time was present in the chromatogram of the biotransformation products [figure 2 (b)] indicating that all the ethylbenzene has been converted to the products. The chromatogram of the biotransformation

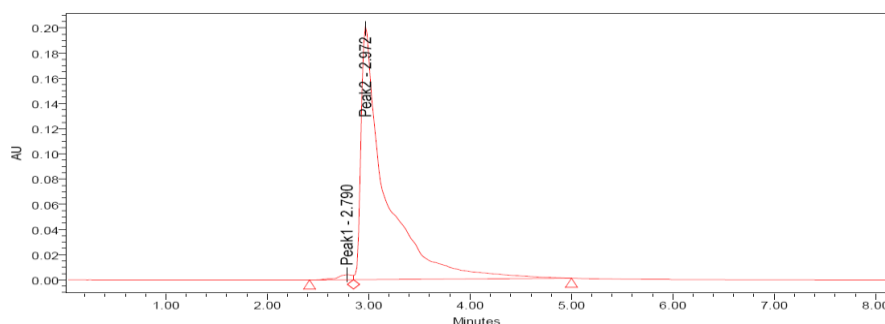
products [figure 4.3.1 (b)] contained two peaks: one due to 1-phenylethanol with retention time 6.0 minutes having peak area 67% and the other due to phenylacetone with retention time 7.5 minutes having peak area 33%. The chromatogram of the biotransformation products figure 2 (b) was similar to the chromatogram of the standard sample of (R)-1-phenylethanol figure 2 (c)] in which 1-phenylethanol was eluted with retention time 6.0 minutes with peak area 71% and phenylacetone was eluted with retention time 7.9 minutes with peak area 29%.



A. Standard Methylbenzene



B. Standard Benzaldehyde



C. Biotransformation product

Since even the pure (R)-1-phenylethanol contains 29% phenylacetone, the biotransformation product was 1-phenylethanol some of which got converted to phenylacetone. $^1\text{H-NMR}$ (400 MHz, CHLOROFORM-D) $\delta=7.38$ (s, 5H Ar) $\delta=4.68$ (m, 1H) $\delta=3.68$ (s, 1H, OH) $\delta=1.54$ (q, 3H); $^{13}\text{C-NMR}$ (101 MHz, CHLOROFORM-D) $\delta=127.9$, 128.9, 129.1, 70.0, 23.2; Mass 122.08 (M+1).

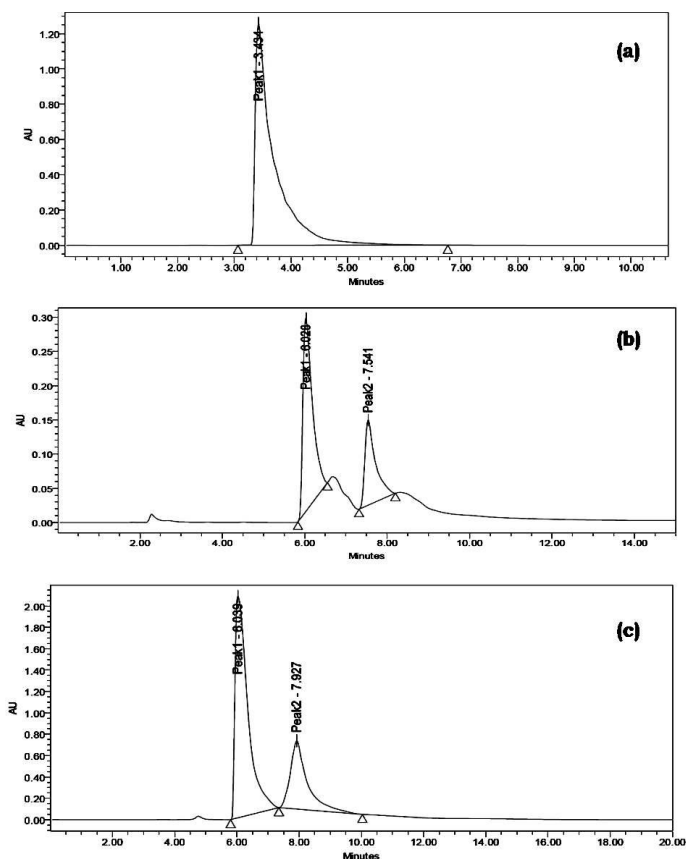


Figure-2 HPLC data

Conclusions:

In the conclusion we have reported the biotransformation of methylbenzene and ethylbenzene to benzaldehyde and 1-phenylethanol with yield 98% and 67%, respectively, using mycelia of *Lenzitesbetulina* MTCC-1183. We have stabilized one standard methodology for the biotransformation. The catalytic conversion is very expensive and toxic for environment and also for researcher health. So this method is very useful in synthetic chemistry.

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A Critical Appraisal of Indian Police in the Context of Institutional Accountability and Functional Autonomy

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Police are considered one of the most important organs of state executive in Indian democracy that frequently influence human life and behaviors. It is not only responsible for maintaining public order, but by controlling and preventing crimes in the country, the police create smooth atmospheres to ensure the rule of law prevails. The police and the responsibility of maintaining law & order are given under the state's jurisdictions by the Indian constitution; however, the central government roles can not be overruled where the larger implications of public order are involved in any part of the country. The current police system in India has its root in the colonial period when for the first time, the police act-1861 was drafted aftermath of the sepoy mutiny of 1857. There was a long struggle against the exploitative and brutal behavior of the police during India's freedom struggle, and many freedom fighters were the victim of police brutality; however, the same police model was adopted without required amendments after Indian Independence.

The police act-1861 was brought to consolidate British colonial rule over India further. Therefore, it was an attempt to militarize the police force to suppress dissent and agitating voices by violent means. Therefore, Since its establishment in 1885, the Indian national congress opposed police brutality and demanded accountable policing since its members were the main victims of the police violence because of their *Dharna & agitations* and standoff with the police. (Arnold 1988: 28-30) However, despite massive opposition and various protest against the Police brutalities and tyranny, an independent India led by the same Congress party adopted democratic polity with autocratic policing, which is still continue without any major changes. As a newly independent country, India made an excellent constitution as per its situation and requirement by choosing the best possible provisions from the all major democratic constitution of the world; however, it didn't make any afford to reform the police system before its adoption in democratic India. Moreover, the police system in India needs to be accountable as per the democratic expectations of the people. Therefore, effective mechanisms must be established to ensure police accountability in India.

The Organizational Structure and Philosophy

The police act-1861 subservient the police system under the direct control of the executive without holding them accountable to the people. However, it should be taken into account that the purpose and intention of the colonial rulers were quite different from that of democratic rule in India. The essence of democracy rely on the trust of the people in the system, and in return, the government rule as per people's will. The governments in a democracy are not supposed to rule arbitrarily and act autocratically, so the various institutions, who used to deal with the people in their day-to-day life, need to be transparent and accountable to the people. The police are one of the most important and visible organizations that face the people most frequently. Therefore, the action and behavior of the police in India should be loaded with all sense of responsibility and transparency while

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dealing with people because it is the symbol of the government around the people in the society. Unfortunately, despite expectations from the police to be accountable and applying a professional approach while performing their duty, the role and performance of the police in India have not been encouraging and away from democratic expectations since the Independence. The executive control over the police has further been tightened since the colonial period, and professionalism and efficiency have further degraded due to the criminalization of politics and the police's politicization, the police system subservient to the political class in power. Apart from lacking professionalism and efficiency, there are mass complaints against the police regarding their biased functioning, failure to register complaints, excessive use of power or brutality, and blatant corruption. These charges are not based on assumptions but supported by facts and well-established data, which shows that as many as 123523 complaints were filed against the police in 1997 itself as per the national crime record bureau (NCRB) report. (**NCRB reports 1997**) In addition, the national human rights commission (NHRC) also receives many complaints of police brutality, false accusations, and human rights violations every year against police personnel and police department. Apart from these behavioral shortcomings that become its tradition, the police system in India is also facing some structural and institutional problems, which adversely affect its functioning, the police-public ratio, dual control, lacking proper infrastructure, and inappropriate funding are some of them which are hindrances in enhancing its efficiency and capability.

In addition, according to section 197 of the Indian penal code, the government officials, including police, are given impunity, and prior approval of the appropriate authority is mandated to prosecute any officer for his acts while discharging duty; however, this impunity has further increased the tendency of the police to extrajudicial mean and adopting the approach to deal the crimes and criminals above and beyond the law. Moreover, sometimes the police complicit with the politicians encouraged them to act beyond their jurisdictions, and sometimes due to political pressure, they turn a blind eye toward serious crimes. Therefore due to impunity and encouragement by political authority, the police apply various tactics for maintaining law & order, which often resulted in gross violation of human rights and extrajudicial killings. For example, UP chief minister Kalyan Singh was caught encouraging the police to control crimes and eliminate criminals at any cost in his address to police officers in 1998. (**Joshi, 2000: 12**) Considering the gross misuse of impunity given to police, the national police commission, constituted in 1977 by the Janta government, recommended to repeal this section, which any successive government did not accept. Moreover, the police need to be equipped with new challenges by adopting new technologies and training, but it is unfortunate to note that no major initiatives for police modernization have been taken either by the union or state governments to enhance the capabilities and efficiency of the police organization to deal with new challenges of security and crimes effectively.

Reform Initiatives

As we mentioned above, the structure and philosophy of the police in India are based on the Indian police act-1861 enacted by the colonial rulers to robust their control over India; however, despite various opposition of this act during the freedom struggle, the successive government in India since Independence has made no change in it; thus, it is still a guiding principle of the police organization in India. Many commissions and committees were constituted to review this act even during the British period; the Indian police commission under the chairmanship of Sir A.L. Frazer was one of them, which found the working of the

police in India inefficient, ineffective, corrupt, and unaccountable; thus recommended to repeal some sections of the police act-1861. However, since the colonial government was not intended to make police accountable but wanted it to be subservient to the government for their colonial purposes; therefore, those recommendations of the Frazer commission were thrown into the dustbin.

In India, the police system needed radical changes instead of those half-hearted efforts from the state governments to make the police functioning according to the democratic standard and make them accountable for their functioning. Thus, the first major initiative was taken regarding the police reform when the first non-congress government in the center led by the Janta party constituted a national police commission to review the police's work since Independence and make some essential recommendations to enhance the police efficiency with a sense of Accountability. Moreover, before the constitution of the national police commission (1977), various committees, expert groups, and human rights commission found a gross violation and misuse of police power for political purposes, which was blatantly surfaced during the emergency when the police were used illegally to suppressed dissenting voices against the government. The shah commission appointed by the Janta government to inquire about the blatant misuse of police power during the emergency also found various evidence of political use of police power; thus recommended to the central government to take necessary measures insulating the police from illegitimate political interference. (**Shah commission, 1978: 142**)

The national police commission suggested three different institutional mechanisms to bring desirable change; one of them was recommended to monitor the performance of the criminal justice system, while the other two were related to evaluating the police performance in India. (**Joshi, 2013: 219**) The commission felt that the police alone could not prevent the crimes unless the criminal justice system in India would be simultaneously effective; therefore, it recommended establishing a criminal justice commission to ensure the timely prosecution of the criminals and monitoring the performances of other agencies from time to time. (**The national police commission, 2nd report, 1979**) The commission found unwarranted and dubious political interventions in day to day functioning of the police and the frequent transfers and postings of the police officials adversely affected the functioning of the police organization in India; thus, the commission recommended establishing a state security commission (SSC) to help the state government in discharging its duties of superintending the police in transparent manners without any favor and partisan. The purpose behind the establishment of the state security commission was to insulate the police from undue political intervention and evaluating the performance of the state police force and present the report of the police performance before the state legislature. The commission observed that the complete autonomy of the police in the democracy would have some other side effect; therefore, political intervention in the police is both inevitable and essential; however, the commission also believed that the unregulated intervention for vested political interest would not only downgrade the image of the police, but it will further create hindrance in performing its duties. (**Subrahmanian, 2007: 76**) In its other reports, the commission recommended rationalizing the facility, perk, and allowances of the police personnel and improving the police infrastructure, training, and equipment; so that the efficiency, capability, and morale of the police force could be enhanced. In its last report, the commission suggested a draft of the model police bill, which contains multi-layered mechanisms for ensuring police accountability, to replace the police act-1861. Since the government in the center changed due to the Janta party government's untimely demise, the commission's recommendations were

not taken into consideration by the Congress party that misused the police power blatantly during the emergency. The background behind the constitution of the national police commission, its findings of the police acts during the emergency, and many other things further increased the prejudice in the mind of Mrs. Gandhi and the Congress party about the commission and its report; though the commission tried to strike a balance between the autonomy and Accountability in the police and many of its recommendations were above and beyond the political considerations.

Accountability Mechanisms

There are some mechanisms to ensure police accountability existing worldwide today, which are monitoring the performance of the police either through internal evaluation or through external mechanisms, like the judiciary, human rights groups, or through civilian oversight. For example, the oldest model of the police establishment board is in the form of her majesty's inspectorate of constabulary in the united kingdom, which monitors and evaluates the functioning of the police. Her majesty's inspectorate of the constabulary was established for the first time in 1856 under the Borough police act. Her majesty's model of inspectorate was further modified under the UK police act 1996, in which inspect and evaluate the police performance and report it to the secretary of state to do needful for enhancing the efficiency and effectiveness of the police force. The board uses to send its report to the police chief for his observations; then the police chief forwarded this report with his comments to the government for laying down before the parliament. After establishing her majesty's inspectorate, the assessment of the police performance is done on an annual basis in the United Kingdom, which has certainly made the police more efficient, more accountable, and socially acceptable in the country. The inspectorate board and civil society jointly evaluate the police performance with the inclusion of some senior police officers. Another is the northern Iris model, which was established in 2000 with nineteen members, in which ten members from the Northern Ireland assembly while nine of them are independent members appointed through open examination. The board is committed to ensuring efficiency, impartiality, and effectiveness in the police organization in the country so that the people could be satisfied with the police service and feel secure and confident. (Joshi, 2013: 224)

The above two models of police accountability are classic examples of combined oversight on the police performance in the world today. But unfortunately, despite various recommendations from committees, the national police commission, and clear directions from the supreme court, such a mechanism of police reform couldn't be developed in India, either at the center or state level. When states were compelled by the supreme court to establish the state security commission, some states did so only for the namesake. For example, the state government of Kerala established a police performance and accountability commission in 2003 through an executive order temporarily, which has submitted only one report so far. Some states also constituted the state security board in compliance with the supreme court direction, which was supposed to evaluate the performance of the police and send the report to the state government to lay down on the floor of the house; however, not even a single such report of the police evaluation was laid down on the floor of the house.

In conclusion, the police in India need to be evaluated jointly by the government and police itself with civilian oversight. The external mechanism of police accountability has not left a significant impression on the functioning of the police; therefore, the internal mechanism should be strengthened and formalized to bring desirable changes in the functioning of the police. Many scholars on the police reform have found the internal mechanism would be much more effective in ensuring Accountability in the Indian police

system. According to Professor David Bayley, "the external mechanism is reactive instead of preventive and starts investigating after the misconduct occurred. Therefore, it cannot identify the root cause of the problem, and many defaulters could go unpunished." However, despite Bayley's arguments in favor of internal mechanisms, India needs to have a joint mechanism of internal evaluation and external monitoring of the police performance.

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Extraordinary Work of R.K. Narayan 'The Guide'

Dr. Vibhash Ranjan*

*This paper reflects that R.K. Narayan often creates characters with whom one can identify spontaneously. Swami, Krishna and Chandran and Ramani or Suseela and Savitri or the unassuming Sastri and the innumerable minor characters are easily recognizable, because they are based on real life models. However, there are some of Narayan's characters who are quite different. For example, Margayya, the ambitious financier in *The Financial Expert*, Raju, the ostentatious guide in *The Guide* or Vasu, the rogue taxidermist in *The Man-Eater of Malgudi*, are extraordinary characters and yet convincing. One reason that these extraordinary characters appear convincing relates to the prominent element of the esoteric in these novels. The use of tales from the Hindu mythology, the teachings of the Bhagavadgita, and the austere religious and beliefs there ordained add strength to the fictional art of R.K. Narayan. Furthermore, these kinds of mythic allusion help the reader with a better understanding of that particular character and a deeper insight into human nature. It is in this context that Narayan's skilful use of myth makes reality more easily comprehensible. As Ian Milligan rightly says, novelists like Narayan "continually add to the richness of our human experience; they bring before us new topics, new characters, new attitudes".*

Introduction:

In the Hotel Carlton, Berkeley, California, Narayan wrote the most famous of his novels, "The Guide". Sometimes he wrote with a typewriter, sometimes with paper and pen, cooking his own food on a hot plate in the hotel room every day.

Narayan has written, "The Guide attained a certain degree of popularity, which, though pleasant in itself, brought in its wake involvements that turned out to be ludicrous and even tragic." It was made into a film which mutilated the original storyline much to the author's chagrin. A planned Broadway edition was as reckless in its treatments. Narayan had to withhold his permission to present it on stage, even as the adaptation was done by an old friend of his, a former literary editor of the New York Times. As an example of the outrage, Narayan mentions, "For instance, his version managed to abolish the heroine. I objected to his omission and to two irrelevant characters of his own; above all I objected to the hero's turning around and urinating on the stage."

Matters became rather acrimonious over this script and Narayan had to leave New York at a very short notice to avoid being summoned for a subpoena; he found asylum in the Indian consulate before boarding a flight out of the United States. However the script was later revised and "The Guide" opened in Broadway in March 1968. It closed in less than a week.

In his essays and columns, Narayan pokes gentle but stirring fun at himself and the idiosyncrasies of his writing. In a piece titled "Love and Lovers". Narayan contrives an interview between a critic and himself. ".....Are you going to tell me that you portray the individual in his fullness? There are areas you have neglected. For example, do you deal with man-woman relationship with any seriousness? Aren't you

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prudish when it comes to sex?

'Not exactly prudish, only I take the hint. When a couple, even if they happen to be characters in my own novels, want privacy, I leave the room; surely you wouldn't except one, at such moment, to sit on the edge of their bed and take notes?'

In "Reflections on Frankfurt", Narayan continues in the same vein of easy irresponsibility. "I heard rumors in Frankfurt and then in Paris and London that I was to be awarded the Nobel Prize this year (1986). Some Paris newspapers carried the 'shortlisted' names of these writers in the Third World, as the committee had decided to award the Prize to the Third world this year to overcome the charge of being biased in favour of American and European writers. I was greeted and congratulated here and there."

He did not win the Prize and has speculated on what might have tripped him. Here is his reflection on the committee's deliberations, "...His writing is too simple, and too readable, requiring no effort on the part of the reader. ...He has created a new map called Malgudi in which his characters live and die. Story after story is set in the same place, which is not progressive, a rather stagnant background.... We hope some day Narayan will develop into a full-fledged writer deserving our serious consideration."

The recurrent motifs in Malgudi's saga are irrelevance and irreverence. Narayan's oeuvre never syncs with the contemporary, never means to. His writing career spanned the second half of the twentieth century, arguably the most happening phase of human history. Both the world at large and the world at small witnessed upheavals; technology leaped, politics changed and moral mutated. Yet, all this is alien to Malgudi's denizens. Life there might have stood still, or may have been always moving in a cosmic continuum, from primal past to fathomless future. The Malgudi men and the women and children, go on about their lives, as they have always done, and always will. Narayan often invokes the current as a backdrop, perhaps to show how meaningless it is for Malgudi. "Waiting for the Mahatma" (1955) is set amid the final years of India's freedom struggle, and Mahatma Gandhi appears in the novel, complete in his loincloth and moral exhortations. But the characters are just brushed by the tension of the times, not swayed. They remain very much themselves; so does Malgudi. Narayan does bring in change, perhaps inevitably, towards the later part of his career. Here his dexterity stretches very thin, and a hint of absurdity creeps in at times. In one of these stories a Malgudi man returns from the US with a Korean wife and a story-writing machine; the humour seems slightly affected and the precision of earlier touch, sadly amiss.

Narayan Has been irreverent in his Malgudi tales; to institutions, individuals and inclinations. There is not a hint of stridency, he makes fun supremely poised and assured. His characters fall in love, and then out of it, promises are made and broken. Youths converted to causes, and then exercised by nubile females. Married men indulge peccadilloes and prayers, sages in shenanigans and married women in gossips and fantasy. People die of disease or dotage, and survivors get on with the game, insignificant as ever.

Readers are left with a search for meaning in all this. Narayan never intrudes with interpretations. But the greatest point about Narayan's writing is its use of language. His talent goes beyond mere aptitude with words or a maverick Malgudi. Narayan stands for the immense flexibility. Adaptability and élan of English, he uses the language of Bible. Shakespeare and American Contribution to an amazing effect while dealing in subjects vastly removed. His creatures squat on the floor for meals, wear dhoti with a

coat, read the Ramayana, regard mothers as sacred, rebel against fathers, marry for love over money, and aspire for eternal life.

The author writes all this without a single footnote, without any discernible twang of the foreign, with a sense of disarming familiarity. Narayan represents the synthesis that is English, a language evolving through the synergy of civilization, Known and unknown; a language in continual quest.

Main Aim of this paper:

The main aim of this paper is to analyse *The Guide*, Narayan's magnum opus, which is not only his most mature book but also one that won worldwide renown by being filmed and won the prestigious Sahitya Akademy Award in 1960.

Analysis of this study:

The Guide, Narayan's magnum opus, is not only his most mature book but also one that won worldwide renown by being filmed and won the prestigious Sahitya Akademy Award in 1960. The theory of Karma is enunciated in the life of Raju the protagonist. According to Hinduism, it is a foregone conclusion that an individual lives and dies in accordance with his karma and vasanas (impressions the personality has gathered from its own thoughts and actions of the past or previous lives). Desires and thoughts which spring forth from one's vasanas make it appear inevitable. John Updike observed in *The New Yorker*, "As a Hindu Narayan believes in reincarnation..... a universe infinite rebirths... He surveys his teeming scene from the perspective of this most ancient of practiced religions".

Raju's career is rather complicated. He begins his adult life as a guide to tourists. A man who is a compulsive showman, Raju believes in appearances. He meets Marco, an archaeologist, to whom "Dead and decaying things-fire-imagination rather than things that lived and moved and swung their limbs". Rosie, his wife, is forbidden to dance because her husband forbids it. A strained relationship is further breached because Raju helps Rosie by being a sympathetic audience when she performs in the privacy of the hotel room while Marco is away researching the caves in the Mempi forest. One thing leads to another, Rosie confides in Raju, and they become lovers. Marco finds out the liaison between the guide and his wife (in name only), and he deserts her cold heartedly without giving her a chance to explain. Castigated by family and friends for what appear to be immoral behaviour, Raju the guide now becomes a manager for Rosie's commercial dance performances all over the country and comes into great affluence. Along with money come the attendant evils such as drink and gambling, Raju is also madly possessive of Rosie. ("She was my property... I like to keep her in a citadel") he is constantly in the grip of fear that he may lose her. This flaw in his character finally causes his downfall. He hides the *Illustrated Weekly* in which Marco's article on Mempi caves appears, fearing that Rosie may re-establish her links with her husband, it is this fear that prompts him to forge her signature on the document sent by Marco for the release of her jewelry. Raju, who is finally caught by the net of his own sins, is arrested by his former friend of prosperous times, the superintendent of police, in the middle of a dance performance by Rosie. When she learns of his arrest, she comments, "I felt all along you were not doing right things. This is Karma".

The fact that ironies of life never cease is realized in Raju's case when after serving time in prison, he inadvertently becomes a saint for the people of Mangala when he took refuge in an ancient temple on the outskirts. Velan becomes his protégé and Raju out of necessity mixes movies and desires, and once again the conman in him

takes over. He spoke to the villagers on various issues of topical importance. He not only gave them discourses on the Ramayan and the characters therein, but also advised them on matters of cleanliness and goodliness. He even prescribed medicines and settled disputes and quarrels involving property. He encouraged the village schoolmaster to reopen the school in the premises of the temple. He plays the role of the Swamy to the best possible extent, but once again he is overtaken by the inexplicable eventualities. Things take a dramatic turn when Velan's brother mistakenly reports that the swamy will not eat till rains come instead of 'till they stop fighting' over a matter of selling and buying. Events that followed were beyond Raju's thinking or control. He never once imagined that there would arrive a time when the fake sanyasi in him would become transformed into a genuine one. People expected him, as the holy one with spiritual power, to bring rain to the draught stricken land of theirs by his penance as it used to happen in ancient India. For sometime, Raju tried to evade this role. But fate is something inexorable and relentless. It is in times like this that one realises it is 'divinity that shapes our ends.' As said by Emerson in a memorable poem named *Brahma*, it is the 'One behind the many' that is responsible for one's life.

If the red slayer thinks he slays, Or if the slain think he is slain, They know not well the subtle ways I keep and pass and turn again. The first four days of his enforced fast were sheer agony for Raju. The sight of food tormented him. He polished off the vessel containing the previous day's leftover food. He cursed his first meeting with Velan who is responsible for the whole thing now. 'He felt sick of the whole thing.' He knew that the fact of his being a sanyasi a myth just as the old crocodile in the pond is. But then the people of this land survive on myths. It gave them something to fall back upon in times of crisis. It enhanced their belief and religious faith. The transformation in Raju is gradual, natural, if also wonderful. First it is Velan, asleep at his feet tired and perseverant, who stirred his conscience thus: "Why not give the poor devil a chance, Raju said to himself instead of hankering after food which one could not get anyway."

The resolution to chase away the thoughts of food gives him 'a peculiar strength.' It further forged his thoughts towards genuine fast. If by avoiding food I should help the trees bloom, and the grass grow, why not do it thoroughly? For the first time in his life he was making an earnest effort, for the first time he was learning the thrill of full application, outside money and love; for the first time he was doing something in which he was not personally interested.

He felt suddenly so enthusiastic that it gave him a new strength to go through the ordeal. On the twelfth day of the 'swamy's' fast, he hears 'rain in the hills' and sags down. In a masterful stroke Narayan leaves the readers in a state of wondering as to what happened to Raju. But what matters is, that it is only after he stopped thinking about himself that he is free from attachment of any kind. He does become the 'Guide', but of a superior mould in the final analysis.

When the mirror of understanding is cleansed of the dust of desire, the life of pure consciousness is reflected on it. When all seems lost, light from heaven breaks, enriching our human life more than words can tell.

One cannot fail to appreciate 'the rainbow magnificence of life' in Narayan's novels. It is the 'miracle of faith' forged by the use of myth that is enacted in these novels. Despite the use of myth, it is the 'credible universe' charged with 'moral imagination' that comes to us in the above unforgettable novels of the 'grand old man of Malgudi.'

Conclusion:

On the basis of above facts, the present paper concludes that R.K. Narayan often creates characters with whom one can identify spontaneously. Swami, Krishna and Chandran and Ramani or Suseela and Savitri or the unassuming Sastri and the innumerable minor characters are easily recognizable, because they are based on real life models. However, there are some of Narayan's characters who are quite different.

So, *The Guide*, Narayan's magnum opus, is not his most nature book but also one that own worldwide renown by being filmed and won the prestigious Sahitya Akademy Award in 1960. The theory of Kama is enunciated in the life of Raju the protagonist.

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Infrastructural Issues in Destination Place: A Study of Migrants in Cardamom Estates

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Though migration is considered as an alternative livelihood strategy and brought benefits to many individual and family income, voluminous negative consequences still remain. Internal labour migrants are highly susceptible to unhygienic environment. Migrants have poor access to health services and they cannot afford private hospitals. This affects their employment opportunities, as well as the loss of wages. Poverty and weak economic background forced labourers to live in rented shabby dwellings or tents with poor infrastructure with no access to water and sanitation facilities in the destination place and received below primary level education, because of which they lack knowledge in cleanliness and hygiene. Labour out migration of people from Theni district of Tamil Nadu to cardamom estates located in Western Ghats has been a regular feature. A sample of 571 cardamom migrated workers from Theni district were taken through multistage sampling technique and an attempt has been made to identify the infrastructural problems faced by the migrants on the basis of perceptions of workers. The researcher has attempted to assess the perceptions of the three classified age groups of migrants viz., I, II and III (below 30, between 30- 45 and above 45 years) towards the infrastructural facilities in their destination place (26 statements). In order to reveal the significant difference in the mean score of the three groups of migrants, one-way analysis of variance was administered.

The study concludes that housing condition, access to safe drinking water and hygienic toilet facilities, proper electric supply, road conditions, medical facilities are more critical for survival in the destination place. Moreover, migrants have to bear the pain of separation from their children, relatives and friends, social and family ceremonies and they have more health problem due to migration to hill area. Social security benefits must be embedded in labour policy. Access to health services and decent living conditions must be included in the migration policy ensuring that migrant rights prevail and that they should not deny access to basic services such as housing and health.

Introduction

“Portability of food security benefits, healthcare, and a basic social security framework for the migrant are crucial”

The Economic Survey, 2017

For many poor people around the world, migration is a way of life and it can reduce poverty, inequality and contributes to overall economic growth and development. The interrelationship between migration and economic development is universally recognized (Deshingkar, 2006, Awasthi, 2010). On the basis of nature, migration can be categorized as internal or international. Internal migration refers to migration from one place to another place within a country. Internal migration has greater potential for poverty reduction, meeting the Millennium Development Goals (MDGs). There has been a steady increase in the country in the number of migrants. Indian census, 2011 estimated that approximately 309 million of people constitute as internal migrants in India.

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Though migration is considered as an alternative livelihood strategy and brought benefits to many individual and family income, voluminous negative consequences still remain. Internal labour migrants are highly susceptible to unhygienic environment. Migrants have poor access to health services and they cannot afford private hospitals. This affects their employment opportunities, as well as the loss of wages. (The Economic Survey 2017, World Economic Forum). Poverty and weak economic background force labourers to live in rented shabby dwellings or tents with poor infrastructure with no access to water and sanitation facilities in the destination place and received below primary level education, because of which they lack knowledge in cleanliness and hygiene. It has therefore created overburdening of infrastructure, degradation of land, slum like settlements leading to anaesthetic appearance of the surroundings. (Shruthi Ashok 2014, Manas Ranjan Behera 2017).

The survey-based studies can bring out the in-depth analysis of the deeper process at work to explain the migration phenomenon. The findings of such micro studies and the primary data collected are of much importance for framing policies and programmes for planning and development.

Objective And Methodology

Labour out migration of people from Theni district of Tamil Nadu to cardamom estates located in Western Ghats has been a regular feature. A sample of 571 cardamom migrated workers from Theni district were taken through multistage sampling technique and an attempt has been made to identify the infrastructural problems faced by the migrants on the basis of perceptions of workers. An 'Attitude Scale' was developed by giving scores to measure the level of attitude. The response of the respondents to each statement was elicited with the help of Likert's five-point scale. The researcher has attempted to assess the perceptions of the three classified age groups of migrants viz., I, II and III (below 30, between 30- 45 and above 45 years) towards the infrastructural facilities in their destination place (26 statements). The mean score on each statement obtained by the three age groups of migrants were separately calculated. In order to reveal the significant difference in the mean score of the three groups of migrants, one-way analysis of variance was administered.

Findings of the study

Accommodation

The basic amenities such as proper house, clean drinking water, and electricity and so on were scored by the respondents and the mean score of all the variables in the destination place were depicted in Table 1.

TABLE 1
Migrants' View on Accommodation

S. No	Particulars	Mean score of different age groups			
		Group I	Group II	Group III	f-Statistic
1.	Concrete house	2.532	2.800	2.144	16.325*
2.	Clean drinking water	3.015	3.422	3.232	4.557*
3.	Electricity	3.366	3.222	2.840	8.277*
4.	Street light	2.171	2.330	2.575	5.178*
5.	Proper road	2.934	2.929	2.709	2.865*
6.	Vegetables, fruits and grocery shop	3.200	2.984	2.558	12.557*
7.	Ration shop	2.634	2.519	2.448	1.056 [@]
	Total	19.852	20.206	18.506	

Source : Computed data based on field survey

*-Significant at 5 per cent level

@- Not Significant

Table 1 shows that among the three age groups of migrants, Group II migrants has given a high total of mean scores for seven variables related to accommodation in the destination place. They were shown higher attitude towards 'clean drinking water' (3.422), 'electricity' (3.222) and 'vegetable, fruits and grocery shops' (2.984) in the destination place. Group I have given second overall high score and they also showed high attitude on the same three variables. The study found that almost all the selected migrants had clean drinking water so that all three age groups of respondents given high score on clean drinking water in the destination place. But the facilities such as concrete house, street light and proper road are lacking in the destination place and it was found that some of the migrants were still living in a small house without electricity. It should be noted that the attitudes of the respondents were significantly differed in all the facilities except 'ration shop' which indicates all the respondents shown the same attitude on the less availability of ration shops in the destination place.

HEALTH AND SANITATION

The calculated mean score and 'f' value of the variables of health and sanitation is shown with the help of Table 2.

Table 2
Migrants' view on health and sanitation

S. No	Particulars	Mean score of different age groups			
		Group I	Group II	Group III	f- Statistic
1.	Primary health centre	2.668	2.568	2.547	0.571 [@]
2.	Hospital	2.473	2.530	2.436	0.382 [@]
3.	Adequate number of doctors	2.746	2.654	2.796	0.669 [@]
4.	Toilet	2.829	2.730	3.028	1.633 [@]
5.	Bathroom	2.551	2.627	2.729	1.265 [@]
6.	Medical shop	2.512	3.043	2.757	10.698 [*]
	Total	15.779	16.152	16.291	

Source : Computed data based on field survey

*-Significant at 5 per cent level

@- Not Significant

The high total mean score was given by Group III migrants (16.291) on health and sanitation facilities in the destination place. Out of six variables, all the three age groups have given high scores for toilet facilities (2.829, 2.730 and 3.028) and adequate number of doctors (2.746, 2.654 and 2.796) in the destination place. The study found that the destination place did not have adequate hospitals and almost all the migrants did not have a separate bathroom in their houses so that these variables have given a less score than the others. It is interesting to note that the attitudes of respondents are not significantly differed in five variables since the calculated 'f' values are not statistically significant.

Communication

Ravenstein's theory (1885) stated that incidence of migration increases with growth in the means of transport and communication and is positively related to the expansion of trade and industry. Hence, it is necessary to study the communication facilities in the destination place. Six variables such as telephone, post office, newspaper, bank, bus and vehicles and

police station in the destination place were analysed and the attitudes of the migrants towards these variables were obtained. Table 3 depicts the mean scores and the calculated 'f' values.

Table 3
Migrants' view on communication

S. No	Particulars	Mean score of different age groups			
		Group I	Group II	Group III	f-Statistic
1.	Telephone	3.424	3.070	3.149	4.554*
2.	Post office	2.254	2.400	2.486	1.547@
3.	Newspaper	2.254	2.097	2.199	0.933@
4.	Bank	2.039	2.259	1.939	3.252*
5.	Bus and vehicles	3.620	3.259	3.912	8.473*
6.	Police station	1.980	2.173	2.354	6.760*
	Total	15.571	15.258	16.039	

Source : Computed data based on field survey

*-Significant at 5 per cent level

@- Not Significant

The overall high means score can be seen in the Group III migrants (16.039). The high score was given to 'bus and vehicles' (3.912) and the least score was given to 'banking facilities' in the destination place (1.939). The facilities such as 'bus and vehicles', 'telephone' and 'post office' in the destination place had a uniform score preference i.e., 'bus and vehicles' had first high mean score, 'phone facility' had second high mean score and 'post offices' in the destination place had third high mean score given by all the three age group of migrants. All the age group respondents did not have good attitude on banking and police station in the destination place. However, the attitudes of the migrants on four variables such as 'telephone', 'bank', 'bus and vehicles' and 'police station' have significantly differed.

Education

The most important reason for a greater number of family members stayed in the native places of the migrants is to provide better education to their children. So, it is necessary to study the attitudes of the migrants about the education facilities available in the place of destination. The different attitudes are analysed with the help of mean scored given by the respondents and the results is shown in Table 4.

Table 4
Migrants' view on education

S. No	Particulars	Mean score of different age groups			
		Group I	Group II	Group III	f-Statistic
1.	Primary School	2.220	2.124	1.961	4.190*
2.	Secondary and Higher Secondary school	2.034	1.746	1.983	4.337*
3.	College	1.727	1.816	1.950	3.757*
4.	Library	1.839	2.103	2.171	9.615*
	Total	7.820	7.789	8.065	

Source : Computed data based on field survey

*-Significant at 5 per cent level

From Table 4, it is clear that all the age group of migrants were unanimously given only a less score for all the variables. Among the three groups, comparatively high score was

given by the Group III migrants (8.065). More scores were given by them to the 'library facilities' (2.171) and least score was to 'college' (1.950). The migrants of Group I and Group II have given more score for 'primary school' (2.220 and 2.124). It can be concluded from the analysis that the destination place has offered only an adequate number of primary schools. The migrants felt that the standard of education in the destination places was comparatively low than in their native places. However, all the calculated 'f' values of the variables are statistically significant which indicates that attitudes of the migrants are significantly differed.

Entertainment

Entertainment in the destination place also plays an important role especially among the young migrants. Some studies declared that a greater number of migrants from the rural areas are attracted by the entertainment in the destination places and that motivated them to migrate. Thus, an analysis was made on the availability of entertainment in the destination place of the respondents.

Table 5
Migrants' view on entertainment

S. No	Particulars	Mean score of different age groups			
		Group I	Group II	Group III	f- Statistic
1.	Cinema theatre	2.951	3.005	2.917	0.317 [@]
2.	Television	3.176	3.222	4.017	23.939 [*]
3.	Hotel	2.985	3.000	3.182	1.199 [@]
	Total	9.112	9.227	10.116	

Source : Computed data based on field survey

*-Significant at 5 per cent level

@- Not Significant

The total mean score in Table 5 shows that the Group III years of age group of migrants gave more score on the three variables. These groups showed a good attitude on 'television' which entertained them more than the other two sources of entertainment. The other two groups also gave greater score for 'television'. So it is understandable that television was the main sources for the migrant's entertainment. But, the calculated 'f' value of the variable 'television' is statistically significant which means that the migrants have significant different attitudes on this variable.

Conclusion

The study concludes that housing condition, access to safe drinking water and hygienic toilet facilities, proper electric supply, road conditions, medical facilities are more critical for survival in the destination place. Moreover, migrants have to bear the pain of separation from their children, relatives and friends, social and family ceremonies and they have more health problem due to migration to hill area.

Suggestions

- India faces tremendous challenges on internal migration and need to formulate proper policies and programmes to improve migrants' health.
- The existing programmes need to be expanded and upgraded and effective implementation of these programmes as well as their integration of source-exitdestination levels would be crucial in improving the status of migrants' health.
- Social security benefits must be embedded in labour policy.

- Access to health services and decent living conditions must be included in the migration policy ensuring that migrant rights prevail and that they should not deny access to basic services such as housing and health. In addition to this, mobile health care, child care for female workers, temporary settlements and security in residence as well as in working areas are also needed.

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History and Archaeology of the Ambedkar Nagar district, Uttar Pradesh: A brief study

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The Ambedkar Nagar district is located in the Eastern part of the state of Uttar Pradesh and lies between 82° 12" E to 83° 05" E longitudes and 26° 9" N to 26° 40" N latitudes. It is situated on the banks of River Ghaghra. Ambedkar Nagar district surrounded on the west by Faizabad district, on the south by Sultanpur district, on the east by Azamgarh district, on the north by Basti and Sant Kabir Nagar districts, and on the north-east by Gorakhpur district. The district has five sub-divisions (*Tehsils*) as part of the administrative setup namely, Akbarpur, Tanda, Alapur, Jalalpur and Bhati. The district of Ambedkar Nagar was formed from the Faizabad district on September 29, 1995. The district of Ambedkar Nagar was named in the memory of the father of the Indian constitution, Dr. Baba Saheb Bhim Rao Ambedkar for his work done for the upliftment of the depressed classes, women and other weaker sections of the Indian society (DCH, Ambedkar Nagar, 2011:5).

History of the Ambedkar Nagar district

Before 1995, the Ambedkar Nagar district was a part of the Faizabad district. According to Ramayana, it is the place where King Dashratha shot Shравan Kumar, and the place is called Shравan Kshetra. The ashram of sage Shringi Rishi was also situated here. According to Ramayana, Lord Rama's son Kusha drives Shравasti. The Rajbhar King drives its eastern part. In Ramayan Lord Rama battled to many Rajbhar Kings. Shiv Baba is a spiritual place where people comes pilgrimage. The area around Ayodhya (Fiazabad) was known as Kosala in the ancient times which have also been mentioned in the ancient literatures. The earliest known kings of Kosala were the Ikshvakus (or Suryavanshis). The Kosala dynasty supposed to be consisting of around 125 kings of whom, 90 reigned before the end of Mahabharata war and the rest there after with the main line ending sometime in the 4th century BC. Mythologically speaking and as proverb says 'Ram-Rajya' was established by Lord Ram at the Kosala and in mean time an ideal lawful state was came into existence and it reached pinnacle of its glory. During the 4th century BC Kosala was the part of Magadha Empire under the Nand dynasty. However, during 7th century AD as well it was the part of Magadha state. Mauryas took the reign of Magadha Empire and ruled till 184 BC when it went into the hands of Sungas with the capital at the Patliputra. The reign of Kosala was merged in the Magadha with the rise of Kushans as dominant power in the first century AD and subsequently it was included in the dominion of Gupta dynasty who's Kingdom extended up to Saketa (Awadh) and Prayag (Allahabad). After the fall of Gupta dynasty in the sixth century AD the area became part of Kannauj dominion under Maukharis, Gurjar, Prathavas and ultimately Gahdavalas whose last ruler Jaichand was vanquished by Shahab-Uddin-Gauri. Local traditions indicate that the real power was exercised in the area by the Bhars –the aboriginal's people who were overthrown by Rajputs.

The area was administered by Subedars (Governors) appointed by Sultan of Delhi during Delhi Sultanate. The present district of Ambedkar Nagar was part of two Subahas (provinces) and Sirkars (divisions) during the Akbar's reign. The Nawab of Awadh dynasty

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was established and the entire district was merged in Subah of Awadh with the appointment of Sadat Khan as the Governor of Awadh in 1722. The city attained great prosperity and became the centre of art and culture during this period. However, Asaf-ud-Daula, the son of Shuja-ud-Daula moved the capital to Lucknow after seven years of his rule. The Awadh subah was annexed to the British Empire in February 1856. The people of the area took part in the freedom struggle movement and attained freedom with rest of the country in 1947 like other parts of the country. The district of Ambedkar Nagar was established by the then Chief Minister of Uttar Pradesh, Ms. Mayawati on September 29, 1995 (U.P. District Gazattee, Faizabad 1960, DCH, Ambedkar Nagar, 2011: 9-10).

The major historical centre located in the Ambedkar Nagar district are - Govind Saheb (Alapur), Shiv Baba (Akbarpur), Ashraf Jahangir Semnani (Kicchocha, Tanda), Mahadev Mandir (Akbarpur Rly Station) and Lorepur fort (Jalalpur). Month long fairs are held at Govind Saheb and Kicchocha Sharif every year which draw a large no of people from adjoining districts. The Shiv Baba (Akbarpur) is a spiritual place in the district where a lot of people come for pilgrimage in the district. Akbarpur is the place where King Dashratha shot Shraavan Kumar according to Ramayana and it is called Shraavan Kshetra. Sage Shringi Rishi's ashram was also situated here. Dr. Ram Manohar Lohia- a renowned Indian freedom fighter and a socialist political leader was also born in the Akbarpur (DCH, Ambedkar Nagar, 2011: 9-10).

Archaeology of the Ambedkar Nagar district

In the last few decades archaeological work done in Ambedkar Nagar district by many scholars like Cunningham (1871), A. Furer (1891), Dilip Chakraborty, Rakesh Tiwari, and R. N. Singh (1999), Vijay Prakash (2000) and I.D. Divedi (2009). A. Fuhrer (1891: 300-02) mentions a number of early historical sites in the district namely Akbarpur, bandhanpur, Surhurpur and Tanda.

When the area of Ambedkar Nagar district was the part of Faizabad district, then during explorations total number of 45 sites (table-1) explored were described by Dr. Vijay Prakash Verma (2000) in his book –“Awadh Aur Ayodhya – Puratatvic Drishti.” These sites have Northern Black Polished Ware (NBPW), Black Slipped Ware (BSW), Black-and-Red Ware (BRW), Grey Ware, Red Ware, Sunga-Kushana remains, Gupta pottery & remains, early medieval pottery, medieval pottery and bricks wall, ancient large size bricks, and an ancient fort. The stone sculptures were also found during the exploration. Besides of these sites, six sites have been explored in Ambedkar Nagar District under the project of ‘Ancient Pilgrimage Route from Kaushambi to Kapilvastu’ by I.D. Divedi and others of Lucknow circle of the Survey (IAR 2009-10: 119-120). These sites have Northern Black Polished Ware (NBPW), Black Slipped Ware (BSW), Grey Ware, and Red Ware of Sunga-Kushana to Gupta period and medieval period.

In the district, the site **Khapura** has been excavated. The archaeological mound of Khapura (26° 26' 48" N and 82° 38' 31" E) is situated on the right bank of river *Tamsa* (Tons) at a distance of 10 km from Akbarpur and 50 km from Ayodhya in the district of Ambedkar Nagar, Uttar Pradesh. The excavation was conducted to determine the cultural sequence of the mound in 2017-18 and 2018-19 (Singh *et al.* 2019). The mythology related to this site is that; it was the area where king Dasaratha of Ayodhya killed Shraavan Kumar mistakenly. The Sringi Ashram was also found here. The excavation aimed to compare the archaeological findings with those from Ayodhya (Faizabad), Imlidih Khurd, Narhan and Sohgaura (Gorakhpur), Pakkakot, and Khairadih (Ballia), Lahuradeva (Sant Kabir Nagar), Rajghat (Varanasi) and Agiabir (Mirzapur).

Following three cultural sequences were found during the excavation;

1. Pre-NBPW Culture with Iron (c.1100-600 BCE)
2. NBPW Culture (c.600- 200 BCE)
3. Gupta Period (c.300-500 BCE)

The main ceramic type of the first cultural period is Black Slipped Ware, Red Ware, and Black and Red Ware. But the Black Slipped Ware was dominated among other wares during the period. Burnishes Black-and-Red Ware was also found from this period which is very similar to the sites of the Chalcolithic period of the Saryupar plain and Vindhya- Ganga region. The main pottery shapes are dishes, bowls, knife-edged bowls, perforated and legged bowls, vases, lipped basins, tumblers, storage jars, and bowl-on-stand.

The second cultural period is comprised of NBPW, BSW, Grey Ware, and Red Ware. Red ware is associated with NBPW on a large scale. There are many types of shapes, such as; straight-sided corrugated flanged bowls, carinated handis, dishes with vertical featureless rims, lipped basins, vases and bowls with sharp rim are associated with BSW, Grey Ware and NBPW. While Red Ware main types are basins, vases, bowls, perforated and legged bowls, storage jars, bowl-on-stand, tumblers and dishes.

The third and last cultural period of this mound is related to the Gupta period. In this period potsherds flared bowl, platters, spouts and different types of vases are found. Some circular pillars made of bricks bats were also found supporting wattle and daub houses.

Other findings from these cultural periods are 34 terracotta beads, 29 terracotta discs, 39 pottery wheels 42 gamesmen (stoppers), terracotta balls, dabbers, terracotta boat shape toy cart from period II, pottery discs, bone points and arrowheads, pendants, beads of semi-precious stones, stone pestles, and 13 iron objects (in which nails, chisels, knife and khurpi are included), two copper objects have also been found from Period II (copper bangles and copper-nail/rod). In biological remains charred grains, charred bones of animals, especially of antler bone fragment are reported from this region.

The present author did a survey of Ambedkar Nagar district in 2018. The main objectives of conducting archaeological survey work in this district were to find out the archaeology and cultural chronology of the district, a detailed study of the remains found by the survey, and to try to know about the settlement pattern of Ambedkar Nagar district. A total number of 80 archaeological sites (table-1) have come to light after the survey and are marked with '*'. During the exploration, many ceramic industries were found at the sites. These are Northern Black Polished Ware, Black Slipped Ware, Black & Red Ware, Grey Ware, Red Ware, and Glazed Ware. These classifications are based on well-known ceramic colours. After analysis of the cultural material collected at the sites, the site (s) can be divided into several cultural period (s) such as the Northern Black Polished Ware (NBPW) period, Sunga-Kushana period, Gupta period, Early Medieval period, and the medieval period.

In this region, based on archaeological remains obtained from earlier archaeological explorations and excavations, and especially on the information obtained from the excavation at Khapura, the following four major cultural periods can be divided. Archaeology of the Ambedkar Nagar district can be divided in to four major cultural periods:

- (1.) Early Historical period (1003 BC to 300 AD)
 - (1-a). Northern Black Polished Ware (1003 BC – 300 BC)
 - (1-b). Sunga Period (Second-First Century BC)
 - (1-c). Kushan Period (First to Third Century AD)
- (2.) Gupta Period (Fourth to Sixth Century AD)
- (3.) Early Medieval Period (Seventh to Twelfth Century AD)

(4.) Medieval Period (Twelfth to Sixteen Century AD)

Table- 1: Inventory of Explored sites of the Ambedkar Nagar district

Sr. No.	Site	Sr. No.	Site	Sr. No.	Site	Sr. No.	Site
1	Akbarpur	2	Asarapur Kichucha	3	Bhaethua Saraiyan	4	Baure
5	Dahiyaawar Darveshpur	6	Dasauwa Foolpur	7	Deeh Nagahara	8	Daiya Deeh
9	Ealanpur Bhitaura	10	Fattepur Belaganv	11	Gaushpur Kakrahiya	12	Jalalpur
13	Bhiti	14	Kaharasulempur	15	Kartora	16	Katata
17	Khairpur	18	Samaspur Rukuddeenpur	19	Lodipur Katauta	20	Lorpur Tajan
21	Madahara	22	Mahual	23	Maukha	24	Puredarbar
25	Sonharalalpur	26	Mubarakpur	27	Nagpur	28	Tanda
29	Pakharpur	30	Rammanpur	31	Rasoolpur Dargaah	32	Rukunpur
33	Vehrojpur	34	Vandandeeh	35	Veharai	36	Vrahinpur Sagra
37	Athawara*	38	Bharthua**	39	Eshapur*	40	Fatepur*
41	Jogapur Gohana**	42	Khewar**	43	Katauta Deeha*	44	Khapura*
45	Majesha*	46	Mayeepur*	47	Naktaha*	48	Paharpur**
49	Sahanemau**	50	Tulsi-Nasirpur*	51	Bandandeeh*	52	Yarke*
53	Amola Buzurg*	54	Baharapur*	55	Barai Buzurg*	56	Bhabhura*
57	Bharatpur*	58	Bsaiya Ganga Sagar*	59	Chandipur*	60	Etauri Buzurg*
61	Fattepur Ghadhawa*	62	Goverdhanpur*	63	Hariharpur*	64	Kahawin Anjanpur*
65	Kaurahi*	66	Lakhanipatti*	67	Makrahi*	68	Nariyanv*
69	Nthamalpur*	70	Padumpur Deeha*	71	Parwardeeh*	72	Rampur Indipindi*
73	Rautpara*	74	Roodhi*	75	Sahpur Chahora*	76	Samdeeh*
77	Saraiya Hardo*	78	Sarawan*	79	Umari*	80	Atraura*
81	Banganw*	82	Chandapur*	83	Mijhura**	84	Sehara Jalalpur**
85	Umrahawa**	86	Andalpur*	87	Banerupurwa*	88	Bara Kurd*
89	Haidrabad*	90	Khandaur*	91	Kopa*	92	Mittupur**
93	Ratana*	94	Surhurpur**	95	Ashopur*	96	Bhiri Uphar*
97	Deehawa Daulatpur**	98	Dharupur*	99	Elfatganj*	100	Foolpur*
101	Fulpur*	102	Hardaspur*	103	Kakrahi*	104	Katariya*
105	Kewtala*	106	Mahadewa*	107	Majha Sarwa*	108	Naseerabad*
109	Naurahani*	110	Raipur*	111	Ramdeeh*	112	Samsuddenpur**
113	Semaaur Khanpur*	114	Sunther**	115	Tandwa Purab*	116	Umrapur**

Key: marked with* sites are explored by the present author, marked with** sites are re-explored by the present author

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Effect of Plyometric and Circuit Training on Jumping Ability of Basketball Players

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The purpose of the study was to study and compare the effects of plyometric and circuit training on the jumping ability of Basketball players. Seventy-five males intercollegiate level Basketball players of Veer Bahadur Singh Purvanchal University Jaunpur Uttar Pradesh were selected randomly as subjects for the purpose of the study. The selected players were equated on the basis of pretest and then divided equally into three equal groups of 25 students each viz. (A) Plyometric training group, (B) Circuit training group and (C) Control group. The age of the players was ranged between 19-26 years. The training program was administered to the two experimental groups whereas no training was administered to the control group. The training was administered for a period of twelve weeks, thrice a week in a progressive manner. The criterion measures to test the hypothesis related to jumping performance were Vertical Jump, Three Successive Double Feet Jump and Three Meter Spike Jump. Equated group experimental design was employed in this study. To compare the effect of two different training programs, plyometric training and circuit training, on jumping ability of Basketball player's one way analysis of variance was performed to find out the difference among the selected three groups. In case of any significance obtained by F-ratio, LSD Post Hoc test was applied to test the significance of difference between the means. Within the delimitations and limitations of the present study and on the basis of findings, it was concluded that:

- 1) There is a significant difference in the mean performance of two different selected training group and control group.*
- 2) In Vertical Jump, Three Successive Double Feet Jump and Three Meter Spike Jump performance plyometric training groups has shown superior performance than the other selected groups followed by circuit training group and the least performance was shown by control group.*
- 3) Hence, the findings of the present study reveal that plyometric training is best training program to improve jumping ability of players out of the two training programs selected for the purpose of the study.*

Key words: Plyometric, Circuit Training, Jumping Ability.

Prologue

Sports are a world-wide phenomenon today. It has gained immense importance and popularity in recent times demanding immaculate organization and planning. In fact, it entered a new horizon of sporting culture, leading to the emergence of sports sciences as the back bone of performance sports. This brought into sharp focus the training process as the means of development of sports performance. With the increasing prestige being attached to winning of medals in international competitions, it is quite natural to give more stress on talent - identification and to systematize the training methodology. Training techniques based on new findings in exercise physiology, biomechanics, sports medicine, sports psychology, etc. are adopted to bring about maximum possible unfolding of potential in sports performance.

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Over the past decade, plyometric training has gained tremendous popularity as a means of improving explosive strength. Plyometric is the term now applied to exercises that have their roots in Europe, where they were first known, simply as 'Jump Training'. Origin of the term 'plyometric' is derived from word "pleythyein" which means 'to increase' or from the Greek words 'plyo' and 'metric' which mean 'more' and 'measure'. The other terms used in conjunction with plyometric are depth jump, box jumping and jump training?

Circuit training is a very popular and effective organizational form of performing physical exercise. It is based on the premise that the athlete must do the same amount of work in a shorter period of time or must do considerably more work within the limits of an assigned training period. Circuit training is the term given to resistance exercises grouped together to achieve general or specific. Exercises are performed in a circular arrangement that allows athlete to program from one exercise station to the next until all stations have been completed. Circuit training is a method of physical conditioning that employs both weight training and conditioning exercises. In some forms apparatus stunts have been added as a third kind of activity. The method has achieved considerable popularity in England and has found favor in the United State as a means of achieving optimum fitness in a systematized and controlled fashion. All over the world coaches of various disciplines in sports have conducted research to find out an appropriate way of training for their athletes and players to improve their motor and physiological abilities which the special factors are contributing towards an athlete's performance. Therefore, the research scholar had made an attempt to compare the effects of 12 weeks plyometric and circuit training on the jumping ability of Basketball players.

Objective of the Study

The objective of the present study was to study the effects of 12 weeks plyometric and circuit training on the jumping ability of Basketball players and to find out which of the selected training is more effective for the improvement of jumping ability.

Methodology

Selection of Subjects

To achieve this purpose of investigation, a total of seventy-five males Basketball players, at intercollegiate level, of Veer Bahadur Singh Purvanchal University Jaunpur Uttar Pradesh were selected randomly as subjects for the purpose of the study. The selected players were equated on the basis of pretest and then randomly divided equally into three equal groups of 25 players each viz. (A) Plyometric training group, (B) Circuit training group and (C) Control group. The age of the players was ranged between 19-26 years.

Criterion Measures

The criterion measures to test the hypothesis related to jumping performance were:

- 1) Vertical Jump.
- 2) Three Successive Double Feet Jump.
- 3) Three Meter Spike Jump

Design of the Study

Equated group experimental design was employed in this study.

Statistical Technique Used

To compare the effect of two different training programs i.e., plyometric training and circuit training and the control group on jumping ability of Basketball player's Analysis of variance was computed to find out the difference among the selected three groups. In case of any significance obtained by F-ratio, LSD Post Hoc test was applied to test the significance of difference of post hoc differences between the means. The obtained F-ratio was tested for significance at 0.05 levels.

Findings

Table-1. Showing the analysis of variance of different training programs groups and the control group on jumping ability of Basketball player's (Scores in Centimeters).

Variables	Source of Variation	df	ss	ms	F-Ratio	Required F-Ratio
Vertical Jump	Between Group	02	778.48	389.24	26.88*	3.13
	Within Group	72	1042.70	14.48		
Three Successive Double Feet Jump	Between Group	02	2942.05	1470.03	12.57*	3.13
	Within Group	72	8426.46	117.03		
Three Meter Spike Jump	Between Group	02	3742.78	1871.39	44.15*	3.13
	Within Group	72	3052.94	42.40		

***Significant at 0.05 level**

The findings of the study revealed that reveals that the means of two experimental groups of plyometric training group, circuit training group, and control group differs significantly, as the obtained 'F' value of Vertical Jump 26.88, Three Successive Double Feet Jump 12.57 and three-meter Spike Jump 44.15 among the groups are greater than the required 'F' value 3.13 at 0.05 level.

Table-2. Post-Hoe test of significance for different training program groups and the control group on jumping ability of Basketball player's (Scores in Centimeters).

Variables	Plyometric Training Group	Circuit Training Group	Control Group	M.D.	C.D.
Vertical Jump	40.40	36.42		3.98*	
	40.40		31.42	8.98*	2.80
		36.42	31.42	5.00*	
Three Successive Double Feet Jump	650.22	640.15		10.07*	8.05
	650.22		620.44	29.78*	
		640.15	620.44	19.71*	
Three Meter Spike Jump	93.00	86.90		6.10*	1.90
	93.00		84.50	8.50*	
		86.90	84.50	2.40*	

***Significant at 0.05 level**

An Examination of Table-2 reveals that the mean difference value between plyometric training group and circuit training group 3.98, between plyometric training group and control-group 8.98 and between circuit training group and control group 5.00, reveals that there is a significant difference in vertical jump performance as the mean difference values are greater than the critical difference value 2.80. similarly, the mean difference value between plyometric training group and circuit training group 10.07, between plyometric training group and control group 29.78 and between circuit training group and control group 19.71, reveals that there is a significant difference in Three Successive Double Feet Jump performance as the mean difference values are greater than the critical difference value 8.05.

The Table also reveals that the mean difference value between plyometric training group and circuit training group 6.10, between plyometric training group and control group 8.50 and between circuit training group and control group 2.40, reveals that there is a significant difference in Three Successive Double Feet Jump performance as the mean difference values are greater than the critical difference value 1.90.

Discussion

The analysis of data clearly reveals that eight weeks of Plyometric training and Circuit training brought significant changes in the jumping ability of player's i.e. Vertical jump, Three Successive Double Feet Jump and Three Meter Skip Jump. The findings of the study reveals that in all the selected jumping performance the plyometric jump training group has shown superior performance than the other selected group followed by circuit training group and the least performance was shown by control group. It may be due to the reason that plyometric training offers rich variation of exercises and low structure which might activates the stretch reflex mechanism. The rapid lengthening of a muscle just prior to the contraction may also result in much stronger muscle contraction. The contractile strength is believed to be due to stretching of muscle spindles, involving a mitotic reflex which results in an increased frequency of motor unit discharge stimulation of other receptors and an increased number of activated motor units. Hence, it may be due to the facts that had increased the ability of plyometric training group to perform better than the other selected groups. Evidences indicates that plyometric exercise over systematically carried out by -1972 gold medal winner Valerie Borzov and JenusLusis. The findings of the study are also in consonance with the findings of Germar, and Tourni et.al.

The findings of the study also reveals that Circuit training group has shown better performance than control group but less than that of plyometric training group. It may be due to the reason that in circuit training exercises are performed in a circular arrangement that allowed the players of selected group to perform exercise from one exercise station on the next until all stations have been completed, where different groups are made to respond based on numbers of repetitions, intensity of stimulus duration of pauses etc. which might have improved the contractile ability of muscles of the subjects involved in this group thus shown better performance than the control group. The findings of the study are in consonance with the findings of Charles and Olsen.

Conclusions

Within the delimitations and limitations of the present study and on the basis of findings, the following conclusions are been drawn-

- 1) The findings of the study reveal that there is a significant difference in the mean performance of two differences selected training group and control group.
- 2) In vertical jump performance plyometric training groups has shown superior performance than the other selected group followed by circuit training group and the least performance was shown by control group.
- 3) In three successive double feet jump performance plyometric training groups has shown superior performance than the other selected group followed by circuit training group and the least performance was shown by control group.
- 4) In three-meter skip jump performance plyometric training groups has shown superior performance than the other selected group followed by circuit training group and the least performance was shown by control group.

- 5) Hence, the findings of the present study reveals that plyometric training is best training program to improve jumping ability of players out of the two training programs selected for the purpose of the study.

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Introduction of FATA : Core of Af-Pak Region's Instability

Vivek Pandey *

If any one place has been in strategic news in recent years it is Federally Administrated Tribal Area (FATA), and if any one issue which has been debated most in the same period, it has been terrorism. In fact if one talks of one, the other would come in picture automatically. In fact these two are very closely interrelated both fundamentally and conceptually. In this research article we discuss the Historical Perspective, Geography/Terrain, Demography, Judicial System, Tribal Socio-Political System, Socio-Economic Profile and Militants Groups of FATA.

Keywords : FATA, Af-Pak Crisis, Terrorism

Introduction :

The federally administered tribal areas (FATA) is a semi-autonomous tribal region in the northwest of Pakistan, lying between Afghanistan to the west and north, and the provinces of Khyber Pakhtunkhwa to the east and Balochistan to the south. The FATA comprises seven agencies (tribal districts) and six frontier regions. The territory is almost exclusively inhabited by Pashtun tribes, who also live in the neighbouring Khyber Pakhtunkhwa and Afghanistan and are Muslim by faith. The territory is governed¹ through the Frontier Crimes Regulations.

The term Af-Pak region was coined and defined by Richard Holbrooke the Obama administration's Special Representative for Afghanistan and Pakistan in March 2008; he said that, "We often called the problem of Af-Pak, as in Afghanistan-Pakistan. He is not just an effort to save it syllables. It is an attempt to indicate and imprint in our DNA the fact that there is one theatre of war, straddling an ill-defined border, the Durand Line, and that on the western side of that border, NATO and other forces are able to operate. On the eastern side, it's the sovereign territory of Pakistan. But it is on the eastern side of this ill-defined border that the international terrorist movement is located". The usage of this term was stopped in year 2010, however the theatre of operations can be best Defined by Af-Pak as this is where the concentration of international effort has been. The geographical contours of this region would be entire Afghanistan, and on western side of Durand line, the areas comprising of Khyber Pakhtunkhwa, Frontier Agency Tribal Area, Northern areas of Balochistan including the town Quetta Taliban is mainly Pashtun dominated movement and they dominate both side of Durand line, which imposes severe restriction on international forces to carry out pursuit and concerted operations as it would challenge the sovereignty of Pakistan.

The seven Tribal Areas lie in a north-south strip that is adjacent to the west side of the six Frontier Regions. The areas within each of those two regions are geographically arranged in a sequences from north to south the geographical arrangement of the seven tribal areas in order from north to south. The geographical arrangement of the seven Tribal Areas in order from north to south is: Bajaur, Mohammand, Khyber, Orakzai, Kurram, North Waziristan, South Waziristan, the geographical arrangement of the six Frontier Regions in order from north to south is: Peshawar, Kohat, Bannu, Lakki Morwat, Tark, Dera Ismail Khan.²

Historical Perspective of FATA:-

FATA features in history as a corridor of early invasions and route for trade between Central Asia and the Indian sub-continent. Although, records of all invaders are not available,

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some known ones include Alexander (323 BC), Turks (445-550 AD), Arab (568-900 AD) Changez Khan and his successors (1220-1365 AD), Taimur and his successors (1380-1504 AD) and Babur (1526 AD). After the end of the Mughal era, in 1739 AD, Nadir Shah obtained the possession of trans-indus territory followed by Ahmad Shah Abdali who established the first Afghan monarchy (1747-118) covering these areas too. Thereafter, rise of the Sikh rulers (1818-1849 AD) with their annexation of Peshawar in 1832 installed them as new rulers of North West India but they are also possessed very little influence on the trans-Indus tract and left the tribesmen to manage their own affair.³

Later, although the British annexed Peshawar (from Sikhs) in 1849, they could not administer the areas due to interference by Amir of Afghanistan until the Durand Agreement was signed in 1893 which defined the boundary beyond which the Amir's influence was not to be extended. However, knowing the traits of the tribesmen, British too never extended their writ to tribal areas and circumvented the problem of tribal incursion (into settled areas) by providing some utility services and stipends to selected influential persons and employed three methods of concern i.e., fines, blockades and expeditions. British also established military garrison all along the Durand line and raised Frontier Corps (comprising tribesmen) for protection of LOC, manning the border and maintaining of law and order. During their rule, they enforced certain restrictions (on tribesmen) to including their visits to settled area between sunrise and sunset, purchase of property in settled areas with special sanction etc.

On independence, Pak renewed all the (British) treaties (with all tribal areas including FATA) and conferred the "continuity status" with legal cover given in Government of India Act 1935 and incorporated them after independence in all the constitution (1956, 1962 and 1973). Successive governments did not take adequate measures (especially with the development) to integrate them into the national mainstream, except for certain changes like doing - area with restrictions on tribesman visits (to settled areas) and purchase of property in settled areas.

FATA came into limelight with the Soviet occupation of Afghanistan when CIA decided to turn Afghanistan into a Vietnam of USSR. The influx of Afghan refugees, spread of militant culture and rise of Taliban altered the ethnic balance (with "Mujahideens" from other Muslim countries, particularly Arab, arriving in the region) brought weapon proliferation and an inflow of narcotic trade to the region. After the USSR left Afghanistan, the region, on Pak initiative, continued to act as a launch-pad for Pak based Mujahideens fighting the pro-Russia / Northern Alliance-led Kabul-based government till such time Taliban captured the capital city. The FATA tribesmen, who buy now got used to gun culture and easy money, extended their hospitality to the foreign fighters (including Al-Qaeda) who started setting down in the tribal belt after Afghanistan came under Taliban rule.

Geography / Terrain:

Lying between Hindu Kush and Southwestern chain of Suleiman mountains, FATA, a narrow belt of 27220 sq km/ consists of one of the most rugged and inhospitable terrains of the world. The area (even on the Afghanistan side) is backward and underdeveloped, lacking basic communications infrastructure. The entire area is interspersed pest with no of mountain ranges and rivers which coupled with poor network makes approx 4200 sq km of area inaccessible or politically "No Go Areas" which (prior to 9/11) were beyond the administration control of the Pak government. These area include Arrange/Barang in Najaur Agency, Khwezai/Berzaiin Mohmand Agency, Tirah Valley in Khyber Agency, Madda Khel in NWA and Shawal in SWA.

Geographically, FATA can be divided into three regions i.e. Northern, Central and Southern region. The Northern region lying between Swat R and Kabul R is mostly mountains with deep gorges and temperature climatic conditions which, though, limit the agriculture, allow the variety of cash crops include fruits, seeds etc. The Central Region comprising Khyber, Kurram and Orakzai Agencies and FR of Peshawar, Kohat and Bannu has snow-clad Safed Koh Mountains in the North and fertile Khanki, Mastura and Bara River valleys in the South. The Southern Region comprising both the Waziristan Agencies (NWA and SWA) and Frontier Regions of Dera Ismail Khan, Tank, Bannu and Lakki Marwat have igneous rock formed Waziristan Hills where a number of important minerals are available in commercial quantities.⁴

From military point of view the area lends itself to low intensity conflict in the form of shipping and ambushes and favors, predominantly, small scale infantry operations. Owing to lack of laterals and difficulty in inter-valley operations moves is unidirectional and characterized by lack of mutual support and flexibility with heavy logistic requirements. Peshawar, being an important communication centre is critical for maintaining the government's writ. The Axes Chitral Mardan Nowshera and Peshawar-Kohat-Bannu-Razmak-Wan a – Zhub from the backbone of the communication system and act as feeders to all offshoots leading to the seven Agencies. Apart from this, Rd Peshawar-Khyber assumes important because it is a lifeline for move of logistic for Coalition Forces deployed in Afghanistan.

Demography:

The Pashtuns or Pakhtuns or Pathans inhabitants of FATA, are ethno-linguistic groups of people who also occupy FATA, settled areas of NWFP, Northern and Western Balochistan and as well as Eastern and Southern Afghanistan. Possessing a distinct socio-cultural setup and having enjoyed an independent status throughout, these tribesmen take pride in their legacy of struggle, adversity and war. A hardy race, divided into approx 60 clans/tribes/sub-tribes, these people who have been brought-up in an atmosphere of hereditary blood feuds are known to be expert right in the right of self preservation where every boy learns to handle a rifle at an early age is quick to take advantage of any sign of hesitation, indecision or weakness. Having resisted numerous invasions, these tribesmen are known to be great warriors and their strength lies in guerilla warfare coupled with unlimited patience in its execution.

The tribesmen who are guided more by their social structure, conventions, codes and traditions (Pakhtunwali) would live-by the same as long as there is an enabling environment and there is no conflict with Islam, in which case the rivaj (Customary Law) is upheld. Although riwaj is generally upheld, the tribal psyche and their gullible nature allowed them to be manipulated in the name of religion and tribe.

Known to be implacable enemies and staunchest friends, the internal dynamics of the tribes play a very important role. Considering themselves as free people, the tribesmen propagate their right to possess a weapon and possession of the latest weapon is considered a status symbol. Also, due to lack of development, smuggling (called as Tijarat in local parlance), even of narcotics, is considered legitimate. The tribesmen present a unified response (to any outside force) only if the tribal status and, to some extent, religion is threatened.

Judicial System:

Enjoying special constitutional status which excluded the FATA from HC/SC jurisdiction, the tribal judicial system hinges on the troika of Jirga System PA and FCR 1901. In all the disputes (criminal/civilian and even in the case of FCR) the Riway (Customary Law)

and Sharia (Islamic Law) form the basis for arbitration. With Frontier Corps, Frontier Constabulary Khassadars and Levies as law-enforcement agencies of the civilian administration, the Administration generally does not interfere in the offences occurring between tribes except where state interest is involved, in which case the interference is direct (use of force) or indirect i.e., through Maliks/Khassadars or by invoking tribal/territorial responsibility clause of FCR.

Tribal Socio-Political System:

The tribal socio-political set-up rests on two basic pillars of power i.e., Maliks (tribal elders) and Mullahs (Religious Teacher) with Riway (Customary Law) and Quam (Tribe) as binding factor and Jirga (Tribal Council) along with Pakhtunwali providing legal cover. This well-coordinated and tailored socio-political system not only negotiable/resolves the tribal disputes/issues but also provide an interface between the Government and Tribes, besides shaping the tribe's actions/perceptions.¹

Socio Economic Profile:

FATA, the least development area of Pak, with agriculture and livestock as main livelihood has approx 7% of land under cultivation.⁵ The region with approx 1500 primary schools, 180 middle schools, 120 high schools and the eight colleges has an overall literacy rate of 17.4% with female literacy rate low as 3%. Likewise, in health sector, the average population per dispensary held is 2893 person while the average population person doctor stands at 14949 persons. The transport infrastructure found is rudimentary with roads per square kilometre as low as 0.16% which leaves almost one third area inaccessible.

Militants Group in FATA:

The group is headed by Jalaluddin Hakkani who has been responsible for the setting up of madarasas and military training camps in the border areas between Pakistan and Afghanistan. Their activities in the region, which begin in 1978, continue till date and have the support of Al-Qaeda, and other militant organizations. Due to advancing age and health problems Jalaluddin Haqqani has passed the mantle of leadership to his son Sirajuddin Haqqani (alias Khalifaji), who operates out of north Waziristan in Pakistan. He carries five million dollar US bounty on his head. The group has links with foreign fighters, Pakistani Taliban (TTP) and Afghan Taliban. It operates on professional lines and has its own think tank and a political wing. The notable members of this group are Maulvi Gul Ramzan, resident of Miranshah, Moulvi Naeem, resident of Bannu. Some other militant groups except Haqqani network are followings: Tehriq-e-Taliban Pakistan, The Taliban of North Waziristan, The Mehadi Millitia and Haidari Taliban, Ansar-ul-Islam, Tehrik-e-Nifad-e-Shariyat Muhammadi, The Kashmiri group and Al Qaeda.

Conclusion:

FATA is still a most dangerous place with the failure of governance and the increase of terrorism affecting Af-Pak region, not only individually and separately but also jointly. In spite of whether the NATO forces remains in the region or goes completely, both Afghanistan and Pakistan will remain confined by their geography and historical and economic ties and requirements. They cannot avoid talking on terrorism head on. Muddling along is not a choice, recent history shows that the cost of destination are too high in the end. The problem influences the both nations. Afghanistan was and could well again become a safe place for international terror. Therefore, it is serious, that not only the international community but also the government and general populations of both Afghanistan and Pakistan become associates in an effort to develop FATA and the contiguous nine Afghan provinces. Afghanistan and

Pakistan could then become a centre for economic development and progress in the region including World.

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Socio-Cultural, Political and Economic Participation of Indian Diaspora in USA¹

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Indian diaspora in USA is one of the most successful communities in USA. By the dint of their hard work and determination they have established themselves in every sphere of American society. Though we mark the arrival of Indians in USA during the period of British colonialism and before, yet the magnitude in Indian emigration to USA rose after the enactment of 1965 Immigration Act. The pace of Indian emigration was accelerated during the 1990s when a large number of very well educated and highly skilled Indian professionals including doctors, engineers, scientists, software professionals, academicians etc. landed in USA. Indo-Americans stand at the top in almost every profession. In terms of their annual family income, attainment in higher education, their representation in different sectors like, health, science and technology, software profession, in different other economic sectors etc. they stand much higher than the national average. Their participation in the political sphere of USA is quite noteworthy. They are the cultural ambassadors of India, and it is due to their efforts many Americans are attracted to Indian cultural heritage, civilizational values, spiritualism, Yoga etc. Indian diaspora in USA has played a tremendous role in transforming the bilateral relationship between India and USA. The paper makes an attempt to analyze the participation and contribution of Indian diaspora to the socio-cultural, political and economic spheres of USA, and their role in strengthening the bilateral relationship between India and USA.

Key Words: *Diaspora, Soft Power, Globalization, Transnationalism, Networking, Lobby*

Introduction : The United States holds one of the largest and prosperous Indian diasporas across the globe. There are considerable numbers of diasporic Indian communities living in various countries such as Fiji, Guyana, Mauritius, Suriname, Trinidad and Tobago etc. Though the early history of Indian emigration to USA can be traced back to about 1900s, the modern history of Indian diaspora in USA and the emergence of an Indo-American community is to be marked with the passage of new legislation on immigration in 1965 in USA. It was in fact a moving away from the racial and restrictive immigration policies implemented by USA earlier, and it permitted, though with certain conditions, people from other nationalities including Asians and Indians to go to the United States. In spite of several attempts made by the governments in USA to restrict immigration, the number of immigrants to USA has increased over the last few decades, and Indian diaspora in USA has seen a significant rise in the last decade.

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Indian emigration to the developed countries mostly comprises of professionals and some skilled labors and, while Indian emigrants to the other economically rich countries comprise of majorly skilled and semi-skilled labors along with some numbers of professionals. The occupational composition of Indian immigrants in the United States was much more professionally and technically oriented than USA labor force as a whole (Madhavan 1985: 466). The new Indian immigrants in USA, who have migrated in the recent past, are distinct from those Indians who have been residing in USA for many years. While the earlier Indian emigrants to USA mostly comprised of skilled or semi-skilled labourers, students and few numbers of professionals, the new Indian entrants to USA in the last two decades are mostly highly educated professionals such as doctors, engineers, software professionals, scientists, academicians etc. Indian immigrants have much higher educational and economic attainment compared to the people of other ethnic communities in USA. The Indo-American community is swiftly emerging as a strong and influencing force.

It has been observed that the integration of the immigrants in the society, culture, economy and politics has yielded manifold benefits for the host country, and the immigrants have proved themselves as a significant asset for the host country apart from being a very prominent contributor to their home country. The growth in immigration and the resultant changes in demography has resulted in a major shift in public policy of the countries experiencing immigration. As Shutika observes, "Understanding the dynamics of new destinations is essential to understanding issues of contemporary immigration debate because these communities have become some of the most vocal and influential players in immigration politics" (Shutika 2011: 08).

Due to the rise in the size, as well as the increase in the economic and political participation, diaspora has become an important aspect and an increasingly vital element in international politics. But it is important, how the home country frames policies to engage the diaspora. Devesh Kapur points out that the effects of international migration and diasporas on the country of origin depends both on the characteristics of the diaspora and the conditions and policies of the home country (Kapur 2003: 446). Indian diaspora in USA is a very significant player in Indo-USA bilateral relationship. This has been due to Indian diaspora's active participation in the socio-cultural, economic and political spheres of USA. The paper makes an attempt to study and analyse the proactive participation and role that the Indian diaspora is playing in every sphere of USA, and hence effecting a vital impact on Indo-USA relationship.

A Brief History of Indian Diaspora in USA : USA has been witnessing immigration from a very longer period of time. In fact, some scholars label USA as a country of immigrants. As Ambrosek observes, "The most famous era of immigration in America occurred between the middle of the 1800s and the beginning of the 1900s. This era is known as the Great Period of Immigration, and during this period, more than thirty million immigrants came to the United States, most of them from Europe" (Ambrosek 2008: 11, 12).

In the gradual process various governments in USA have brought about different immigration acts restricting immigration to USA. Before the framing of the 1965 Immigration Act in USA, the immigration laws were very much racial in tone and restraining in nature. In the 1960s, immense social change and debates on the issues of civil rights and racial equality forced the government in the United States to bring a more lenient legislation on immigration. The 1965 Immigration Act followed by some other immigration acts enacted by USA opened doors for the people who can contribute to the economic development of USA. In the recent

years there are really very serious discussions in regard to the implementation of immigration policies to curtail immigrants in USA.

The history of Indian diaspora in USA can be divided into four phases. The first phase can be marked during the period of British colonialism in India in the nineteenth century. During this period many numbers of workers and some numbers of students and semi-skilled professionals went to USA. After India's independence some Indian semi-skilled and skilled workers and business men went to USA. This can be labelled as the second phase. Many numbers of students, academicians, doctors, engineers, scientists etc. went to USA after the passing of the Immigration Act in 1965. This is the third phase of Indian emigration to USA. The fourth phase can be marked in 1990s. Globalization and innovation in science and technology, medical sciences, information technology etc. in USA gave rise to the demand for technically skilled people. And this demand was fulfilled by the emigration of very well educated and proficient Indian professionals. But as documented by Archdeacon, migration into USA can be classified into five different periods: (a) the colonial era (1607-1790s); (b) the old immigration (1790s-1890s); (c) the new immigration (1890s-1930s); (d) the depression (1930s-1965); and (e) third world immigration (1965-present) (Archdeacon 1983). We can mark that after the period of 1960s Indian emigration to USA mostly comprised of professionals. The success and achievement of Indian professional class and business class in USA changed the perception of others towards Indians. Indians in USA are now considered as a model minority community to be emulated.

Indian Diaspora in the Socio-Cultural Sphere of USA : Indian diaspora in USA is one of the most influential diasporas with its enriched socio-cultural heritage, economic achievement and political participation. As Barringer et al. put it, "Today, the Indian diaspora in the United States is quite large and diverse in terms of education, occupation, income, region of origin, religion, etc." (Barringer et al. 1993).

The first generation of Indian diaspora was deeply rooted in their Indian culture and tradition. The subsequent and younger generation of the Indian diaspora have also maintained the rich Indian cultural and civilizational heritage and values. At the same time, they have also acquired the socio-cultural practices of the larger American society. As Gsir and Mescoliput it, "Socio-cultural integration occurs, not only through immigrants' endeavors to learn a new language and culture, but also through the articulation or interaction with the host society and in relation to opportunities to participate in the socio-cultural activities of the receiving society" (Gsir and Mescoli 2015: 12). The socio-cultural interaction, political participation and economic transaction with the other communities have made Indian diaspora to acquire some of their values.

Indian diaspora is very emotional, possessive and protective towards their culture and tradition. It is really very interesting, how the Indian diaspora has been able to maintain its cultural practices in such a changing and vibrant country like USA. Indian festivals like, Holi, Deepavali, Navaratri etc. are celebrated with much pomp and ceremony. People from different communities participate in them donning Indian costume. Americans are greatly attracted towards Yoga, Indian spiritualism and socio-cultural value system, and it is largely due to the vibrant Indian diasporic group there. Culture has in fact brought Indian diaspora together. Culture has also played an important role in Indo-USA cooperation.

Contribution of Indian Diaspora to the Economy of USA and India : Indian diaspora in USA is quite prosperous and they have achieved their excellence through their hard work. There are many entrepreneurs from Indian diaspora in USA as well as so many CEOs of top companies of USA are from Indian diaspora. Many top-class executives in prominent

American companies are from Indian diaspora. As has been mentioned above, Indian diaspora is a vital aspect of India's foreign policy, economic development, cultural ambassador and knowledge enhancement. They have played a very significant role in bringing development to the economy of India and also created a very positive and promising global image of India across the world so that investors can come and invest in India. The diaspora has not only significantly invested in the economy of India but also, they have been a source of attracting investors to India.

On the economic front, for the last two decades the FDI in India has increased. Undoubtedly, Indian diaspora in USA due to their economic achievement, political influence and intellectual brilliance has played a significant role in attracting FDI to India. But India needs to employ Indian diaspora in USA very proactively in a strategic manner to attract more FDI into India. The socio-political environment in India has to be developed to gain the confidence of the investors. Sectors of management, finance, corporate, trade, banking etc. need to be improved so as to attract FDI and carry out the economic development in India.

Diaspora not only helps the home country by their own investments and bringing investments from other corporate houses, but also the remittances sent by the diaspora help in bringing economic development in their home country. Indian diaspora in USA sends a good amount of remittances to India. And these remittances have helped in developing some of the economic activities in their home states or places. Remittances not only enhance the purchasing power of the family members of the diaspora living back home but also help the family members or relatives of diaspora investing in retail trading and in such kinds of business activities. Also, the remittances of the diaspora help in carrying out many philanthropic activities in their region. Here, we may take the case of the state of Gujarat in India. With the remittances of the diaspora, many hospitals, libraries, children park, temples etc. have been built in different regions of the state. Some roads and other infrastructures have also been built by the remittance money.

In the 1990s India had to face the severe balance of payment crisis. The foreign debt of India was mounting. In this period of crisis, the then Indian government appealed to the Indian diaspora or more prominently the Non-Resident Indians (NRIs) to help India in this period of financial crisis. In certain ways Indian diaspora had come in rescue of Indian diaspora. Also, the liberal economic policies adopted by India during this period provided a great opportunity for the diaspora to invest in the economy of India.

In the recent years, economic relation between India and USA has greatly improved. Many American companies have been investing in India. Also, many Indian companies including software companies have been investing in USA. Many people from Indian diaspora are also investing in various sectors of US and Indian economy. Many of the hotels in India located in Gujarat, Punjab etc. are owned by people from Indian diaspora in USA. Both the United States of America and India have identified some of the key sectors of the economy where they can increase their co-operation. Certainly, the end of the Cold War, and the advent of the process of globalization, along with the liberalization of Indian economy has established one of the most prudent partnerships between India and USA. Currently, USA is one of India's biggest trading partners and India is one of the largest investment options for MNCs of USA (Sahay 2009).

The achievement of Indian diaspora in USA is unparalleled. They are considered as a model community to be emulated. Though the Indian population in USA is about just less than one percent of the total US population, yet in terms of their economic and educational achievement they are second to none. Roughly, the annual household income of Indian

community in USA is about one lakh USD, which is much higher, almost double than the national average annual income of U.S. population, which stands at roughly fifty-four thousand USD. Similarly, the attainment of Indo-Americans in higher education is much higher, almost more than double of the national average of U.S. population. Due to their economic achievement and brilliance in higher education attainment, Indian diaspora is a very influential community, and they have played a tremendous role in transforming Indo-USA economic and political relationship. Both the governments in USA and India should engage the Indian diaspora in a more strategic and proactive manner in enhancing their economic relationship.

Indian Diaspora in USA and their Political Participation : People of Indian diaspora in USA have proclaimed their presence and prominence in the political sphere of USA especially in the last three decades by contesting elections, campaigning for different political parties, playing the role of strategist for different political parties and candidates, funding political parties and candidates and participating in the political process of USA. Indian diaspora in USA acts as a powerful lobby group for the interests of India. The powerful lobby of Indian diaspora has helped in developing a positive image of India and improving the discussion on India in the political institutions of USA. As Shain and Barth point out, “The diaspora is bound to have more impact in homeland politics if it is in a stronger position in its relationship with the homeland. This strength relationship is measured in terms of how much the homeland needs diaspora resources for investment, or how much political support the diaspora can mobilize from the host country for homeland benefit” (Shain and Barth 2003:465). India greatly benefits from the brilliance, achievements, skills, technologies, social networks and lobby of Indian diaspora in USA.

In last some years, Indian diaspora have been actively participating in the politics of the United States. There are number of Indian origin people who are prominent politicians in USA. (Namrata) Nikki Haley, former governor of South Carolina, (Piyush) Bobby Jindal, former governor of Louisiana, Kiran Ahuja (chief of staff at USA office of personnel management), Reshma Saujani (first Indian woman to run for Congress), Seema Verma (first Indo-American female administrator of USA centers for Medicare), and many others have made their place in the political domain of USA. Apart from these political voices, Indian diaspora has formed various community level organizations and political institutions to raise voice for various issues pertaining to their benefit.

It is of course true that there are not so many senators, governors etc. from Indo-American community. But if one considers the number or percentage of Indian origin population in USA, their political success and economic achievement is quite significant. The economic success and superb achievement in higher education have added strength to the political participation of Indian diaspora in USA. Indo-American community is an influential political force. They support and favor the cause of India by influencing the framing of USA’s foreign policy. This political activeness of Indians has strengthened their assertiveness. The new Indo-American political assertiveness is particularly important for altering the pessimistic views scenarios about trends in American images of India that were outlined previously (Hymans 2009). Indian diaspora is credited of turning the very dormant and unfriendly Indo-USA relationship to a very active, cordial and promising one. Both the US and Indian government must keep the Indian diasporic community in view while devising foreign policy.

Indian Diaspora in USA: Networking and Lobbying : Now we all are living in the world of networks. Network facilitates the flow of information and at the same time it helps in

developing networking. Globalization and transnationalism have greatly impacted on the facilitation of networks and networking. The innovations and developments in the communication technologies have facilitated diaspora's interaction among themselves and with the homeland. The evolution of highly skilled diaspora networks has gained importance in the last two decades. These networks bring together groups or individuals of immigrant intellectuals who have maintained ties with their countries of origin (Sahay 2009). Countries who have good number of diasporic populations benefit from the diaspora networks. Diasporic networks are mediators between the homeland and the diaspora and among the diaspora groups. As Bhat and Narayan put it, "Efforts of the Government of India and also of the state governments in India have only furthered these ties through formalization of these networks under the contemporary globalization for the mutual advancement of India, Indian diaspora and the countries of the Indian diaspora" (Bhat and Narayan 2010: 22).

Indian diaspora is now able to communicate with their relatives, friends and fellow Indians very easily. The online availability of Indian tv channels, newspapers, magazines, journals etc. acquaint the diaspora with the developments happening in India. Through these modes, diaspora is also able to share their views and ideas with the fellow Indians. Indian diaspora is now a transnational community having networks across the globe, and the transnational character of the diaspora has helped them to live with multiple identities.

Indian diaspora in USA have formed various organizations and associations on the basis of their regional, religious and cultural affiliations. As Gautam observes, "During the early 1980s, the diasporic identity formation through the federation of organized associations took off. Contacts were established with other Indian communities and friends who had already settled in other countries. In the United States of America (USA), the NFIA (National Federation of Indians in America) was already working as a countrywide association. It was a federation of many local Indian organisations" (Gautam 2013: 24).

Some of the associations based on their identity as 'Indians' are India Community Center (Texas), Indo-American Chamber of Commerce (Texas), Indian Association of Western Washington, Indian Association of Greater Boston etc. There are various associations formed on the basis of culture such as Bengali Association of Southern California, Leuva Patidar Samaj of USA, Maharashtra Mandal (USA), Punjabi Cultural Society of Chicago (USA), Chicago Tamil Sangam (USA) and many others. There are various organizations based on different religions such as Swaminarayan Satsang Mandal, Vedanta Society of Southern California, Gurudwara Sachkhand Inc., Gayatri foundation and so on. These organizations interact with their members and among themselves through various communicative networks.

The economic and educational attainment of Indian diaspora and the formation of various associations and organizations by them has given them an edge in becoming a very strong lobby group in USA. Indian diaspora in USA is being viewed as a very robust lobby group who have influenced in devising a very lenient policy of USA towards India. Indian diaspora is also credited for improving and making the Indo-USA bilateral relationship a vibrant and cordial one.

Conclusion : Though there were some numbers of emigration of Indians to USA during the period of British colonialism and before, yet after the enactment of 1965 Immigration Act there was the rise in number of Indian emigrations to USA. But in the late part of the twentieth century and early part of twenty-first century we mark a surge in Indian emigration to USA. By the dint of their hard-working nature, despite of many obstacles, Indians have established themselves in all the spheres of American society. Indo-Americans are conceded as the model community for their economic contribution and achievement, educational attainment, law abiding nature, civilizational values and ethos etc. In terms of their hard work and dedication to work, they are second to none. As Kapur observes, "The greater impact of the Indian community on USA is a function of community's high initial level of education at the time of emigration and consequent success

within USA, coupled with the leveraging of that country's global salience as well" (Kapur 2003: 446). Indo-Americans have immensely contributed to every sphere of American society. As a soft power they are also promoting India in USA. Indian diaspora in USA has transformed Indo-USA bilateral ties, and they are a tremendous asset for India and USA.

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Tourism Industry of Jammu & Kashmir - Challenges And Opportunities

*Romasa Shukla **

Almost in every economy of the world, tourism sector plays a vital role in the contribution of generating revenue, employment opportunities and in economy's GDP. In Jammu & Kashmir state also, the tourism sector is playing a huge role in the overall development of State's economy. Kashmir has rightly been described as "Heaven on Earth" for its breath taking beauty throughout the world. Tourism sector has a great potential in Kashmir and it also provides immense business opportunities for the people in the Kashmir region. This paper attempts to examine the potential, opportunities and challenges of tourism sector in Jammu and Kashmir.

Keywords: Tourism, Employment opportunities, GDP, Economic Development, J&K

Introduction:

Tourism industry has become a very fastest growing industry in the modern period. It is recognized as an important "tiger" industry for the first decade of the current century. Tourism does not produce goods, but it is mainly a service industry and extends services to different classes of people. It consists of the activities undertaken through travel from home or workplace for the pleasure and enjoyment of certain destinations, and the facilities that cater to the needs of the tourist. Travel and tourism have been important social activities of human beings from time immemorial. The urge to discover new places within one's own country or outside and try to find a change of environment has been practiced from ancient times. Almost in every economy of the world, tourism sector plays a vital role in the contribution of generating revenue, employment opportunities and in economy's GDP. It provides opportunities to local populace to increase their living standards by increasing employment opportunities. According to the estimates from the World Travel and Tourism Council (WTTC) in 2011, tourism generates around 270.7 million jobs globally and accounts for over 10% of global Gross Domestic Product (GDP). It also plays an key role in cross-cultural exchange of the two cultures. It helps to learn about different languages, life styles and tradition. It provides opportunities to adopt the qualities of different cultures vice-versa, as tourists are also bound to cause tension among the local population by introducing new life styles and progressively promoting social, cultural and religious disruptions. Tourism serves as a means of conserving the cultural heritage of the local area which otherwise might be lost due to development. It provides scope for conserving local dance, art, craft, music, drama, dress and old historic monuments.

Objectives of the Study:

The present study has following specific research objectives:

1. To provide an introduction regarding Tourism Industry in J&K.
2. To identify potential and major challenges & problems of Tourism Industry in J&K.
3. To provide suggestions for the full utilization and expansion of Tourism Industry in J&K

Methodology:

The present study is descriptive and is based on the secondary information .The secondary information was collected from various Journals, Periodicals, Magazines,

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Newspapers, Newsletters, Research articles, Books, Internet and published and unpublished records of Ministry of Tourism Government of India and J&K tourism.

Tourism Industry in Jammu and Kashmir:

Jammu and Kashmir is the Northern most State of the India. Geographically it is a unique State with three different regions within the State i.e. Jammu, Kashmir and Ladakh. Agriculture, Horticulture, Animal husbandry, Forestry and Tourism are the main source of economy of the J&K State. Among all industries, tourism is an important industry in the state. Tourism is considered to be economic bonanza for J & K state because industrial development is very limited to hilly terrains. J &K is one of the popular tourist destinations in Asia. The tourism in J&K offers a wide array of places to see. The delighting backwaters, hill stations and landscape make J&K a beautiful tourist destination. Historical monuments, forts, places of religious importance, hill resorts, etc. add to the grandeur of the state. Thus, they attract tourists from all over the world. Tourism has now become a significant industry in J&K, contributing enormously to the state's economy and providing employment to a large number of people. Being a labor-intensive industry, the scope of employment is very vast. Tourism is regarded as multi-segmented industry, therefore provides different types of jobs like hotel managers, receptionists, guides, tour operators, travel agents, photographers & many other jobs which are required to strengthen the tourism. Additionally, J&K is also likely to become a major hub for medical tourism if timely steps are taken by the government authorities to exploit this opportunity as well. The state is bestowed with beauty & rich forests, natural lakes, fresh water. The state of Jammu & Kashmir is known all over the world for its beautiful valleys, lakes, snow capped peaks, invigorating climate, valleys, cool climate, opportunities for trekking fishing, skiing & number of archaeological, historical, cultural & religious places, cool climate & hospitable people. J&K especially Kashmir valley offers various categories of tourism. These include adventure tourism, medical tourism, water rafting, skiing, religious tourism, etc. Jammu and Kashmir has a composite culture. There is a harmonious blend of art, religion and philosophy. Religions like Christianity, Buddhism, Islam, Hinduism, and Sikhism etc. has co-existed in J&K since hundreds of years. The Hindu holy shrine of Amarnath in Kashmir attracts millions of Hindu devotees every year and Vaishno Devi shrine in Jammu region also attract tens of thousands of Hindu devotees every year. The wondrous state of J & K is bestowed with holy spots that make it an ideal pilgrim destination in India. The history of the state still lives in the forts, museums, ancient buildings and other heritage spots within the state. Jammu and Kashmir is blessed with both tangible and the intangible heritage which should be incorporated into the wider tourism circuit.

As stated above, the state of J&K has three distinct regions viz., Jammu, Kashmir and Ladakh. All the three regions have immense potential for tourism from both domestic as well as international tourists. Its impact is visible in the service industry sectors, such as transport, hospitality, horticulture, handicraft and small scale Industry. Kashmir is popularly known as "Paradise on Earth". For centuries Kashmir has been centre of attraction. Kashmir is also known as "Switzerland of East" and is famous for its wealth of beauty, its snow-capped mountains, rivers and fresh water lakes offer tourists ample opportunities for trekking, rafting, skiing & mountaineering. Some notable tourist places in Kashmir Valley are Dal lake, Mugal gardens, Niishat Bagh, Gulmarg, Yusmarg, Phalgam etc. Kashmiri's natural landscape has made it one of the popular destinations for adventure tourism in South Asia. Jammu is also known for its ancient temples, Hindu shrines, gardens and forts. The temple of Maha Kali (better known as Bahu or Bawey Wali Mata), located in the Bahu Fort, is considered second only to Mata Vaishno Devi in terms of mystical power. The temple was built shortly after the

coronation of Maharaja Gulab Singh in 1822. Other temples in the city include the Gauri Kund Temple, Shudh Mahadev Temple, Shiva Temple, Peer Khoh Cave Temple, Ranbireshwar Temple, and the Parmandal Temple Complex. Jammu's historic monuments feature a unique blend of Islamic and Hindu architecture styles. Ladakh the third and important region of the State has emerged as a major hub for adventure tourism. This part of Greater Himalaya called "Moon on Earth" comprising of naked peaks and deep gorges was once known for the silk route to Asia from subcontinent. Ladakh is home to the minority Buddhist community in the state. They have preserved their unique culture for the past hundreds of years. The major points of attraction are the Leh Palace, Namgyal Tsemo Gompa, Sankar Gompa, Shanti Stupa, and Soma Gompa. It has diverse practices in religion, rites and rituals, fairs and festivals, landscape and people, language and culture.

The year 1846 marks the beginning of modern tourism industry in Kashmir. Prior to 1846 in ancient and medieval times tourism industry did not exist in Kashmir yet the region was thronged by a lot of sages, seers, missionaries, traders, pilgrims, adventurers etc. The year 1885 marks a turning point in the history of Kashmir as it was from this year that the British Rulers got sufficient powers to make direct intervention in the policies of the government and in tourism industry many revolutionary developments took place like the development in the means of transport and communication such as the pathway between Jammu and Srinagar was built, telephone connection was setup, aircraft was landed at Srinagar airport in 1925 etc. The State Government made concerted endeavors to develop Kashmir as an international resort. However, these efforts were thwarted due to the political developments during 1989-90. In 1987 India received 1.164 million tourists out of which Jammu and Kashmir accounted for 7.21 lac and valley alone 5.11 lac of it thereafter the tourist inflow started dwindling and the tourism almost came to a grinding halt from 1989-90 onwards. Those who depended on this industry in one or the other way suddenly found themselves without an occupation and no means of livelihood. From a total of 5.5 lac tourists in 1989, the number had diminished to 8.52 thousands in 1995, 9.98 thousands in 1996 and 16.13 thousand in 1997 due to the political developments in the valley. Till the year 2010 there was a negative growth rate in the tourist arrivals. But during 2011-12 there was a significant increase in volume of domestic as well as foreign tourist arrivals in Kashmir. As per the data compiled from Economic Survey-2014 -15, the number of tourists visited Kashmir Valley during the years 2012, 2013, 2014 was 13.09 lakhs,

11.71 lakhs and 11.68 lakhs respectively. Pre 1989, Kashmir was paradise in the true sense. The ongoing armed conflict that erupted in early 1990s has hit hard the tourism sector causing the loss of tourist appetite for this particular destination. By 1991 there was a virtual shut down to tourism sector, which impacted the economy of the entire state and percolated down to every house hold. This state attracted over million tourists in the year 1988. With resurgence of violence in the state, the number of tourists has dwindled considerably over last 2 decades. Tourism, one of the main Kashmir's main industries has suffered tremendously due to violence in the region. The state has lost billions of dollars in tourism revenue. It is estimated that state lost 27 million tourists from 1989 to 2002 leading to tourism revenue loss of us \$ 3.6 billion.

1987, the last big season before the violence started, tourism accounted for approximately 10 per cent of the state's income. During the next 23 years of unrest, tourism contributed virtually nothing to state's economy. As a result of this specific incident negative travel advisories to visit Kashmir were issued by various foreign countries. This adversely affected the tourist revenue generated by foreign visitors. Such has been impact of conflict in

the valley that its main city Srinagar was once declared as the most threatened site in India by the World Monuments Fund (WMF), placing it on the 2008 list of Most Endangered sites (Winter and Punjab, 2010). From 8th May 2016 violent incidents certainly deterred people across India and abroad from coming to Kashmir valley, bad mouth about the current situation in the valley to keep the visitors away.

Prospects and Potentials of Tourism Industry in Jammu and Kashmir :

Jammu and Kashmir has tremendous potential in tourism sector. The scope of large scale industrial development is very limited in the State. Tourism being a labour intensive industry provides a very vast scope for employment opportunities in Jammu and Kashmir. The employment opportunities provided by this industry are comparatively higher than other industries. Tourism is regarded multi-segmental industry; therefore, it provides different types of jobs like hotel managers, receptionists, accountants, clerks, guides, travel agents, chefs, transport operators etc. The State of Jammu and Kashmir offers a very large number of marketable products. While looking from tourist point of view, each district of the State has so much to offer such as: Vast Natural Resources, Adventure Tourism (River Rafting, Mountain climbing), Numerous Trekking routes, Pilgrimage Tourism (Muslim, Hindu, Buddhist), Wildlife Tourism, Heritage Tourism, Springs, Festivals and Cultural activities, Handicrafts etc.

Seeking an alternative for economic development and contribution in employment generation, tourism can be regarded as a viable source of economic development in the region. Dividing categorically tourist destination of the J&K, one can analyze that the region has potential for:

1. Adventure travel.
2. Pilgrimage tourism.
3. Heritage tourism.
4. Leisure tourism.
5. Ecotourism.

The positive economic benefits of tourism industry in Jammu and Kashmir are:

1. Contribution to State's income generations.
2. Expansion of employment opportunities in the State.
3. Tax revenue.
4. Generation of Foreign exchange.
5. Transformation of regional economy.
6. Up-gradation and expansion of basic infrastructure.
7. Social and Cultural effect.

Challenges and Problems Faced by Tourism Industry in Jammu and Kashmir :

The growth of tourism in Jammu & Kashmir State shows that the industry has registered an all round substantial development in the state during the last two -three decades, most of the potential, for its growth has not yet been exploited and much more is left to be desired. The limited, and rather unsatisfactory, growth of this sector in the State has been due to a number of problems it is beset with and various difficulties it has been facing. The important factors, which have limited the growth of tourism in Jammu & Kashmir, are mentioned below:

1. Poor road connectivity and transportation facilities
2. Lack of basic hygienic amenities at halting points
3. Non-standardization of rates and fares
4. Lack of sound marketing and promotion strategies

5. Poor maintenance of heritage sites
6. Issues regarding security and harassment
7. Lack of passionate and trained professionals
8. Inadequate capacity
9. Costly travel- soaring fuel surcharges, poor flight management etc.
10. Lack of supportive infrastructure- bad roads, improper health and hygiene, communication gaps, etc.
11. Lapses in security and safety- incidents of tout and harassment of tourist in some places.
12. Uneven progress-slow growth of village tourism, lack of information about tourist profile etc.
13. Untrained Guides
14. Poor administration and management.

Need to Review Tourism Industry in Jammu and Kashmir :

Tourism is perhaps the only sector which starts paying off immediately as it has no gestation period. The other developmental activities like roads, railways, construction, mega projects etc take time to complete, function and pay- off. Sometimes these projects are delayed due to displacement, land acquisition, environmental problem etc. But in case of tourism no such delays take place and people are benefited immediately. For instance, as soon as a tourist steps out of his/her house, the benefits start flowing in terms of his spending on taxi, hotel, shopping, travel agent etc. till he/she reaches back. The Central and State governments have to form special groups to generate employment and prospects of tourism sector in Jammu and Kashmir and has to work tirelessly to capitalize on this potential sector. Policy Recommendations and Suggestions for the Development of Tourism in Jammu And Kashmir:

From the above finding its clear that tourism is an important sector of development for Jammu and Kashmir economy. Following are some suggestions with regard to future development of tourism in Jammu and Kashmir.

1. Development of a strong network among government and various agencies, which would work towards re- marketing Kashmir tourism on modern basis.
2. Identifying new tourist spots will go a long way in enhancing tourism potential of the valley.
3. Jammu and Kashmir tourism needs enough measures to provide proper security to tourists so that a sense of safeness will be felt by the tourists.
4. Jammu and Kashmir is one of the best destinations with regard to some new areas which include Adventure tourism, Medical tourism, polo tourism etc, which needs to be explored and thus giving a new sense of hope to tourism.
5. Tourism should be shifted from being a seasonal commotion to all year around activity. Proper tourism marketing of each season can increase the tourist activity manifold.
6. There is scope of development of Pilgrimage, Heritage and Adventure tourism in the region.
7. There are many prospects for development of ecotourism.
8. Training and development program for creation of local skills inventory.
9. There is a need to develop tourism infrastructure.
10. Sensitization program for community participation in tourism activities.

Conclusion:

Tourism is the life line of Jammu and Kashmir and all possible efforts need to be undertaken for retaining, maintaining and sustaining it. Tourism can play an effective role in

integrating the entire universe. Tourism opens up new window for resources, both investment generation and revenue generation leading to employment generation as well as socio-economic development of the local populace. Even though tourism creates jobs and contributes significantly to economic growth, it is not automatically a solution for poverty reduction. Therefore, it is important for government of the state, local investors and other stakeholders to actively participate in tourism and its related activities. The local workforce can also help by engaging and encouraging the use of local companies for the provision of transport, services and food in order to assist in alleviating local poverty. The different terrains of the State coupled with law- and -order problems have contributed to poor connectivity in the region. The rail- road mix of transport in the state is very low. There is dire need to build alternative roads in some places to ensure better connectivity. There is also a need to upgrade many of the existing roads from two lanes to four lanes. The State, sparsely populated and scattered as it is, needs more airports and better air connectivity as well.

The tourism infrastructure like wider and smooth roads, transport including provision for Airlines and Rail services, up gradation of hotels, development of tourist places in Jammu and Kashmir should be strengthened. There is dire need to build alternative roads in some places to ensure better connectivity. The State, sparsely populated and scattered as it is, needs more airports and better air connectivity as well. Steps should be taken to restore the ancient splendor of the monuments. The religious sites in all the three regions of Jammu and Kashmir need a very special focus for the development of basic infrastructure to attract pilgrims in huge numbers.

The above analysis reveals that the Tourism sector in Jammu and Kashmir suffered a sudden downfall due to the massive political disturbance which stuck the state in late 1980's. even though tourism creates jobs and contributes significantly to economic growth, it is not automatically a solution for poverty reduction, the different terrains of the State coupled with law-and-order problems have contributed to poor connectivity in the region. The rail -road mix of transport in the state is very low. There is dire need to build alternative roads in some places to ensure better connectivity. Steps should be taken to restore the ancient splendor of the monuments. All it requires is intelligent planning and iron will.

Finally, Kashmir is an area with great tourism potential & is a leading edge of development. Kashmir is considered as a most elite destination in the world. Tourism is the main industry in the state. It is regarded as multi-segmented industry therefore, provides different types of jobs like hotel managers, guides, travel agents and others. The enchanting geographical landscape & range of ecosystems leaves a lasting impression on the tourists in Kashmir.

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A comparative Study of Sports Aggression Among Football, Basketball and Hockey Players of B.H.U

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Purpose: The purpose of this study was to compare the Sports Aggression test among basketball, football and hockey players.

Method: For the purpose of the study, a total of 120 male players comprising 40 Basketball, 40 Football and 40 Hockey players of Banaras Hindu University were randomly selected as the subject for this study. The subject age was ranged between 18 to 25 years. In this study the Sports Aggression Test (SAT, R Makarowski et al., 1990) questionnaire was used to measure the Sports Aggression.

Sports Aggression Test questionnaire was distributed between the among Basketball, Football and Hockey players one hour before the competition. The hypothesis selected for this study that there would be no significant difference in Sports Aggression among Basketball, Football and Hockey players of B.H.U. The data were analyzed by applying Descriptive statistics (mean and standard deviation) and one-way analysis of variance technique (ANOVA). The level of significance was set at 0.05.

Result: The findings of the study revealed that significantly higher level of Sports Aggression was found in hockey players in comparison to Football, Basketball and hockey players.

Conclusion: On the basis of findings of the study: hockey players are more aggressive as compared to the football and basketball players

Keywords : Sports Aggression Test (SAT, R Makarowski et al., 1990.)

Introduction

Sport psychology is a proficiency that uses psychological knowledge and skills to address optimal performance and well-being of athletes, developmental and social aspects of sports participation, and systemic issues associated with sports settings and organizations. APA recognizes sport psychology as a proficiency acquired after a doctoral degree in one of the primary areas of psychology and licensure as a psychologist. This proficiency does not include those who have earned a doctoral degree in sport psychology but are not licensed psychologists.

In **Sport, Aggression** is a characteristic that can have many negative as well as positive effects on performance. **Aggression** is defined as “any form of behaviour directed toward the goal of harming or injuring another live being who is motivated to avoid such treatment” (Baron & Richardson, 1994).

Aggression is any interpersonal behavior intended to cause physical harm or mental distress to a person or persons. In the sports context, aggression can be defined as an unprovoked physical or verbal assault, and aggressiveness as the intent to commit such an

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assault. Aggression has also been defined as ‘an overt verbal or physical act that can psychologically or physically injure another person or oneself’.

It is no secret that sports can be physical, but there is a big difference between aggression used within the rules of the game, versus aggression used specifically to take an opponent out of the game. Healthy aggression can help a team out-physical an opponent, generate crowd enthusiasm, and create anxiety within the minds of the opponent. Unhealthy aggression does the opposite in that it leads to penalties, suspensions, unnecessary injuries, and possibly legal consequences. Knowing the difference between these types of aggression is paramount to a healthy, fun, and safe sport experience for athletes.

Method

In this study, a total of 120 male players comprising 40 Basketball, 40 Football and 40 Hockey players of Banaras Hindu University were randomly selected as the subjects for this study. The subject age ranged between 18years to 25 years. Sports Test was variable selected for this study. The Sports Aggression test questionnaire was used to measure aggression among the players. The data was collected by administering a sports Aggression questionnaire. The data were analyzed by applying Descriptive statistics (mean, standard deviation, Range and standard Error) & one-way analysis of variance technique (ANOVA). The level of significance was set at 0.05.

Results of The Study : The findings pertaining to descriptive statistics for the Sports Aggression variable among 120 Basketball, Football and Hockey players have been presented in Table No. 1

Descriptive statistics for the Sports Aggression variable among Basketball, Football and Hockey players have been presented in Table No. 1

Variable	Groups	Mean	Std. Deviation	Std. Error	Range	
					Minimum	Maximum
Sports Aggression	Hockey	51.2250	5.45136	.86194	42.00	59.00
	Football	58.5500	3.30462	.52251	53.00	64.00
	Basketball	63.3000	2.67179	.42245	59.00	67.00
	Total	57.6917	6.36666	.58119	42.00	67.00

It is evident from Table No. 1 that the mean and standard deviation scores of Hockey players, football players and basketball players in relation to Sports Aggression are 51.22 ± 5.45 , 58.55 ± 3.30 and 63.30 ± 2.67 respectively.

The findings pertaining to one-way analysis of variance (ANOVA) for the Sports Aggression variable among Basketball, Football and Hockey players along with least significant difference (LSD) test for post-hoc test have been presented in table no. 2 to 3.

Table-2: Analysis of variance of Sports Aggression among Basketball, Football and Hockey players

Source of variance	df	Sum of Squares	Mean Square	F-value
Between Groups	2	2960.317	1480.158	92.94*
Within Groups	117	1863.275	15.925	
Total	119	4823.592		

significant at 0.05 level of confidence
 $F_{0.05}(2,117) = 3.07$

Table-2 'reveals that there is significant difference among Basketball, Football and Hockey players in relation to Sports Aggression as obtained F- value of 92.94 is higher than the tabulated value 3.07 required for significance level at 0.05 level with 2, 117 degree of freedom.

As the F-ratio was found significant in the case of sports aggression least significant difference (LSD) test for post-hoc was applied to test the significant difference between paired means, further the LSD analysis for paired means on Sports Aggression has also been presented

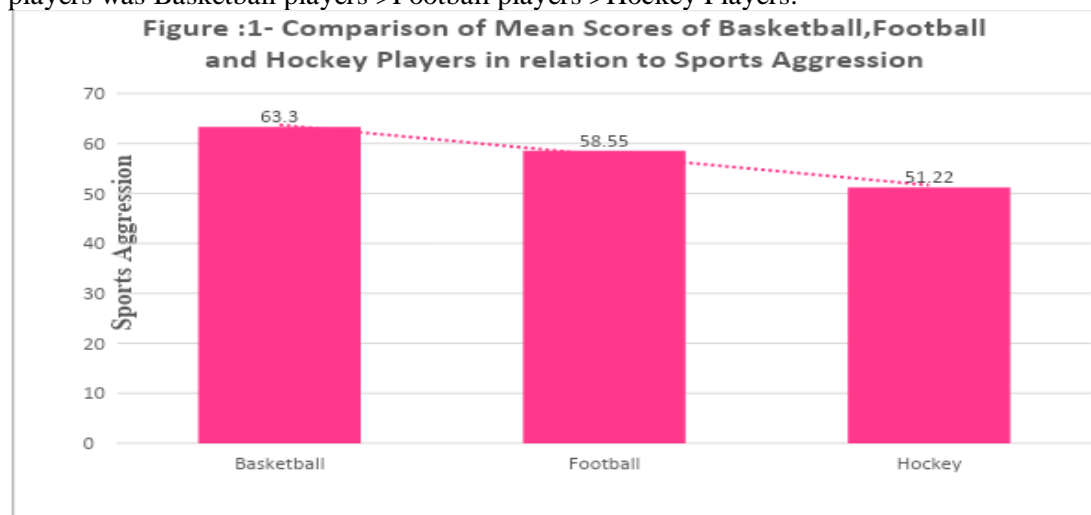
Table-3: Least Significant Difference Post –hoc test for the means of Basketball players, Football and Hockey players in relation to Sports Aggression

Means			MD	P value
BASKETBALL	FOOTBALL	HOCKEY		
63.30	58.55		4.75	
63.30		51.22	2.08	
	58.55	51.22	2.33	*1.78

* significant at 0.05 level of significance

It is evident from table-3 that the mean difference of Basketball with Football players (4.75); Hockey with Basketball players (2.08) and Football with Hockey (2.33) was found significant in relation to Sports Aggression since mean difference was found greater than critical difference of 1.78 at 0.05 level.

The sequence of Sports Aggression among Basketball players, Football and Hockey players was Basketball players >Football players >Hockey Players.



Graphica I representation of post Test means of Sports Aggression of Basketball, Football and Hockey players has been presented in figure no.1

Discussion: -

The statistical findings of the present study revealed that the higher level of sports Aggression was found in Basketball players in comparison to Football and Hockey players. The reason for this may be the more physical contact, fast and quick nature of the game, smaller

Playing field area and time limit for the attack in Basketball game.

Discussion of Hypothesis :

The Hypothesis earlier was that there might have not been significant difference in sports aggression variable of basketball, Football and Hockey Players is rejected.

Conclusion:

Basketball Players are more aggressive in comparison with Football and Hockey Players may be because of following reasons:

1. The Nature of Basketball Game is very quick and fast in comparison with Football and Hockey.
2. Physical Contact during the game of Basketball is very often which can be one of reasons for aggressiveness of Basketball Players in comparison with Football and Volleyball Players.
3. Time limit i.e. 3 sec, 8 sec and 24 sec rules can also be the reason for more aggression of the players of Basketball.
4. If we talk about the Playing Field of Basketball game is smaller than the Hockey and Football game. This can be another factor for the Aggressiveness of Basketball Players than the Hockey and Football Players.

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Structural and electrical properties of modified lead Tungstate

Dr. A.D. Singh *

This paper reveals that Polycrystalline samples of modified lead germanate, $Pb_{4.95}A_{0.05}Ge_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$), were prepared using solid-state reaction techniques. X-ray powder diffraction studies of the compounds suggest the formation of single phase materials of trigonal crystal structure at room temperature. Detailed studies of the dielectric constant (E) and loss ($\tan \delta$) of the compounds, both as a function of frequency ($2 \times 10^4 - 10^6$ Hz) at room temperature and temperature (from room temperature to $200^\circ C$) at 10, 100 and 1000 kHz, exhibit a ferroelectric diffuse phase transition. The transition temperature is found to decrease with Ba, Sr and Ca doping at the Pb site. The biasing field and temperature dependence of dc electrical conductivity were measured for all the compounds. The nature of the ferroelectric phase transition was checked by measuring the temperature dependence of the polarization.

Keywords : X-ray study, dielectric constant, phase transition, ac and dc conductivity, polarization

Introduction:

The discovery of ferroelectricity in lead germanate $Pb_3Ge_3O_{11}$ [1, 2], has created tremendous interest among research workers, and a large amount of work has been reported on it and its isomorphous compounds [3-6]. Considerable interest grew later because of its ferroelectric as well as optically active properties [7]. It is also a very good pyroelectric material because of its high pyroelectric coefficient [8,9]. Most probably it is the only material whose Curie constant lies between the Curie constants of displacive ($\sim 10^5$) and order disorder ($\sim 10^7$) types of phase transition. At room temperature it is a ferroelectric with a $P3$ space group symmetry of the trigonal class which transforms to hexagonal $P6$ symmetry at $177^\circ C$ [10]. It has been found that the apatite nasonite structure of this material is a good host material for ionic substitution, and hence a large number of isomorphous compounds can be formed by substituting alkali or alkaline earth ions at Pb sites and tetrahedrally coordinated ions ($Mo^{6+}, W^{6+}, Cr^{6+}, Si^{4+}, Ti^{4+}, Zr^{4+}$ etc.) at the Ge site [11]. These substitutions help in tailoring the material properties, which could be useful for device applications. Since much of the work to date has been carried out only on Si-substituted lead germanate in its single crystal and/or thin film [12, 13] form, we have concentrated our attention mostly on the study of modified $Pb_{3-2y}Ge_3O_{11}$ in the ceramic form. In this paper, we report our work on the structural and electrical characterization of $Pb_{4-y}A_yGe_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$) for better understanding of materials for possible applications.

EXPERIMENTAL

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Polycrystalline samples of $\text{Pb}_{4-x}\text{A}_x\text{Ge}_2\text{Ti}_2\text{O}_{11}$ ($A = \text{Ca}, \text{Sr}, \text{Ba}$) were prepared from high-purity PbO (99.99%, M/s Aldrich Chemical Co., USA), GeO_2 (99.999%, M/s Aldrich Chemical Co., USA), CaCO_3 and BaCO_3 (M/s Ultra Pure, Loba Chemie), SrCO_3 (M/s Burgoyne Urbidges and Co.) and TiO_2 (99.0%, M/s S. D. Fine Chem. Pvt. Ltd) by using high-temperature solid-state reaction techniques. Stoichiometric weighed materials were mixed in dry and wet (alcohol) medium for 3 h in an agate mortar which was dried and calcined at 660°C for 8 h in a pure alumina crucible. The calcined powders were reground to make an homogenous powder. To check the formation and quality of the single-phase compounds, X-ray diffractograms (XRD) of the prepared homogeneous powders were taken with a Philips X-ray diffractometer (PW 1840) using $\text{CuK}\alpha$ radiation ($\lambda = 1.5418 \text{ \AA}$) for a wide range of Bragg angles (15° to 70°) with a scanning rate of $2^\circ/\text{min}$. The powders were pressed in the form of pellets using a stainless steel die-punch at an isostatic pressure of $5 \times 10^7 \text{ N/m}^2$. The pellets were then sintered at 685°C for 10 h. Air drying conducting silver paint was used as electrodes for the measurement of the electrical properties.

The dielectric constant (ϵ') and loss ($\tan \delta$) of the pellet samples were obtained as a function of temperature (room temperature, RT up to 200°C) at frequencies of

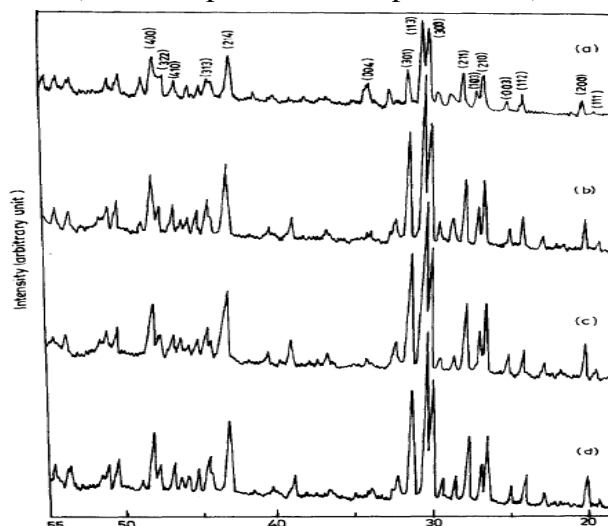


Fig. 1. Comparison of the XRD of modified lead germanate with a pure one: (a) $\text{Pb}_4\text{Ge}_2\text{O}_{11}$; (b) $\text{Pb}_{4-x}\text{Ca}_x\text{Ge}_2\text{Ti}_2\text{O}_{11}$; (c) $\text{Pb}_{4-x}\text{Sr}_x\text{Ge}_2\text{Ti}_2\text{O}_{11}$; (d) $\text{Pb}_{4-x}\text{Ba}_x\text{Ge}_2\text{Ti}_2\text{O}_{11}$.

10, 100 and 1000 kHz using a GR 1620 AP capacitance measuring assembly and Hewlett Packard Q meter (model HP 4342 A). The dc conductivity of all the samples was measured as a function of temperature (RT up to 300°C) at a constant biasing field of 8.5 kV/m using a Keithley-617 programmable electrometer. The values of polarization at different temperatures were calculated from D - E hysteresis loops observed with a modified Sawyer-Tower circuit at an ac field of 8 kV/cm and 50 Hz . A chrome-alumel thermocouple and laboratory-made sample holder were used in the electrical measurements.

RESULTS AND DISCUSSION

Sharp, single reflection peaks of the XRD pattern (Fig. I) show the formation of a single-phase compound. All the diffraction peaks were indexed in the trigonal crystal

Table 1. Some structural properties of $\text{Pb}_{4.95}\text{A}_{0.05}\text{Ge}_{2.5}\text{Ti}_{0.5}\text{O}_{11}$

A	Lattice parameters		Volume of unit cell (\AA^3)	Theoretical density (g/cc)	Measured density (g/cc)	Particle size (\AA)
	a (\AA)	c (\AA)				
Ca	10.2574	10.6706	972.29	7.06	6.37	290
Sr	10.2625	10.6772	973.86	7.07	6.48	300
Ba	10.2727	10.6905	977.00	7.04	6.49	285

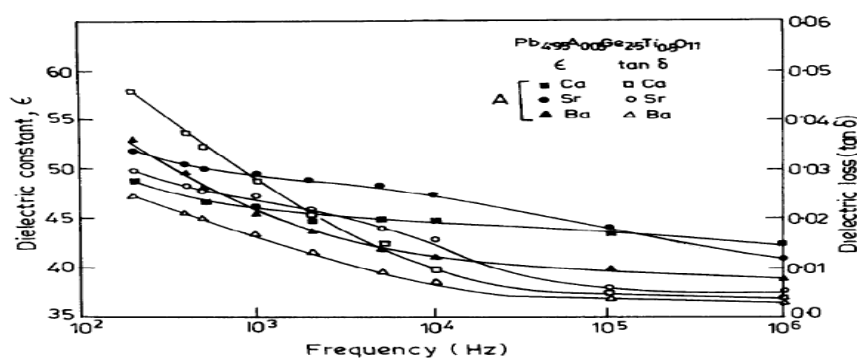


Fig. 2. Variation of dielectric constant (ϵ) and loss ($\tan \delta$) as a function of frequency of $\text{Pb}_{4.95}\text{A}_{0.05}\text{Ge}_{2.5}\text{Ti}_{0.5}\text{O}_{11}$ (A = Ca, Sr, Ba) at room temperature.

system. The d-values of the peaks were calculated from the X-ray diffractogram. Using these d-values in a standard computer program package, cell parameters of the samples were obtained which were refined using the least-squares method. The refined cell parameters are given in Table I. The observed d-values and cell parameters were found to be highly consistent with the reported values [11]. However, a small shift is observed in the peak positions which results in a slight change in cell parameters. This change in cell parameters is due to the different ionic radius of the different dopants. It is now concluded that the incorporation of Ca^{2+} , Sr^{2+} or Ba^{2+} in place of the Pb^{2+} , and Ti^{4+} in place of the Ge^{4+} site does not affect the basic structure of $\text{Pb}_5\text{Ge}_3\text{O}_{11}$.

The linear particle size (P) of the samples was calculated from some strong reflection peaks of different Bragg angles using Scherrer's equation:

$$P = \frac{0.89\lambda}{\beta_{1/2} \cos \theta}$$

where $\beta_{1/2}$ is the half width of the peaks. The average particle size of the samples are given in Table I. The particle size was calculated usually in the lower angle region to avoid strain broadening.

The above lattice parameters were used to calculate the theoretical density of the material assuming the number of formula units to be $z = 3$ per unit cell [14]. The theoretical and observed density of the samples are shown in Table I. From the

comparison of theoretical and measured densities we have confirmed that some porosity or voids must be present inside the pellet samples.

The variations in the dielectric constant(ϵ) and loss

Table 2. Some important dielectric parameters of $Pb_{4.95}A_{0.05}Ge_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$)

A	Frequency (kHz)	ϵ at RT	ϵ_{max}	$\tan \delta$ at RT	$\tan \delta$ at T_r	σ_{dc} ($\Omega^{-1}cm^{-1}$)	T_r ($^{\circ}C$)
Ca	10	45.8	87.0	0.0125	0.092	3.18×10^{-7}	113
	100	43.6	76.5	0.0047	0.009	1.14×10^{-6}	
	1000	42.1	67.5	0.0041	0.005	9.60×10^{-6}	
Sr	10	47.50	79.0	0.019	0.070	5.02×10^{-7}	128
	100	44.50	71.5	0.0045	0.018	1.11×10^{-6}	
	1000	42.6	67.50	0.0030	0.008	7.10×10^{-6}	
Ba	10	40.90	76.80	0.0075	0.050	1.70×10^{-7}	135
	100	40.00	72.30	0.0050	0.013	1.12×10^{-6}	
	1000	38.0	67.00	0.0042	0.007	8.87×10^{-6}	

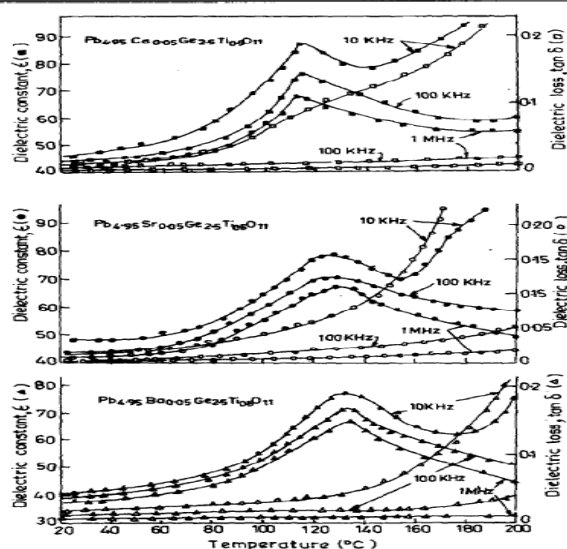


Fig. 3. Variation of dielectric constant (ϵ) and loss ($\tan \delta$) as a function of temperature of $Pb_{4.95}A_{0.05}Ge_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$) at frequencies of 10, 100 and 1000 kHz.

$\tan \delta$ with frequency ($2 \times 10^3 - 10^6$ Hz) are shown in Fig. 2. It has been observed that the values of ϵ and $\tan \delta$ decrease for all samples with increasing frequency, which indicates the normal behaviour of a dielectric. At low frequency and room temperature all the fundamental polarizations are present. Fig. 2 shows the variation of ϵ and $\tan \delta$ with temperature at frequencies of 10, 100 and 1000 kHz. Some important dielectric parameters are given in Table 2. It has been found that the maximum dielectric constant of the samples decreases and the transition temperature increases in the sequence of dopant Ca^{2+} , Sr^{2+} and Ba^{2+} , respectively. Though it has been found from our experiment that the ϵ_{max} decreases as per the sequence, yet we are not in a position to come to a general conclusion from our observation because the dielectric constant depends on the density of the material as well as the structure of the pores [14]. It has been found that at higher temperature and low frequency (< 10 kHz), the dielectric constant increases instead of decreasing as observed in any normal ferro-electrics. This has also been observed in PCO and its isomorphous compounds by other workers [15]. The pressed sample develops a considerable

amount of space charge polarization arising from some defects in the bulk and/or at the surface of the material. The contribution of the space charge polarization is negligible at high frequencies but noticeable at very high temperatures [16]. For the same reason we have not found an increase in the dielectric constant for the frequencies of 100 and 1000 kHz beyond the transition temperature for all the samples. The variation of dielectric loss with

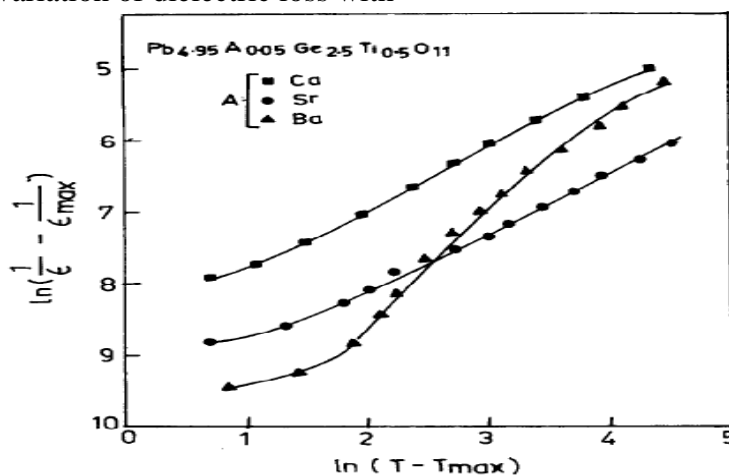


Fig. 4. Variation of $\ln(1/\epsilon - 1/\epsilon_{\max})$ with $\ln(T - T_c)$ of $Pb_{4.95}A_{0.05}Ge_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$) for 100 kHz.

temperature (Fig. 3) shows a smooth increasing trend at the 10 kHz frequency whereas the variation of dielectric loss with temperature at higher frequencies, i.e. at 100 and 1000 kHz, is almost constant over a large temperature range but slightly increases at higher temperatures.

We have also calculated the diffuseness of the phase transition at 100 kHz using the formula [17]:

$$\frac{1}{\epsilon} - \frac{1}{\epsilon_{\max}} = C(T - T_c)^\gamma$$

where ϵ is the dielectric constant at temperature T and ϵ_{\max} is its maximum value at T_c . The values of diffusivity γ for all the samples have been calculated from the slope of the

$$\ln\left(\frac{1}{\epsilon} - \frac{1}{\epsilon_{\max}}\right) \text{ vs } \ln(T - T_c)$$

plot (Fig. 4) and are given in Table 3, and show intermediate values between normal ferroelectrics ($\gamma = 1$) and highly diffused type ($\gamma = 2$), hence the compounds undergo diffuse phase transition on substitutions at Pb and Ge sites.

The temperature dependence of ac electrical conductivity σ_{ac} and activation energy E_a , of the materials was calculated from the dielectric data collected at different temperatures using the standard formulae, $\sigma_{ac} = WER \tan \delta$ and $\sigma_{ac} = \sigma_0 \exp(-E_a/kT)$,

respectively, where ϵ_0 = dielectric constant of free space, ω = angular frequency and K_B = Boltzmann constant. The values of activation energy E_a , were obtained for 10 kHz from the slope of the plot of $\ln u$ versus T^{-1} (Fig. 5) and compared in Table 3. The values of ac conductivity at room temperature for different frequencies are given in Table 2. From such a low value of activation energy we can conclude that the vacancies created in the oxygen sites may be the main carriers in electrical conduction.

At room temperature, the variation of dc conductivity as a function of biasing field is shown in Fig. 6. It has been found that the dc conductivity of the modified PGO

Table 3. Comparison of diffusivity (γ), activation energy (E_a), dc conductivity (σ_{dc}), polarization (P) and transition temperature (T_t) from polarization measurement of $Pb_{4.95}A_{0.05}Ge_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$)

A	γ at 100 kHz	E_a (eV) at 10 kHz	σ_{dc} ($\Omega^{-1}cm^{-1}$)	P ($\mu C/cm^2$)	T_t ($^{\circ}C$)
Ca	1.20	0.62	6.8×10^{-7}	0.48	113
Sr	1.28	0.60	1.8×10^{-6}	0.59	128
Ba	1.55	0.56	2.3×10^{-6}	0.56	135

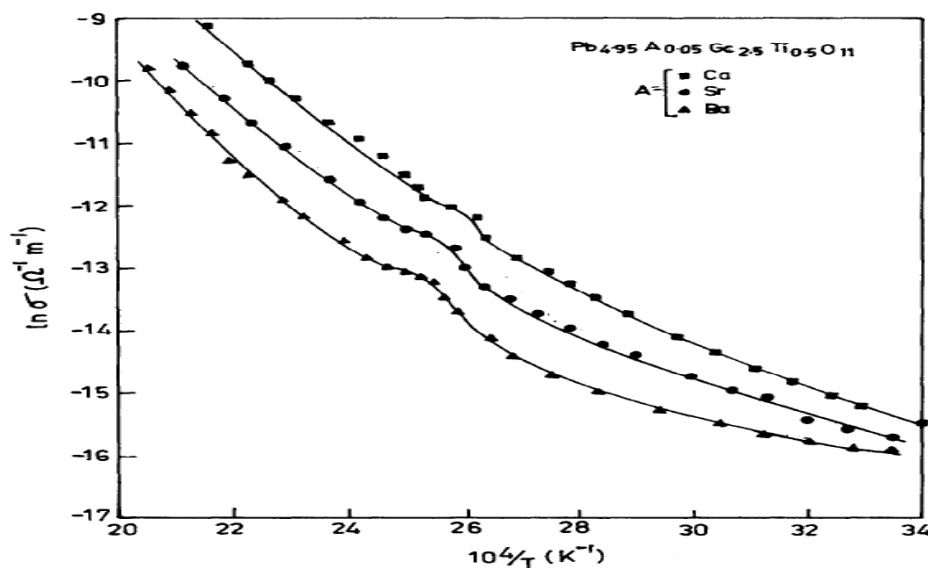


Fig. 5. Variation of $\ln \sigma_{ac}$ as a function of $10^4/T$ (K^{-1}) at 10 kHz of $Pb_{4.95}A_{0.05}Ge_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$).

compound increases with an increase in the biasing field and reaches saturation approximately after a certain limit of the applied field due to ionization of the gases and moistures present in the pores and cracks of the compounds. So the conductivity increases as the biasing field increases and reaches saturation at a certain electric field [181]. The temperature dependence of the dc conductivity of the compounds at a constant biasing field of 8 kV/m has been shown in Fig. 7. It is found that there are some anomalies (change in slope) very close to the corresponding transition temperature. The room temperature dc conductivities of the samples are given in Table 3. It has also been found that the conductivity increases slowly with an increase in temperature upto T_t , and with a further increase in temperature the dc conductivity

increases very rapidly. This is because some ionization takes place inside the sample at high temperature.

The variation of the polarization P with temperature (Fig. 8) was determined by hysteresis loops obtained from the modified Sawyer-Tower circuit. The values of Pat room temperature are given in Table 3. It is observed that the polarization decreases with increasing temperature and appears to be quadratic, which hence implies that the transition is of second order.

Conclusion

Analyzing the above results we conclude that the modified lead germanate compounds have lower transition temperature than pure lead germanate and that the nature of the phase transition is of second order, but the crystal structure remains the same. We also propose that the material may be used in pyroelectric IR sensors because the values of the dielectric constant and loss

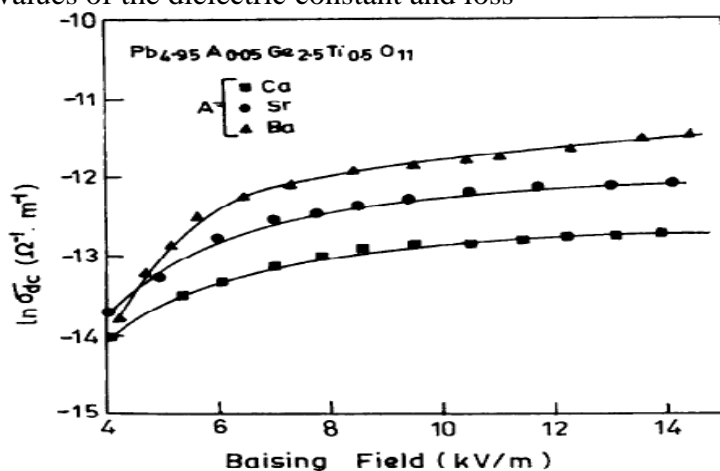


Fig. 6. Variation of $\ln \sigma_{dc}$ as a function of biasing field of $Pb_{4.95}A_{0.05}Ge_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$) at room temperature.

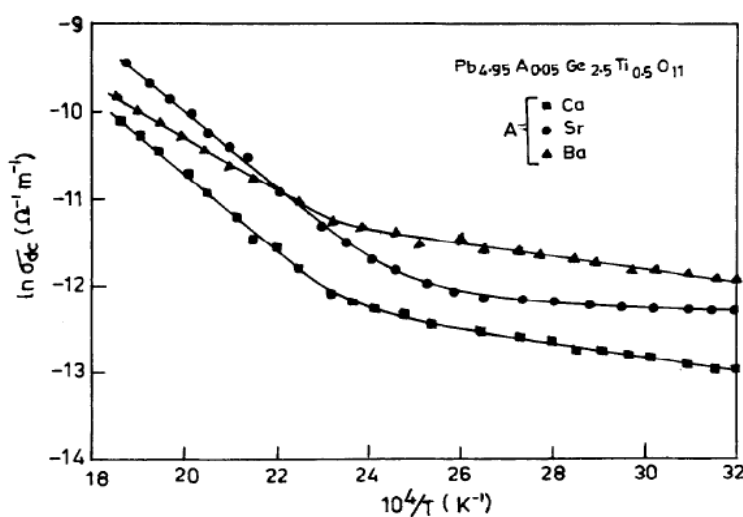


Fig. 7. Variation of $\ln \sigma_{dc}$ as a function of $10^4/T$ (K^{-1}) of $Pb_{4.95}A_{0.05}Ge_{2.5}Ti_{0.5}O_{11}$ ($A = Ca, Sr, Ba$) at constant biasing field 9 kV/m.

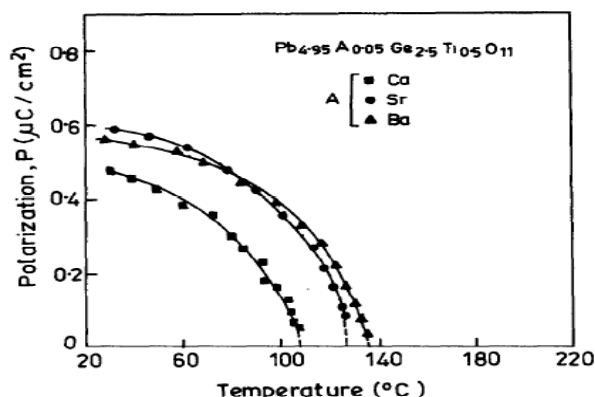


Fig. 8. Variation of polarization (P) as a function of temperature of $\text{Pb}_{4.95}\text{A}_{0.05}\text{Ge}_{2.5}\text{Ti}_{0.5}\text{O}_{11}$ ($A = \text{Ca}, \text{Sr}, \text{Ba}$) at a constant applied field of 10 kV/cm against the samples.

are very low and the transition temperature lies between -30 and 300°C .

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Oriental (Indic) Narratives: Naïveté, Nativity, Novelty, Occidental Influences – Understanding The Historical Writings of Vrindavan Lal Verma

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Re-engaging with the past is a very old practice in human evolution and has proved to be integral to the development of human consciousness at least over the various stages of recorded history, albeit the verifiable phases of human endeavours precede even human history as the narratives of pre-historic and proto-historic epochs of humanity's past can be formulated on the basis of the understanding of archaeological, anthropological, ethnographic, genetical and linguistical sources. But the advent of writing which was necessitated by the increasing complexity of human experiences and societal compulsions had definitive impact on the overall process of re-orientation, re-alignment or re-interpretation of the past eventualities especially with the additional avenues of corroborable literary evidences.

Yet, the distinct nature of the archaeological and literary evidences, varied anthropological experiences, different genres of written materials, occasional gaps within historical events and narratives, which could either be intentional or accidental or both, and above all the empirical, situational and temporal leanings or understandings of the author (as also the reader in a ruthlessly consumer oriented and market driven milieu) guides her/him to construct, reconstruct or deconstruct in a specific way employing her/his own imaginative/inclinal skills alongside the technical ones.

While the concept of modern historical fiction, as it is known and viewed in the present world, is considered to have crystallized during what has been described as the Late Modern period in the European and the Mediterranean historical-literary experience in an age when Romanticism was emerging and replacing the Age of Enlightenment in the backdrop of the germinating Industrial Revolution, around CE 1800 in the history of the supposed “Old World”; the origins of literary works of such nature can be found in the so-called Ages of Antiquity, Classical and Golden Age of India, Post-classical history (including the Middle Ages), and the Early Modern Period, even beyond the European or Occidental/Hesperian engagement¹. To cite a solitary instance of the ilk, the Indic creational forms like the grand Epics – *Ramayana* and *Mahabharata*, the Jaina and the Buddhist sources like the *Jatakas* and vernaculars, chronicles like *Harshacharita*, *Rajatarangini*, *Prithviraj-Raso* etc, will suffice to prove the contention.

Of course, the compulsions and urges behind such creations, dictated by the requirements and duress of different temporal and spatial zones, levels of politico-social consciousness and ethical-moral and/or cultural mores/taboo, contributed towards deciding their trajectories or treatment. As such the structure of historical periodization referred above was specific to European-Mediterranean dispensation and was at variance with the historic itinerary applicable to regions without, like India and China. Nevertheless, due to the enhanced levels of inter-continental, intra-continental and international interactions from the 18th century onwards as a result of the Technological-Industrial revolution and Imperialism, the histories of majority of civilizations or cultures were brought closer and to some extent

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got entwined. Cultural glorification or vilification, socio-economic juxtaposition and political subjugation which were the natural offshoots of these generally unequal proximities, led to a renewed interest in historical themes and narratives for reasons which may not be as obvious as they are now but were definitely known and comprehensible at least to the discerning eye and the inquisitive mind during that period.

The process of ideological formulations, assimilations, adaptations, appropriations, impositions, reactions and counterpoise as regards historical epochs, personalities and issues came to the forefront in this era of technical and intellectual revolutions, colonialism and globalization, which was apparently marred by notions of racial superiorities and identity crisis at individual, societal and cultural levels. This had a definite impact on scholarly pursuits of history and literature alike.

II

Vrindavan Lal Verma, a pre-eminent Hindi novelist and a writer², excelled especially in the genre of historical fiction. The themes, characters and narratives he picked up, created or recreated were based on historical eventualities or personages. In an age of cultural liminality if not a political one, where past established certainties were losing their cogency and the newer ones were in their formative phase or were yet to arrive, this pivotal phase *prima facie* witnessed some striking parallel as well as mutually dependent developments with direct cultural exchanges between the two participating cultures in India. Verma was, thus, reducing and reproducing his thoughts to writing in a period of great political turmoil and all-encompassing flux.

In the realms of Historical understanding, varied and often divergent views and standpoints emanating out of vested interests and agendas, ideological leanings and forced cultural intercourse were at play. The Timurid/Chagatai Empire of Turkic-Mongol origin (often called as Mughals), perceived to be the political epicentre of India in popular culture (as the revolting sepoys proclaimed Bahadurshah Zafar as all-India Emperor in 1857 – a fact which the British Imperialists were astute enough to utilize to their benefit at the time of deportment of the defeated Bahadurshah and abolishing of the post of Badshah (Emperor) post crushing of the revolt – to announce themselves as the replacers of the Chagatais as overall masters of entire India) had finally vanished, the regional kingdoms had either been vanquished or subjugated by the British or were on the verge of such situations, and the British Crown had replaced the rule of the British East India company as the paramount power in the country. As to the Indian natives there was a two-way churning, to find a solution to the imperial suppression by the British and to reform and rebuild themselves from within.

The rapidly changing political scenario in India through imperial contact and the consequent focus on administrative, socio-economic and religious aspects and issues necessitated and sometimes resulted in a renewed interest in India's past. Imperialists, Orientalists, Indologists, Marxists, Revivalists and Nationalists – all got engaged in re-interpreting and re-defining it. Simultaneously, the inherent diversity in an otherwise centrifugal milieu also contributed towards emergence of regional and parochial sentiment of which history and literature could hardly remain unaffected.

III

Though external influence on Verma's writings cannot be dismissed outrightly, its historical legitimacy remains problematic. An erudite scholar having not only a keen interest in history, literature and international affairs but also being blessed with great talent and skills to grasp them and reduce them to writing, it is not plausible that he had no idea of the styles

and structures of contemporary historical fictions created in the West. However, due to the want of any precise evidence of such nature and the absence of a demonstrable common denominator between the intellectual and literary developments that might have developed in unison in India and Europe – two unequal entities, the former being a suffering colony of the oppressing latter imperial power – the quantum of such influences, incorporations and appropriations and their impacts (if at all there were any) on Verma's compositions remain unascertainable.

Verma's historical compositions do not depict any radical discontinuity with the previous native literary structures and departures from or exclusion of fundamentals of such constructions. As such, the uniqueness or the peculiarity of Ancient and Mediaeval Indian literary historical conception (as can be evidenced in the aforementioned chronicles like *Harshacharita*, *Rajatarangini*, *Prithviraj-Raso* etc, the two Mega Epics – *Ramayana* and *Mahabharata*, the Buddhist sources like the *Jatakas*, other vernaculars), as also the *Upanishads* and *Puranas*, which was partially mired in mythology, folklore or legends, may not fit in the modern western critical/logical historical perimeters based primarily on deductive validity, replicability and relativity of ocularly and apodictically verifiable facts, and to a lesser extent on their reflectivity, and almost never on revealed or the intuitive one's which may be beyond its comprehension or the present state of human epistemic horizons; making them unsuitable, both stylistically and ideologically, for colonial acceptance or adaptation despite of their undeniable claims to containing grains of historical truth. Under the circumstances, it would be rather futile to think that Verma might have been making any conscious effort either to incorporate the European Historical-fictional ethos into his writing or to make his works receptive to the western audience. The style and themes of the narratives of his historical fictions remained completely indigenous. The language which Verma's characters in his historical novels spoke, had its root in the locale and milieu and was in sync with their socio-economic and cultural background or conditions. Verma's own description of the settings, flora and fauna, eventualities in his historical fictions too portray not only his profound knowledge and understanding of historicity of his themes but also of the local dialect, terrain and ground realities. Notwithstanding all of this, however, the real beauty of Verma's historical narratives lies in the universality of its appeal. The very fact that despite of the overuse of typical Bundelkhandi idiomatic language which made his works almost untranslatable, a copious number of his novels have been translated not only in many primary regional languages of India but also in Chinese, Czech, English, German, Russian and Spanish languages, provides ample testimony to it. In fact, television serials and films have already been made in India on two of Verma's foremost historical novels, viz. *Jhansi Ki Rani* and *Mrignayani*.

IV

The modern historical fiction with its multi-dimensional approach and multi-layered interpretation of the narrative is largely considered as a gift of the West. Nevertheless, the ideological alignment and value orientation of main characters which are considered as their cornerstones were not inimitable to the western experimentation alone. Strong traces of the same are detectable and in fact can be seen pervading from similar natured Indic mainstream or regional compositions from the earliest times.

Formulated in a mythic-historical complex and predominantly patriarchal set up with its overarching preference for a morally correct and pious hero as the lead character blessed with all the traits assignable to Gods, the greatness of Vrindavan Lal Verma's historical narratives lay not only in his treatment of his lead characters but also in their choice. Be it

Lakshmi Bai or Mriganayani or Padmini, he quite extraordinarily, subscribes to females as the chief protagonists of his historical novels. A breaker of taboos and a rebel of sorts in his literary pursuits, Verma belied the cliched avowal that in a historical novel, either the History or the novel itself is the casualty. His historical fictions were lies which told the truth as all vital elements of history and novel retained their aura, essence and vivacity.

The characters, be real or fictional, look, speak, and act in ways that accurately reflect their era both in time and space, their language is relatable, the dialogues are authentic as vocabulary and grammatical structures reinforce the historical settings without making them or the characters or the novel in itself unenjoyable or unfathomable. All of Vrindavan Lal Verma's historical novels have a definite historical backdrop and context. The narratives are properly researched as to correctness of the historical facts and eventualities right up to the smallest or minutest details. He resorts to creative liberties and injects personalities with the purpose of moving the story along yet balances those exotic details with familiar, relatable ones without losing contact with the historical context and to keep the story grounded.

Enjoying the same authority as the doyens of western historical fictions of the 19th century like Sir Walter Scott, Honoré de Balzac, James Fenimore Cooper, and Leo Tolstoy and of early 20th century like Kenneth Roberts and William Faulkner, Verma also saw and portrayed history not just as a convenient frame in which to stage a contemporary narrative, but rather as a distinct social and cultural setting. Following the traditions of Early Indian greats like Bhasa³, Vishakahdatta⁴, Kalhana⁵ etc, Verma employs his erudition, lingual expertise, historical common sense, imaginative and creative skills to recreate personalities and eventualities of the past. He, however, blends his active imagination with ruthless scrutiny of historical sources and data, rationalism, logic and realism, and in this sense far excels these notable laureates of the past as also few later writers like Chanderbardai⁶ or Malik Muhammad Jayasi⁷ or some of the his actual or near contemporaries like Jaishankar Prasad⁸, Maithili Sharan Gupta⁹, Subhadra Kumari Chauhan¹⁰. Unlike some of these, Verma is neither a political commentator nor does he write under any royal patronage. Further, dissimilar to creations of many others mentioned above which invoked local ballads, folklores, folktales and legends as their solitary claim to truth and primarily remained poetic in genre, it is through strong emphasis on verisimilitude that his work has been rendered more convincing and authoritative while enjoying similar authenticity and entertainment value. In his own confession he stated, "to furnish the skeleton of history with flesh and blood, novel seemed to me the best instrument"¹².

The obvious periods of liminal visual stimuli and sensory threshold with a lot of ambiguity attached and/or gaping holes in the existing fragmentary historical narratives and data were filled reasonably by Vrindavan Lal Verma with his nuanced historical and literary expertise and integrative and cohesive approach. Moving from macrocosm to microcosm he provided us glimpses of history of forgotten people and voiceless groups in their natural settings.

Implicitly or explicitly, directly or indirectly, tacitly or admittingly, subtly or apparently, all modern authors of historical fictions in India writing in different regional languages or in Hindi or English, be it Amitav Ghosh (*Sea of Poppies*, *River of Smoke*, *The Glass Palace*), Aruna Chakravarti (*Jorasanko*), Ahmed Ali (*Twilight in Delhi*), Bhagwan S Gidwani (*Return of the Aryans*; *The Sword of Tipu Sultan*), Bhishma Sahni (*Tamas*), Devi Yesodharan (*Empire*), Easterine Kire (*Mari*), Hindol Sengupta (*The Sacred Sword*), Kiran Nagarkar (*Cuckold*), Sunil Gnagopadhyaya (*Those Days*), Manohar Malgonkar (*The Devil's*

Wind), Qurratulain Hayder (*Aag Ka Darya*), Vineet Bajpai (*Harappa Series*), Chitra Banerjee Divakaruni (*The Palace of Illusions*) etc, to name a few, undeniably owe a lot to the works of Vrindavan Lal Verma for mastering their skills in the genre.

Vrindavan Lal Verma, living and writing in the colonial era, was quite naturally affected by the dynamics of his times. The biggest dilemma confronting him as an author aspiring to excel in sphere of historical fiction was create a balance between enthralling his audience with his writings and also educating them and making them conscious of the rich history, cultural heritage and internal and external challenges which they faced individually and collectively as members of a region and a nation. As such the central problem of establishing a continuous rapport between the past and the present was not easy to address in a punishing and discriminatory colonial environment because both past and present and their mutual relation could be interpreted or understood differently by the oppressor and the oppressed. Another challenge was not to become too nostalgic about all that was ancient but to apply reason to embrace or discard it on the basis of value it held for the present. Likewise, it was equally essential for authors like Verma who were firmly entrenched in regional ethos to not to lose sight of the national view while being proud of their local glory.

Under such situation, historical creations presented three broad dimensions to Verma. History has to provide knowledge to find *raison detre* behind societal decline, the seeds of which had been sown in the past itself; it has to make an impact by producing effect in order to evoke and instil higher values and sentiments in common masses through the behaviour and actions of his characters, and finally it has to offer entertainment for pure aesthetic and artistic value and for the sake of winning a large audience.

Being the son of the soil and a naturalist and environmentalist, Verma was mesmerised by the physical beauty of Bundelkhand. As an anthropologist and philanthropist, he had deep admiration for the folk life of Bundelkhand where its inhabitants contributed towards the enrichment of its cultural heritage despite of their poverty. But the description of nature in his accounts is not an end in itself and it serves as a backdrop to the unpredictable life and endeavours of the populace alongside instilling a sense of patriotism in them. Folklores, folk dances and songs are interspersed in Verma's historical narratives as he seeks union between nature and patriotism through them. Thus, a character in *GarhKundhar*, named Diwakar utters, "it will be glorious to die for such a beautiful country"¹¹. While the description of Palothar hills in the same novel creates a mood of patriotic chivalry, the Betwa river symbolizes the destiny of the region and its people.

Not entirely convinced with modern scientific mores and patterns, Verma sought to apply what was meaningful in the past to the present. Hence, he not only reconstructs but occasionally deconstructs through his historical narratives and their characters. Not only he himself but also his characters tend to be rebellious against status quo as his works tend to retain or favour a fissiparous approach. Padmini, Rani Lakshmibai and Mrignayani are all rebels in their own right as they are not inclined towards pusillanimous surrender to the will of male chauvinism or established traditions of the times. Simultaneously, he tends to be critical of modern encroachments into older conventions and sometimes portray his lead characters as upholders of such customs and practices.

What came to be known as *anchalik* literature and is cliched now was a novelty in the late 1950's. what is truly stupendous is that Vrindavan Lal Verma achieved proficiency in it almost thirty years prior to its recognition. Verma's claim to fame rests on veracity and factual authenticity of his historical novels. He dug out his subjects with the zeal of an archaeologist and vigorously pursued books, official records, archives, gazetteers, material in museums alongside familiarizing himself with geo-cultural milieu before and during the formulation of his historical fictions. All his constructions and creation were, therefore, in accordance with the ethos of the age.

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Judicial Review and Constitution of India

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The Constitution of India is the supreme law of India. It lays down the framework defining fundamental political principles, establishes the structure, procedures, powers, and duties of government institutions, and sets out fundamental rights, directive principles, and the duties of citizens. It is the longest written constitution of any sovereign country in the world. In India there are three organs of government namely Legislature, Executive and Judiciary. The Legislature performs the function of making the laws, the Executive executes/implements the laws and the Judiciary keeps a check on both the organs specified above and makes sure the laws being made and implemented are not ultra vires to the Constitution of India. To make these organs work in their specified limits our constitution has the feature of Separation of Power. Article 50 of the Indian Constitution talks about the separation of power. The Constitution follows parliamentary system of government and the executive is directly accountable to legislature and parliament cannot go beyond the provision of Indian constitution. Indian democracy adopted parliamentary system but parliament cannot go beyond the provisions of the constitution. The constitution of India was adopted on 26 January 1950. In this paper I would like to discuss about provisions of judicial review in Indian constitution and find out, is constitution of India success to maintain the balance between judiciary and parliament of India.

The Constitution is the supreme law of India.

The parliamentary form of democracy, which is adopted by India, wherein every section of people is involved in decision making and policy making process. Every organ reflects fair representation of every section of the society. This is the kind of wide-ranging democracy. the Rule of law¹ is the groundwork of social equality. It can never be modified through exercise of new powers of Parliament. Now it has been trusted, that the Rule of law is the straightforward attractiveness of every one Constitution. All those who exercise public powers, they bear the accountability. They have to work within democratic provisions of the Constitution. According to Basu in his book Basu's commentaries on constitution of India vol 1. any act of the ordinary law-making bodies which contravenes the provisions of the supreme law must be void and there must be some organ which is to possess the power or authority to pronounce such legislative acts void.² The constitution of India provides an express provision for judicial review in the shape of Article 13.³ which states as:

13(1). all laws in force in the territory of India immediately before the commencement of constitution shall be void to the extent to which they are inconsistent with the provisions of part 3rd of the constitution.

13(2). state shall not make any law which takes away or abridges the fundamental rights conferred by part 3rd of constitution and any law made in contravention of fundamental rights shall to the extent of contravention, be void.

13(3). law includes any ordinance, order, by-law, rule, regulation, notification, custom or usage having the force of law.

Article 13 in fact provides for the judicial review of all legislations in India, past as well as future. This power has been conferred on the High courts and the Supreme court of India which can declare a law unconstitutional if it is inconsistent with any of the provisions

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of part 3rd of the constitution. the laws which take away or abridge the fundamental rights are liable to be struck down as ultra-vies or void by the courts under art 13 (2) by exercising the power of judicial review.

Judicial Review in India

The Doctrine of Judicial Review was for the first time propounded by the Supreme Court of America. Originally, the constitution of United States did not contain an express provision for judicial review but it was assumed by the Supreme Court of United States in the historic case of *Marbury vs Madison*⁴ Chief Justice Marshall observed that "the constitution is either superior paramount law, unchangeable by ordinary means or it is on a level with ordinary legislative acts and like other acts is alterable when the legislature shall please to alter it..... Certainly, all those who framed written constitutions contemplate them as forming the fundamental and paramount law of the nation and consequently the theory of every such government must be that an act of the legislature repugnant to the constitution is void.... It is emphatically the province and duty of the judicial department to say what the law is". Judicial review plays an important role as a protector when the executive, judiciary and legislature harm the Constitutional values and deny the rights. The judicial assessment is considered as an indispensable feature in the country. In India, there is parliamentary form of democracy where every section of people is involved in decision making and policy making process. It is true that the primary duty of the court to apply Rule of law and is the groundwork of social equality. By exercising new powers of Parliament, Rule of law which is to be applied by the court cannot be modified. All those here, who are doing public duty, are accountable. They have to work within the democratic provisions of the Constitution of India.

Constitutional amendments and Judicial review:

Amending the Constitution of India is the process of making changes to the nation's fundamental law or supreme law. The procedure of amendment in the constitution is laid down in Article 368 of the Constitution of India.⁵ This procedure ensures the sanctity of the Constitution of India and keeps a check on arbitrary power of the Parliament of India. Part-xx Article 368 (1) of the Constitution of India grants constituent power to make formal amendments and empowers Parliament to amend the Constitution by way of addition, variation or repeal of any provision according to the procedure laid down therein, which is different from the procedure for ordinary legislation.

Article 368 has been amended by the 24th and 42nd Amendments in 1971 and 1976 respectively. The following is the full text of Article 368 of the Constitution, which governs constitutional amendments. New clauses 368 (1) and 368 (3) were added by the 24th Amendment in 1971, which also added a new clause (4) in article 13 which reads, "Nothing in this article shall apply to any amendment of this Constitution made under article 368."⁶ The provisions in italics were inserted by the 42nd Amendment⁷ but were later declared unconstitutional by the Supreme Court in *Minerva Mills v. Union of India 1980*⁸ The Supreme court ruled that the constituent power under article 368 must be exercised by the Parliament in the prescribed manner and cannot be exercised under the legislative powers of the Parliament. However, there is another limitation imposed on the amending power of the constitution of India, which developed during conflicts between the Supreme Court and Parliament, where Parliament wants to exercise discretionary use of power to amend the constitution while the Supreme Court wants to restrict that power. This has led to the laying down of various doctrines or rules in regard to checking the validity/legality of an amendment, the most famous among them is the *Basic structure doctrine* as laid down by the Supreme Court in the case of *Kesavananda Bharati v. State of Kerala*.⁹

Constitutional Amendments and the Supreme Court: Shankari Prasad Singh Deo V. Union of India¹⁰

In this case, the Zamindars challenged the constitutional validity of the first amendment Act 1951 on the ground that it violates fundamental rights and Article 13(2) of the Constitution of India and contended that Article 31 is unconstitutional. The court held that any amendment made under Article 368 is not a law under Article 13 of the constitution. So, the First Amendment Act is constitutionally valid. The terms of article 368 are perfectly general and empower parliament to amend the constitution without any exception whatever.

Sajjan Singh V. State of Rajasthan¹¹

In this case, the constitutional validity of the 17th Amendment Act of 1964 was challenged. Hon'ble court by the ratio of 3:2 rejected the contention and applied the doctrine of pith and substance and held that Article 368 gives the power to amend 13(2). The judgement made in Shankari Prasad was upheld in this case. The Court stuck to the position laid down in Shankari Prasad case and held that the constitutional amendments made under Art 368 fall outside the purview of judicial review by the courts.

I.C. Golak Nath & Ors V. State of Punjab¹²

In this case, the validity of the 17th Amendment Act of 1964 was challenged again and was referred to a larger bench of 11 Judges. Court by the ratio 6:5 overruled the earlier judgement made in Shankari Prasad and Sajjan Singh and held that the word Law in Article 13 includes constitutional amendment made under Article 368. CJI Subba Rao, speaking for 5 Judges held that Article 368 provides only for the procedure and not power to amend. As it derives its power from Article 248 i.e., Residuary Power (as not mentioned specifically) that is an ordinary law, so the test of Article 13 will apply. The power of parliament to amend the constitution is derived from Article 245 read with entry 97 of list 1st of the constitution and not from Article 368. Article 368 only lays down the procedure for the amendment of the constitution. Amendment is a legislative process.

An Amendment is a law within the meaning of art 13 (3), including every kind of law, statutory as well as constitution law and hence a constitutional amendment which contravened Art 13 (3) will be declared void. Invoking the concept of Implied Limitations on the parliament's power to amend, Chief Justice Subba Rao held that fundamental rights were given a transcendental position under our constitution and are kept beyond the reach of parliament.

In order to remove the difficulties created by the decision of Supreme Court in *Golaknaths case*, parliament ended with the 24th Amendment Act 1971. This amendment added the following things to Article 13 and Article 368.

Art 13 (4). "Nothing in this article shall apply to any amendment of this constitution made under article 368."¹³

Article 368. Procedure for amendment of the constitution was replaced by Power of parliament to amend the constitution and the procedure thereof. Article 368(3). "Nothing in article 13 shall apply to any amendment made under this article."¹⁴ Thus, this amendment restored the amending power of the parliament and also extended its scope by adding the words "to amend by way of addition or variation or repeal" any provision of this constitution in accordance with the procedure laid down in Article 368.

Kesavananda Bharti V. State of Kerala¹⁵

In this case, the 24th and 25th Amendment Act of 1971 was challenged. A large Bench of 13 Judges was constituted. With the ration of 7:6 held that: Power to amend the constitution is to be found in Article 368. It is hard to believe that it lies in residuary power.

There is a difference between ordinary law and constitutional amendment. Parliament can't destroy or amend the Basic structure of the constitution. CJI Sikri gave the list of the Basic structure though not exhaustive; The supremacy of the constitution. Republic and democratic form of government. Secular character of the Indian Constitution. Separation of Power. Federal character. Justice Sikri observed that these basic features are easily distinguishable not only from the Preamble but also from the whole scheme of the Constitution. He further added that the structure was built on the foundation of dignity and freedom of the individual which undoubtedly cannot be amended. It was also observed in that case that the above are only illustrative and not exhaustive of all the limitations on the power of amendment of the Constitution.

Indira Nehru Gandhi V. Raj Narain¹⁶

In this case, the 39th Amendment Clause 4 was challenged as it puts a bar to challenge the election of Speaker and Prime Minister. It was struck down in this case and the court declared it unconstitutional. Allahabad High Court's decision staying Mrs Gandhi's Election as Member of Parliament. Indira Gandhi filed an appeal before the Supreme Court from the decision of the Allahabad High Court in which it was held that the appellant had committed certain malpractices in her election. Before Supreme Court could hear the Appeal, the parliament passed the Constitutional Amendment Bill 1975, which inserted clause 329A¹⁷ in the constitution and placed the election of Prime Minister and Speaker beyond the purview of judicial scrutiny by way of judicial review. Supreme Court held that the Democracy is the basic structure of the constitution. Therefore, if by 329 A, any essential feature of democratic, republican, structure of Indian polity is damaged or destroyed it would be ultra vires of the constitution.

ADM Jabalpur vs Shiva Kant Shukla¹⁸

During the Emergency the leaders of the opposition were put in prison and fundamental rights suspended. Upsetting rulings by Twelve High Courts in the country, the Supreme Court held that during the Proclamation of Emergency under Article 352 of the Constitution, a court was powerless to protect an individual from state action notwithstanding such action being contrary to law and resulting in complete deprivation of the right to life and liberty, and the importance generally of the power of judicial review.

Minerva Mills Ltd vs Union of India¹⁹

The Supreme Court struck down clauses (4) and (5) of Article 368 inserted by the 42nd Amendment, on the ground that these clauses destroyed the essential feature of the basic structure of the constitution. Limited amending power is a basic structure of the constitution, since these clauses removed all limitations on the amending power and thereby conferred an unlimited amending power, it is destructive of the basic feature of the constitution.

Mohd. Ahmed Khan V. Shah Bano Begum²⁰

Shah Bano Begum who belonged to Indore, Madhya Pradesh, was divorced by her husband in 1978. She filed a criminal suit in the Supreme Court of India, in which she won the right to alimony from her husband. However, the Muslim politicians mounted a campaign for the verdict's nullification. The judgement in favour of the woman in this case evoked criticisms among Muslims, some of whom cited the Qur'an to show that the judgement was in conflict with Islamic law. It triggered controversy about the extent of having different civil codes for different religions in India. The case caused the Congress government, with its absolute majority, to pass the Muslim Women (Protection of Rights on Divorce) Act, 1986, which diluted the judgment of the Supreme Court and restricted the right of Muslim divorcées to alimony from their former husbands for only 90 days after the divorce (the period of iddah

in Islamic law). However, in later judgements including *the Daniel Latifi*²¹ case and *Shamima Farooqui v. Shahid Khan*,²² the Supreme Court of India interpreted the act in a manner reassuring the validity of the case and consequently upheld the Shah Bano judgement, and *The Muslim Women (Protection of Rights on Divorce) Act 1986* was nullified. Some Muslims, including the All-India Shia Personal Law Board, supported the Supreme Court's order to make the right to maintenance of a divorced Muslim wife absolute.

I.R. Coelho V. State of Tamil Nadu²³

In this case the court held that any act inserted in Schedule 9 can be judicially scrutinized but only those enactments which are inserted after 24th April 1973. The Court held that even through the Act is put in the 9th schedule by a constitutional Amendment its provisions would be open to challenge on the ground that they destroy or damage the basic feature of the constitution.

Supreme Court Advocates on Record Association vs Union of India²⁴

Writ Petition (Civil) No.13 of 2015, the National Judicial Appointments Commission Act was challenged on the ground that the NJAC violates judicial independence by creating a system in which the Chief Justice would no longer have primacy in judicial appointments and in which the judiciary would not have majority control over the NJAC in a system where the political influence of the executive and parliament would be dominant. Also, it grants power to the parliament to change and alter judicial selection criteria and procedures, which constitutes the violation of judicial independence, separation of powers and Rule of Law. The Supreme Court observed that the impugned Amendment and the Act are struck down as unconstitutional. pre-existing scheme of appointment of judges stands revived. However, the matter be listed for consideration of the surviving issue of grievances as to working of pre-existing system.

Shayara Bano vs Union of India²⁵

W.P.No. 118 of 2016 in this case supreme court of India held that triple talaq is a unilateral power given to the husband to divorce his wife and on the face of it, it looks arbitrary therefore triple talaq is unconstitutional being violative of fundamental rights. Justice Nariman propounded Doctrine of Manifest Arbitration and held that triple talaq is violative of Art 14 of the constitution of India.

In Joseph Shine vs Union of India²⁶

SC held that sec 497 of Indian Penal Code is unconstitutional.

Navtej Singh Johar vs Union of India²⁷

The constitutional validity of sec 377 was challenged on the ground that it violates fundamental right. Justice Chandrachud observed that "I am not bound by societal morality, I am bound by constitutional morality and if the constitution protects the interests of a single citizen of India i am bound to protect it". Therefore Sec 377 of I.P.C was decriminalized and was held to be unconstitutional.

Anuradha Bhasin vs Union of India²⁸

The Union Territory of Jammu and Kashmir was directed by Supreme Court to review all orders suspending the internet services forthwith, all orders not in accordance with law must be revoked. Supreme Court held that the Freedom of Speech and Expression and the Freedom to practice any Profession or carry on any Trade, Business or Occupation over the medium of internet enjoys constitutional protection under Art 19 (1) (a) and Art 19 (1) (g). The restriction upon such fundamental rights should be in consonance with the mandate under Art 19 (2) and Art 19 (6) of the constitution inclusive of the test of Proportionality.

Conclusion:

India adopted the concept of Separation of power. In India, we have the concept of judicial review embedded in the basic structure of the constitution. It helps the courts to keep a check and balance upon the other two organs of government. When the Legislature and Executive have harmed the constitutional values and deny the rights, which have been definite under the Indian Constitution to the Indian inhabitants. In such circumstances the judicial review plays very important role as protector for safeguarding the rights of people. Though it is a fact that power to review is very important, at the same time absolute power to review cannot be granted and by observing judicial review as a part of basic feature of the Constitution, courts in India have given altogether a different meaning to the theory of Checks and Balances. This also means that it has buried the concept of separation of powers, where the judiciary will give itself an unfettered jurisdiction to review anything and everything that is done by the legislature. In the *Minerva Mills* case whereby the Supreme Court held that “government, legislature, executive and judiciary is all bound by the Constitution, and nobody, is above or beyond the Constitution.” Every law made by the parliament is subject to interpretation by supreme court in the light of ideals and objectives of the constitution and if they go beyond or above that, they can be held null and void. Both parliament and the judiciary should not exceed their limits as defined by the constitution of India so that harmony can be maintained between the legislature and judiciary. The new socio-economic trends are to be kept in mind before making the legal provisions and their interpretation both in strict and liberal sense. Participatory democratic system must be made effective and there must be proper check on the active interaction between the people and their representatives is responsible for the conflict between the parliament and judicial system in India.

¹ Rule of law was developed by a British jurist Albert Venn Dicey in his book ‘The Law of The Constitution’ 1885.

² D.D. Basu book “Commentaries on Constitution of India”. Vol. 1.

³ Constitution of India.

⁴ 2 L. Ed. 60; 1803 U.S. LEXIS 352.

⁵ Part- xx of the Indian Constitution.

⁶ 24th Amendment Act, 1971.

⁷ Constitutional (Forty second amendment) Act, 1976, enacted during the emergency.

⁸ AIR 1980 SC 1789.

⁹ AIR 1973 SC 1461.

¹⁰ AIR 1951 SC 458.

¹¹ AIR 1965 SC 845

¹² AIR 1967 SC 1643.

¹³ The constitutional (Twenty-Fourth amendment) Act, 1971.

¹⁴ Supra.

¹⁵ AIR 1973 SC 1461.

¹⁶ AIR 1975 SC 865.

¹⁷ Special provision as to election to parliament in case of prime minister and speaker.

¹⁸ AIR 1976 SC 1207

¹⁹ AIR 1980 SC 1789.

²⁰ AIR 1985 SC 954.

²¹ (2001) 7 SCC 740.

²² AIR 2015 SC 2025.

²³ AIR 2008 SC 861

²⁴ AIR 2015 SC 5457.

²⁵ (2017) 9 SCC 1.

²⁶ AIR 2018 SC 1676.

²⁷ AIR 2018 SC 4321.

²⁸ AIR 2020 SC 1308.

Indian Banking Sector Reforms : An Overview

*Dr. Abhilash Kumar Srivastava **

The sense in which we today use the term banking has its origin in the western world. It was introduced in India by the British rulers, way back in the 17th century. Since then, enough water has flown and today Indian banks are considered among the best banks in the developing world and its attempts to emerge among best in the world is going on. By the time there needs to be some changes in any system to make it better than before and banking system is no exception to it. So this research paper is an attempt to study various banking sector reforms in the Indian banking system.

Keywords : Banking system, developing world, Indian banks, Banking sector reforms etc.

Introduction

Banking Sector Reforms

The government commenced a comprehensive reform process in the financial system in 1992- 93 after the recommendations of the CFS in 1991. In December 1997 the government did set up another committee on the banking sector reform under the chairmanship of M.Narasiham. The objective of the committee is objectively clear by the terms of reference it was given while setting up:

“To review the progress of banking sector reforms to date and chart a programme of financial sector reforms necessary to strengthen India’s financial system and make it internationally competitive”

The Narasimham Committee-II (Popularly called by the Government of India) handed over its reports in April 1998, which included the following major suggestion.

1. Need for a stronger banking system for which mergers of the PSBs and the financial institutions (AIFIs) to be merged while weaker and unviable ones to be closed.
2. A 3-tier banking structure was suggested after mergers:
 - (a) tier-1 to have 2 to 3 banks of international orientation:
 - (b) tier-2 to have 8 to 10 banks of national orientation: and
 - (c) tier-3 to have large number of local banks.

The first and second tiers were to take care of the banking needs of the corporate sector in the economy.

3. Higher norms of capital-to-risk-weighted adequacy ratio (CRAR) suggested-increased to 10 percent.
4. Budgetary recapitalization of the PSBs is not viable and should be abandoned.
5. Legal framework of loan recovery should be strengthened (the government passed the SARFAESI (Act,2002).
6. Net NPAs for all banks suggested to be cut down to below 5 percent by 2000 and 3 percent by 2002.
7. Rationalisation of branches and staffs of the PSBs suggested.
8. Licensing to new private banks (Domestic as well as foreign) was suggested to continue with.
9. Bank boards should be depoliticized under RBI supervision.
10. Board for financial regulation and supervisions (BFRS) should be set up for the whole

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banking, financial and the NBFCs in India.

Research Methodology

This paper is based on secondary source of data.

DRI

The differential rate of interest (DRI) is a lending program launched by the government in April 1972 which makes it obligatory upon all the public sector banks in India to lend 1 percent of the total lending of the preceding year to 'the poorest among the poor' at an interest rate of 4percent per annum. The total lending in 2005-06 was Rs.351 crores.

Priority Sector Lending

All Indian banks have to follow the compulsory target of priority sector lending (PSL). The priority sector in India are at present the sectors agriculture, small and medium enterprises (SMEs), road and water transport, retail trade, small business, small housing loans (not more than Rs.10 lakhs), software industries, self help groups (SHGs), agro-processing, small and marginal farmers, artisans, distressed urban poor and indebted non-institutional debtors besides the SCs, STs and other weaker sections of society.

In 2007, the RBI included five minorities-Buddhists, Christians, Muslims, Parsis and SIKHS under the PSL. In its new guidelines of March 2015, the RBI added 'medium enterprise, sanitation and renewable energy' under it. The PSL targets must be met by the banks operating in India in the following way:

1. INDIAN BANKS need to lend 40 percent to the priority sector every year (public sector banks, both) of their total lending. There is a sub target also -18 percent of the total lending must go to agriculture and 10 percent of the total lending or 25 percent of the priority sector lending (whichever be higher) must be lent out to the weaker sections. Other areas of the priority sector to be covered in the left amount, i.e.12 percent of the total lending.
2. Foreign Banks (having less than 20 branches) have to fulfill only 32 percent PSL target which has sub -targets for the exports (12 percent) and small and medium enterprises(10 percent).It means they need to disburse other areas of the PSL from the remaining 10 percent of their total lending (lesser burden).

The committee on financial system (CFS, 1991) had suggested to immediately cut it down to 10 percent for all banks and completely phasing out of this policy for the betterment of the banking industry in particular and the economy in general. The committee also suggested to shuffle the sectors covered under PSL every three years. No follow up has been done from the government except cutting down PSL target for the foreign banks from 40 percent to 32 percent. Meanwhile some new areas have been added to the PSL.

Revision In PSL

The Reserve Bank of India (RBI) panel on priority sector lending on Feb 21, 2012 proposed that the target (priority sector) for foreign banks to be increased to 40 percent of net bank credits from the current level of 32 percent with sub targets of 15 percent for exports and 15 percent for the medium and small enterprises (MSE) sector, within which 7 percent may be earmarked for micro enterprises. The target of domestic scheduled commercial banks for lending to the priority sector to be retained at 40 percent of net bank credit. The Nair committee, (under the chairmanship of M.V.Nair, Chairman, Union Bank of India), has reexamined the existing classification and suggested revised guidelines with regard to priority sector lending and related issues. Major suggestions by the committee are as given below.

1. The committee suggested that the sector 'agriculture and allied activities' may be a composite sector within the priority sector, by doing away with the distinction between direct and indirect agriculture. However the targeted for agriculture and allied activities would be at 18 percent.
2. A sub-target for small and marginal farmers within agriculture and allied activities is recommended, equivalent to 9 percent, which would be achieved in stages by 2015-16.
3. The MSE sector may continue to be under the priority sector. Within the MSE sector, a sub-target for micro enterprises is recommended, equivalent to 7 percent, which would also be achieved in stages by 2013-14.
4. The loans to housing sector may continue to be under the priority sector. Loans for construction or purchase of one dwelling unit per individual up to Rs.25 lakh; loans up to Rs 5 lakhs in other centers for repair of damaged dwelling units maybe granted under the priority sector.
5. To encourage construction of dwelling units for economically weaker sections and low income groups, housing loans granted to these individuals may be included in the weaker sections category.
6. All loans to women under the priority sector may also be counted under loans to weaker sections.
7. The loans to education sector may continue to be under the priority sector. The limit under the priority sector for loans for studies in India may be increased to Rs.15 lakh and Rs.25 lakh in case of studies abroad, from the existing limit of Rs.10 lakh and Rs.20 lakh, respectively.
8. The committee has also recommended allowing non-tradable priority sector lending certificates on a pilot basis with domestic scheduled commercial banks, foreign banks and regional rural banks as market players.

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Nitrogen mustards of Pyrimidine derivatives (potential anticancer agents)

Dr. Shubhra Singh *

Synthesis of 2-Hydroxy-4, 6-dimethyl pyrimidine (I) : 2-hydroxy-4-methyl-6-{4'-[N, N-bis (2-chloroethyl) amino]styryl} pyrimidine (II), 2-hydroxy-4-methyl-6-{4'-[N, N-bis (2-chloroethyl) amino]styryl} pyrimidine hydrochloride (III). 2-hydroxy-4, 6-{4'-[N, N-bis(2-chloroethyl)amino distyryl] } pyrimidine (IV), 2-hydroxy -4, 6-{4'-[N, N-bis (2-chloroethyl) amino] distyryl} pyrimidine hydrochloride (V), 2-mercapto-4, 6- dimethyl pyrimidine (VI), 2-mercapto-4-methyl-6{4',-[N, N-bis (2-chloroethyl) amino] styryl} pyrimidine hydrochloride (VIII), 2-mercapto-4, 6-{4'-[N, N-bis (2-chloroethyl) amino] distyryl} pyrimidine hydrochloride (X) are reported. Their I. R spectra have been studied and their structures established.

Key Words: Dimethyl pyrimidine, Xylene, Spectroscopic data.

Pyrimidine derivatives play a fundamental role in life processes and their chemotherapeutic potential has also given a considerable impetus to their study. Gabriel and colman¹ as well as Ross² have reported that methyl groups at 2, 4-and 6-position in pyrimidine ring undergo easy condensation with benzaldehyde in presence of anhydrous zinc chloride, 2-hydroxy 4,6-dimethyl pyrimidine (I) and 2-mercapto-4, 6-dimethyl pyrimidine (VI) attracted our attention because one or two nitrogen mustard groups can be introduced in them. 2-hydroxy-4, 6-dimethyl pyrimidine and 2-mercapto-4, 6-dimethylpyrimidine were condensed with benzaldehyde mustard. A number of condensing agents such as iodine, acetic anhydride, piperidine and anhydrous zinc chloride were used but anhydrous zinc chloride was found to be the most suitable in inert solvent like benzene, toluene and xylene.

2-Hydroxy-4, 6-dimethyl pyrimidine (I) was prepared following the procedure of Hale³. A mixture of 2-hydroxy-4, 6-dimethyl pyrimidine (I) and benzaldehyde mustard in molar ratio taken in xylene and refluxed for 6 hours in presence of anhydrous zinc chloride. Colorless needles of 2-hydroxy-4 methyl-6- {4'-[N, N-bis (2-chloroethyl) amino] styryl}-pyrimidine (II) m.p. 193⁰c were obtained. The appearance of sharp absorption band at 1610 cm⁻¹ confirms the formation of compound (II). When one mole of 2-hydroxy-4,6-dimethyl pyrimidine and two moles of benzaldehyde mustard were refluxed for 4 hours, 2 hydroxy-4, 6-{4'-[N, N bis(2-chloroethyl) amino] distyryl} pyrimidine (V) m.p. 203⁰c was formed which had characteristic band at 1610^{cm-1} (-CH=CH-) while sharp bond at 1390^{cm1}(-CH₃) has disappeared. Similarly 2-mercapto-4 methyl-6-{4-[N, N-bis (2-chloroethyl) amino] styryl}-pyrimidine (VII) m.p. 120⁰c max 1610cm-1 and 2-mercapto 4,6-{4-[N, N-bis (2-chloroethyl) amino] distyryl}-pyrimidine (IX) m.p. 192⁰c. ν max 1605 ^{cm-1}, (-CH=CHO) were obtained. Hydrochloride derivatives of these compounds were prepared by diluting the concentrated mother liquor with ether by passing dry hydrogen chloride gas.

Experimental

All melting points are uncorrected and I.R. spectra were taken on KBr disc.

Preparation of 2-hydroxy-4, 6-dimethyl pyrimidine (I) :

10g. Urea was dissolved in alcohol (160 ml. and to the cooled solution, acetyl acetone (10g), and conc. H₂SO₄ (30g) was added as quickly as possible. Well mixed solution when

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kept in an ice chest for a few hours deposited 12g of sulphate. The solution of sulphate was boiled with an excess of BaCO₃ for a few minutes and filtered. The filtrate on concentration gave 2-hydroxy-4, 6-dimethyl pyrimidine (I) Recrystallized from benzene-ethanol m.p. 197⁰c.

Found: C, 58.60; H, 6.30; N, 22.62

C₆H₈N₂O Requires: C, 58.65; H, 6.46; N, 22.58%

ν Max 3325 (-OH), 1390(-CH₃), 1225 (C-N=) cm⁻¹

Preparation of 2-hydroxy -4- methyl-6- {4'- [N, N-bis (2-chloroethyl) amino] styryl}-pyrimidine (II):

2-Hydroxy-4,6-dimethylpyrimidine (1.24g; 0.01 mole) and benzaldehyde mustard (2.46g; 0.01 mole), anhydrous zinc chloride (3.0g) were taken in 80ml xylene and the mixture refluxed for 6 hours. Separated crystals, recrystallized from benzene-ethanol. Colorless needles, m.p.193⁰c.

Found: C, 57.85; H, 5.40; N, 11.70

C₁₇H₁₉N₃OCl₂ Requires: C,57.95; H, 5.397; N, 11.93%

ν Max 3330 (-OH), 1610 s (-CH=CH-), 1540 (-CH₂-CH₂-)

1390 (-CH₃), 1325 (C-N=), 810 (two adjacent H-atoms), 650 (C-Cl) cm⁻¹

Preparation of 2-hydroxy -4- methyl -6- {4'- [N, N-bis (2-chloroethyl) amino] styryl}-pyrimidine hydrochloride (III):

Concentrated mother liquor from the above experiment was diluted with dry ether and dry HCl gas was passed. Dark pink solid separated.

Recrystallized from alcohol. Pink colored crystals m.p. 90⁰c.

Found: N, 10.65

C₁₇H₂₀N₃O Cl₃ Requires: N, 10.81%

Preparation of 2-hydroxy -4 6- {4'-[N, N-bis (2-chloroethyl) amino] distyryl}-pyrimidine (IV) :

2-Hydroxy-4,6-dimethylpyrimidine (1.24g; 0.01 mole) was dissolved in a mixture of xylene (70 ml) and absolute alcohol (10 ml). To it benzaldehyde mustard (4.8g; 0.02 moles) and anhydrous zinc anhydrous chloride (2.5g) were added and the mixture was refluxed for 4 hours. Separated crystals, recrystallized from benzene-ethanol. Colorless needles, m.p. 203⁰c.

Found: C, 57.81; H, 5.18; N, 9.56

C₂₈H₃₀N₄O Cl₄ Requires: C,57.93; H, 5.17; N, 9.65%

ν Max 3350 (-OH), 1610 s (-CH=CH-), 1450s (-CH₂-CH₂-)1325s (C-N-),

810 (two adjacent H-atoms), 660 (C-Cl) cm⁻¹.

Preparation of 2-hydroxy -4 6- {4'-[N, N-bis (2-chloroethyl) amino] distyryl}-pyrimidine Hydrochloride (V) :

The concentrated mother liquor from the above experiments was diluted with ether and dry HCl gas was passed. A viscous oil was obtained which solidified after 3 days. Recrystallized from benzene-ethanol.

Pink crystals m.p. 110⁰c.

Found: C, 54.82; H, 5.2

C₂₈H₃₁N₄O Cl₅ Requires: C,54.5; H, 5.02%

Preparation of 2-mercapto -4 6-dimethyl pyrimidine (VI):

Thiourea (2.0g) was dissolved in alcohol (40 ml). To it acetyl acetone (2.0g) and 50drops of conc. H₂SO₄was added during cooling and the mixture was left for 2 days. Separated crystals were dissolved in water and freshly precipitate BaCO₃ was added till the solution became neutral. Filtered and the filtrate on concentration gave light yellow prisms of

2-mercapto- 4, 6- dimethyl pyrimidine (VI), Yield 80%. Recrystallized from benzene, m.p. 210⁰c.

Found: C, 51.30; H, 5.90; N, 20.45

C₆H₈N₂S Requires: C, 51.428; H, 5.714; N, 20.0%

ν Max: 2940 (-SH), 1390 (-CH₃), 1330 (-C-N=), 970s (isolated H-atom) cm⁻¹.

Preparation of 2-mercapto - 4 -methyl - 6- {4'- [N, N-bis (2-chloroethyl) amino] styryl}-pyrimidine (VII):

It was prepared as the compound (II), Yellow needles m.p. 203⁰c.

Found: N, 11.50

C₁₇H₁₉N₃S C₁₂ Requires: N, 11.41%

ν Max: 2920 (-SH), 1610s (-CH=CH-), 1470 (-CH₂-CH₂-), 1390 (-CH₃), 1325 (C-N=), 850 (two adjacent H-atoms) and 740s (C-Cl) cm⁻¹.

Preparation of 2-mercapto - 4 -methyl - 6- {4'- [N, N-bis (2-chloroethyl) amino] styryl}-pyrimidine Hydrochloride (VIII):

It was also prepared as the compound (III), Blood red crystals, m.p. 120⁰c.

Found: C, 50.03; H, 5.34

C₁₇H₂₀N₃S S₁₃ Requires: C, 50.43; H, 4.94%

Preparation of 2-mercapto - 4, 6- {4'- [N, N-bis (2-chloroethyl) amino] distyryl}-pyrimidine (IX):

This compound was also prepared as compound (IV), was pink crystals, m.p. 192⁰c.

Found: C, 56.50; H, 5.5; N, 9.12

C₂₈H₃₀N₄S C₄ Requires: C, 56.66; H, 5.03; N, 9.39%

ν Max 2980 (-SH), 1605vs (-CH=CH-), 1325 (-C-N=), 860 (two isolated H-atoms), 740 (C-Cl) cm⁻¹.

Preparation of 2-mercapto - 4, 6- {4'- [N, N-bis (2-chloroethyl) amino] distyryl}-pyrimidine Hydrochloride (X):

This compound was also prepared as the compound (V). Red solid was obtained after 4 days. Recrystallized from benzene-ethanol m.p. 132⁰c.

Found: C, 53.71; H, 5.01

C₂₈H₃₁N₄S Cl₅ Requires: C, 53.12; H, 4.90%

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- | | | | |
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A Geographical Analysis of Rural Markets In Bhojpur District

*Mamtisha Kumari **
*Prof. (Dr.) Ashok kumar Sinha ***

Rural market is more potential for consumer durables and services. Rural population largely depends on agriculture and it can contribute nearly 50% to total national income. Rural marketing improves agricultural sector and improved agricultural sector can boost whole economy of the country.

Rural markets in India have untapped potential. There are several difficulties confronting the effort to fully explore the rural markets. The concept of rural markets in India is still in evolving shape, and the sector pages a variety of challenges. Distribution costs and non-availability of retail output are major problems faced by marketer

Keywords : Agricultural innovations, rural areas, Urbanization, Integration, traders' co-operative strategies.

Introduction :

Before projecting profile of the project an effort has been made to stretch out the historical setting of Bhojpur District from untold past to the ongoing days. The contentment's of different chapters and the importance of the project have been represented. A short format of source, mapping, data and field study

1.1 Introducing Bhojpur District

The aim of this chapter is to focus the necessary characteristics of the Bhojpur District. I will try to expose the physical and socio-economic aspects, with a note on living rural market system. The study of this chapter is united with the explore of a connection between the region's resource funding and economy particularly agriculture under the physical surroundings. An avid scrutiny of the environmental base needs an inspection of assets application and demonstrates with the investigation of geology. Soil, climate and drainage that assist in planning the footing of agricultural scheme. Capability of the growth of the region is also formed an opinion with these features. The organization depends on its geo-physical possibility.

Bhojpur District is one of the thirty-eight districts of the state of Bihar situated in western Bihar. The District came into existence in 1972. When Shahabad District was bifurcated into Bhojpur and Rohtas.

This district is named 'Bhojpur'¹ after great Parmara king 'Bhoja' as most early settlers were Rajput rulers of Parmara Dynasty then called as ujjaininya. The district is bounded by the districts of Chapra, Rohtas, Patna. Jahanabad, Arwal, Buxar and district Ballia of Uttar Pradesh. Presently, Bhojpur district has three Sub-Divisions Ara sadar, Jagdishpur and Piro which is further divided into fourteen blocks consists of two hundred twenty-eight gram panchayats and One thousand two hundred forty-four Villages. The district occupies an area of 2,395 square kilometers. It is located at a longitude of 83⁰ 45' East and the latitude is 25⁰ 10' to 25⁰40 North and is situated at a height of 193 meters above sea level.

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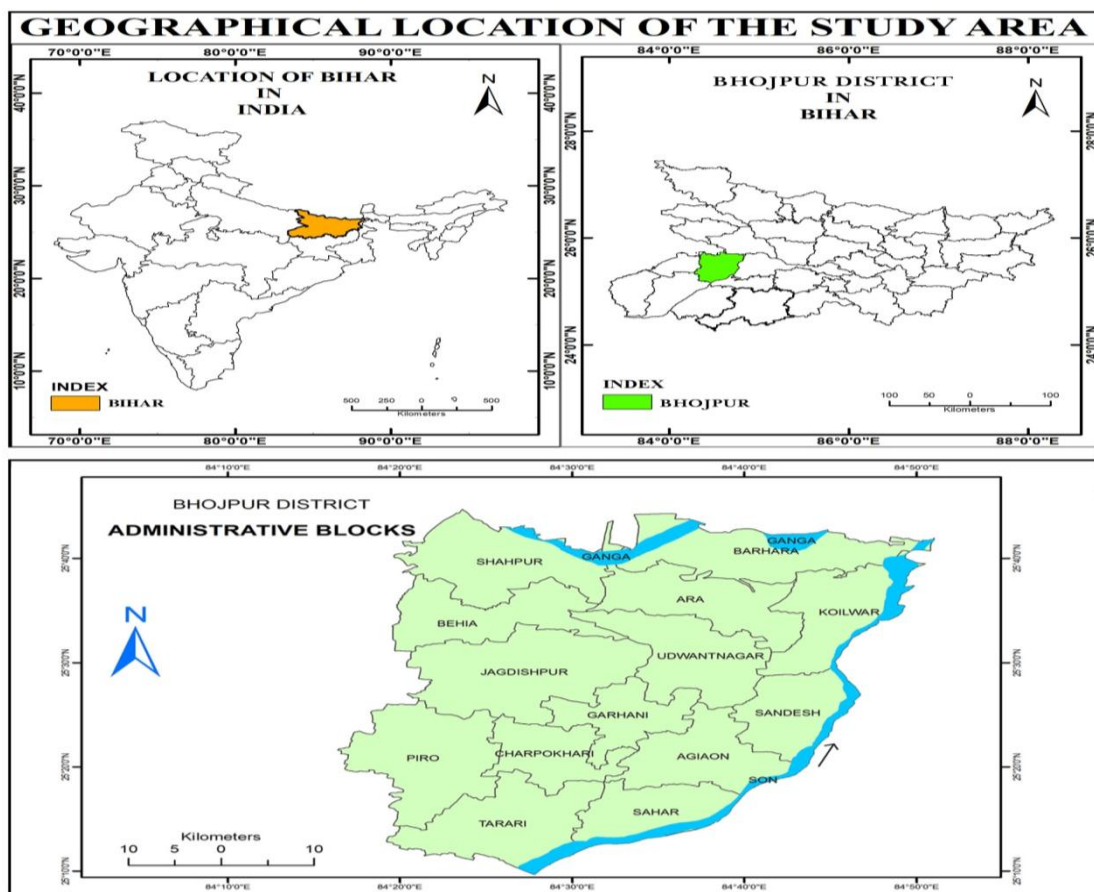
In 2006 the Indian government named Bhojpur one of the country’s 250 most backward districts. It is one of the 38 districts in Bihar currently receiving funds from the Backward Regions Grant Fund Programme.²

According to the 2011 Census of Bhojpur District, Bihar has a population of 2,720,155, roughly equal to the nation of Kuwait or the US state of Nevada. This gives it a ranking of 145th in India.³ The district has a population density of 1,136 inhabitants per square kilometer. Its population growth rate over the decade 2001-2011 was 21.27%. Bhojpur District has a sex-ratio of 900 females for every 1000 of 72.79% languages include Bhojpuri, a language with almost 2,000,000 speakers according to the study of ‘Times of India Daily’⁴ written in both the Devanagari and kaithi scripts, Hindi and Urdu.

Geo-physical Elements

Geo-physical elements such as geology, relief. Drainage system, climate and soil affect the agriculture and its design and other land uses of the district. The nature of territory is straightly connected to the geological features of the earth, relief, river system and the soils where atmospheric conditions allow different kinds of crops to be harvested.

Location of Bhojpur District

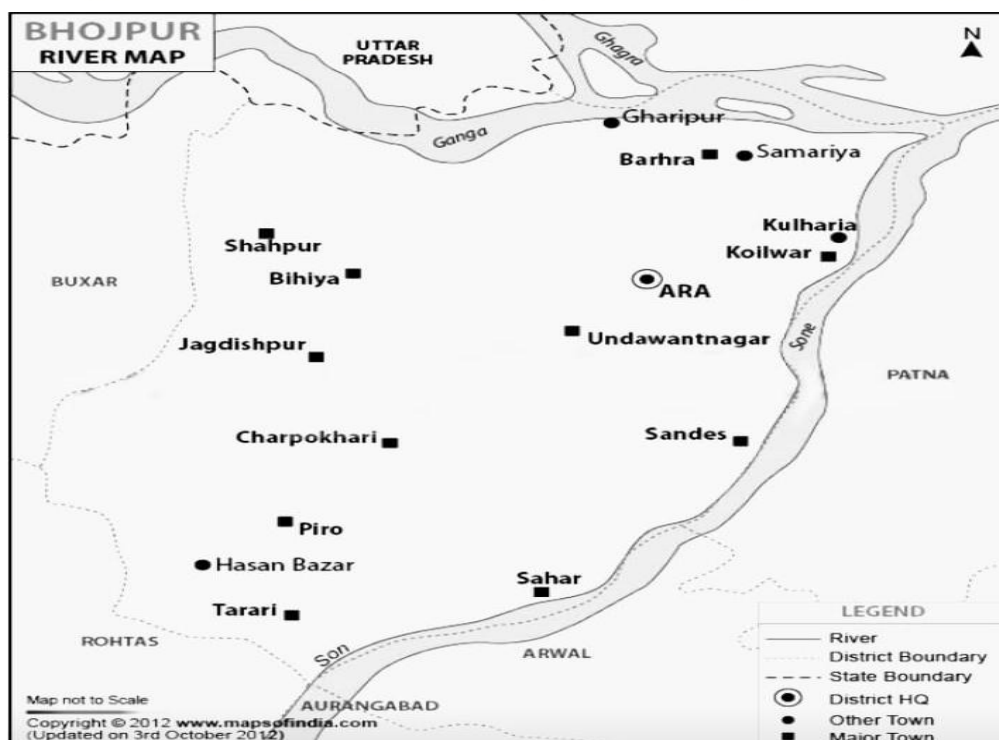
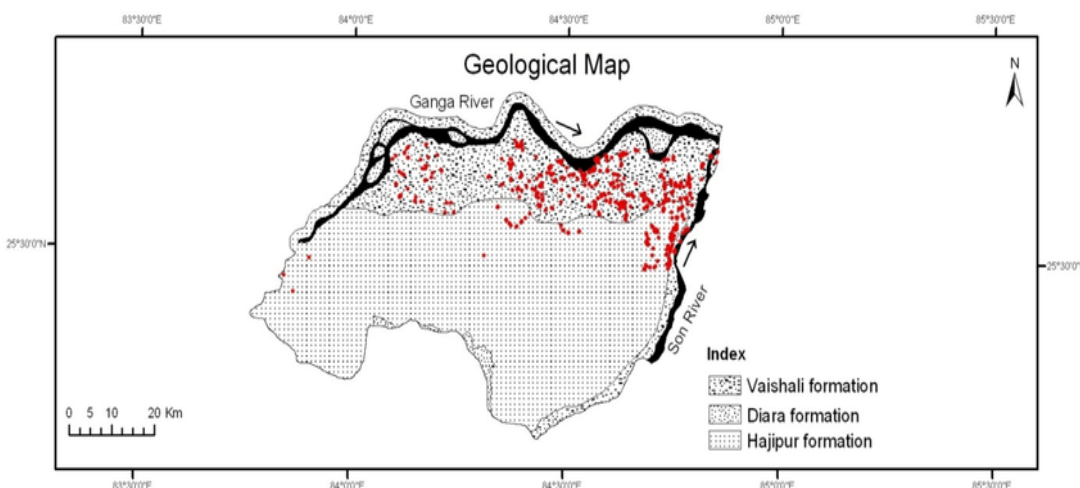


Geology

District 2474 sqkm area of this district falls under these toposheets. It expands between 25010' and 25040' north latitude and 83045' and 84045' Toposheet no. 72C/7, 72C/8, 72C/11, 72C/12, 72C/13, 72C/14, 72C/15 and 72c/16, fall under the Bhojpur East longitude.

Bhojpur District is situated in the western Bihar on the Genetic alluvial region which is in south of the Ganga and west of the Son river. The headquarter of this region named Ara is connected by a web of national Highways and state Highways. The region is also well-connected with Patna, Varanasi and remaining area of the country by well-maintained roads. There is has been noticed.

Geological Map of Bhojpur District



Objective :

Analyzing, a large number of rural population which subsidized about 65.07% of total population and about 88.71% of Bihar and more than 85-71% of the Bhojpur district is the main deliberation for choosing this project for Ph.D. little study has been done in this branch in India particularly in our Bihar. Surviving on conventional socio-economic formation genuinely reproduces the zonal institutions of marketing system of India. The dependency of the economic structure of the Bhojpur district is mainly upon local marketing pattern which is the mirror of a rural market. The rural population of India resume to suffer from unemployment, poverty, socio-economic backwardness and under-employment. If agricultural innovations and new developed technology are transferred through the population to the rural areas then the transmit ion of the structure of the rural areas can be made through these periodic market centres.

Retail distribution of products in the area and a local marketing system, according to the differing economical capacity local demand, cultural and social status of the population all these market centres subsist firstly to supply goods and services for the surrounding area. Periodicity of the markets and trends of customer travel mainly depend upon means of transport and availability of products.

We know that periodic markets are famous in rural areas specially which gather in the morning at a place and ends in the evening. A ship having permanent structure and may be one or more in number may remain as being countryside. Periodic market has been connected with the centre and permanent market discussed in shape of rurban centre.

Research Methodology :

First, I planned my research work on this topic entitled “**An Analysis of Rural Markets in Bhojpur District**”. For this Bhojpur I visit several markets of the district but I saw that district has very fertile soil which provide a variety of crops, fruits and vegetables but scarcity of means of transport, cold storage and many other facilities, the products cannot reach to main markets.

Secondly, I started to collect data related with this research. I collect data by survey and also from blocks.

After collection of the data I drawn maps and diagrams with the help of collected data. We can see and understand anything easily with the help of maps and diagrams.

At last, I analyse the maps and diagrams and discuss about them.

Literature review :

An evaluation of contribution of rural periodic markets in rural development planning is a major area of research. A developing consciousness in the direction of the development of combined region has been noticeable in the middle of social scientists and policy planners both for evident reasons. Those policy planners and social scientists are Johnson 1970, NCERT 1972, Bromley 1975 and U. Ram, the effect of development planning have conducted to an evaluation of the work force.

The Need for a policy of Rural Development :

Rural development is the process of improving the quality of life and economic well-being of people living in rural areas, often relatively isolated and sparsely populated areas.

Rural development is a comprehensive term. It essentially focuses on action for the development of areas outside their mainstream urban economic system. We should think of what type of rural development is needed because modernization of village leads to urbanization and village environment disappears.

- A. Integration of Market Days:** Integration of market days occurs when prices among different locations or related goods follow similar patterns over a long period of time. Groups of goods often move proportionally to each other and when this relation is very clear among different markets it is said that the market days are integrated. Thus market days integration is an indicator that explains how much different markets are related to each other.
- B. Setting Up of New Market Centre :** Setting up of new market centre is a growth strategy that identifies and develops new market segments for current products. A market development strategy targets non-buying customers in currently targeted segments.
- C. Regulated Markets :** Regulated markets where the sale and purchase of the products are monitored by the Market Committee. This Market Committee consists of farmers, government agents and traders.
- D. Infrastructure Development :** The present infrastructure is not sufficient to meet the growing demands of the farmers.
- E. Co-operative Agricultural Marketing Societies :** The government also started co-operative marketing under which the farmers get access to fair prices. This is due to the better and enhanced bargaining power of the farmers via collective sale in the market.
- F. MSP Policy :** Minimum support price is a minimum legislated price that a farmer may charge in exchange for his products. The MSP insulates the farmers in case of price fall as this is the minimum price that they can receive.
- G. Significance of Information Technology in Rural Markets :** There are many methods in which information Technology can be used to convey the details about one person to another.

There are a number of information and communication instruments as follows:

- a. Kisan SMS Portal
- b. Kisan Call Centre
- c. Kisan Vikas Kendras
- d. E-Nam
- e. E-Governance
- f. E-Coupal

H. Rural Marketing Strategies:

Thinking about surroundings in which the rural market utilizes and other connected issues, if it is possible to develop efficacious strategies for rural marketing. Some of the generally features which will associate in rural market are Land holding model, irrigation amenities, continuousness of peasants, cropping model, mix of venture, education levels, contiguity to cities/towns, sociological agents, profession groups.

Marketing strategies are:

- A. Product strategies
 - i. Small Unit and low priced Packing.
 - ii. New product Designs
 - iii. Well built products
 - iv. Brand name
- B. Pricing Strategies

Pricing strategies are very much connected to product strategies. Some of these strategies are:-

- i. Low Cost/Cheap products
- ii. Avoid Sophisticated Packing

- iii. Refill Packs/Reusable Packing
- iv. Application of value engineering
- C. Distribution Strategies
- D. Promotion Strategies

Development Policy And Strategies.

- Agricultural Land Policy
- Ground water
- Surface Irrigation
- Crop Planning
- Input supply
- Pesticides
- Credits
- Crop insurance
- Marketing Facility
- Drinking water supply
- Electrification
- Transport

Management and Organizational Reforms:

It is important to ensure proper sequencing of actions by the concerned department.

Conclusion:

To conclude we can say, that the problem of unemployment in India has reached a critical stage. But now the government and local authorities have taken the problem seriously and working on it to reduce unemployment. Also, to completely solve the issue of unemployment we have to tackle the main issue of unemployment that is the vast population of India.

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Undercurrent Streams of Romanticism In Prosaic Soil of The Eighteenth Century England

*Dr. Sanil Kumar **

As a matter of fact, the 18th century is known as the age of prose and reason, but it is perceptible that the age was not altogether devoid of the romantic streams. Just as the Age of Chaucer was the first transitional period in English Literature as it was the meeting ground of the Middle Ages and the Renaissance spirit. Similarly the Age of Johnson is a period of transition which witnessed a new struggle between the order of Classicism and the new order of Romanticism, and of the gradual triumph of the new. On the one hand, there were poets like Dr. Johnson, Goldsmith and Crabbe who followed the general practice of the school of Pope and primarily adhered to the Augustan tradition. On the other hand a number of poets such as Thompson, Somerville, Edward Young, Shenstone, James Beattie, Thomas Gray, William Collins, Macpherson, William Cowper, Blair, John Dyer, Mark Akenside and Allen Ramsay tried to abandon the practice of the school of Pope. In the work of these transitional poets we may recognise the breaking up of the Augustan tradition. Long before, the Augustan principle of reason and correctness finally came to the unveil in the *Lyrical Ballads* of Wordsworth and Coleridge, a new spirit was beginning to be felt in the later 18th century poetry. In the words of Moody and Lovett, "The death of Pope in 1744 is conventionally regarded as marking the end of the period during which the classical ideal was dominant in Literature. This ideal was now to give way gradually to what is called the Romantic Movement."

"The 18th century, like all centuries' remarks Roger P. McCutcheon, "was complex and contradictory. Although the century is praised for its ideals of sanity and order it is produced an amazing number of eccentrics. Almost everywhere generalization ever made about 18th century literary culture is, to the specialist, an over-simplification."¹ The predominating culture in English literature from first to the ninth decade is generally called 'neo-classical'. The literature of the age was principally was the product of intelligence influencing the outward level of life. The prominent writers of the time were people well conversant with, and duly skilled in the literary culture and writings of Greek and Roman antiquity. They admired classical models and learnt from them how to exercise restraint over imaginative luxuriance and emotional lavishness. They developed a tendency to give importance to conformity, regularity, clarity, balance, temperance and order. The qualities they praised "were reason, judgement, good sense-terms well-high synonymous- which were believed to be applicable not only to literature and the arts, but to government, religion and personal conduct."²

An important factor in the background was the growth of the reading public. As a result a number of writers and publishers started emerging by leaps and bounds.

"Since the poets of the period laid special stress on order and balance, they made the rhymed couplet their favourite verse-form. No ear could miss the regularity of this measure, though not all-twentieth century readers have caught its subtleties."³

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“Pope was the high priest of a rationalistic and social age. It is difficult to speak to high of the brilliance of his talents and the completeness with which he achieved his special task.”⁴

The people of the age of Addison and Pope paid greater attention to decorum, decency, artificial manners and conventional behaviour than to natural simplicity, originality and individuality. They preferred a well-ordered and well-regulated life and did not take interest in a life of adventure, mystery and wonder.

In the 18th century, people had little trust in enthusiasm, ecstasy, illusion and ideal aspiration. They made up their minds to fix their attention on solid everyday realities and problems. With the result, literature tended to record and vivify the ordinary realities of society and exhibited the charm of novelty in the commonplace objects. The poetry of the age was devoid of enthusiasm, emotional intensity and imaginative sublimity. It became mechanical, artificial and conventional and grew out of the ordinary prosaic soil of the day. The middle class writers and reading public liked peace, order, balance and clear thinking and expression. Naturally poetry became artificial, mechanical, conventional and prosaic. Matthew Arnold, a distinguished Victorian critic, found lack of poetic passion in the English Augustan Poetry and declared-

“We are to regard Dryden as the puissant and glorious fonder, Pope as the splendid high-priest of our age of prose and reason, of our excellent and indispensable eighteenth century.”⁵

But it is noticeable that with the Transitional poets a reaction set in against the dominance of the Popean couplet and experiments were made in other kinds of verse, such as the blank verse and the Spenserian stanza. The growing monotony of the couplet and the revival of interest in the poetry of Milton and Spenser accounted much desire for change. Growing admiration of Milton was the principal immediate cause of the rise and popularity of bland verse. Many of the poems of the time- Thompson’s *Seasons*, Somerville’s *The Chase*, Young’s *Night Thoughts*, Blare’s *The Grave*, Dyer’s *The Ruins of Rome*, and Mark Akenside’s *The Pleasures of the Imagination* were written in the blank verse.

Many of the poets of the age of Johnson that is the 18th century sought inspiration from the poetry of Spenser. They reproduced not only the Spenserian stanza but even the great masters archaic diction. Spenser certainly enjoyed an immense popularity which is evident by the fact that over fifty poems in the Spenserian stanza were published between 1730 and 1775. The use of Spenserian stanza and to some extent, the revival of the Spenser tradition can be seen in Shenstone’s *The School Mistress*, Thompson’s *Castle of Indolence* and James Beattie’s *The Minstrel*. It was in *The Gentle Shepherd* of Allen Ramsay that the reviewing love for Nature first became conspicuous. More than Ramsay, the revival of interest in real landscape was popularised by James Thompson’s *Seasons*(1730). No doubt, *The Seasons* still belong to the Augustan school in its note of didacticism, highly Latinized vocabulary, conventional poetic diction, and frigid and bombastic style. However, it made a start in picturing the various modest and rights of Nature, which are marked by personal knowledge, great precision and sympathy. His views of English landscape, new panoramic and now detailed his description of the first spring showers of the summer thunder-storms, and of the terrors of the wintry night, showed an honest understanding and sensitivity. *The Seasons* concluding with a mood of religious ecstasy in the presence of nature: which is prophetic of Wordsworth’s treatment of Nature:

“Ye forests, bend: ye harvests, wave to him Breathe your still song into the reaper’s heart As home he goes beneath the joyous moon.”

In his another poem *The Castle of Indolence* Thompson gave a beautiful description of a lotus-land:

“Joined to the prattle of the purling rills, Were heard the lowing hoards along the vale,
And flocks low-bleating from the distant hills; And drowsy tinklings lull the distant folds.”

William Collins had also a delicate feeling for Nature. His *Ode to Evening* is steeped in the evening glow. It gives a most intimate and sensitive suggestion of twilight:

“Now air is hushed, save where the weak-eyed bat, With short shrill, flits by own leathern wing,
Or where the beetle winds, His small but sullen horn.”

Cowper’s poem reflects his simple pleasure, his love of Nature, his interest in the lives of the humble and the simple and his sensibility. Nature had been his best healer and he anticipates the Lake-poets in the way he expresses his gratitude. He believed that the country is divine and the town is diabolical. He summed the idea in the oft-quoted line: ‘**God made the country, and man made the town**’. Writing about the place of Cowper as a fore runner of the Romantics, E. Albert remarks, “The simple sincerity with which he expressed his love of the details of homely life, his accurate and realistic description of natural landscapes, and the warm, yet gentle, humanity which laid him to support and love the underdog, all foreshadow Wordsworth, though he lacks the latter’s burning faith and depth of visions.”⁶

In search of inspiration and themes, some of the poets of the 18th century turned to the Middle Age. The interest in Middle Age was largely due to the revival of ballad literature. Bishop Percy’s *The Religious of Ancient English Poetry* (1765) a collection of ballad literature of the past, proved a great power in spreading Romantic tales. In the words of Emile Legouis, “The collection of included Percy’s ordinary remodelling as well as authentic old poems; but the total effect was genuinely archaic and helped to awake the medieval world. Its fate, its legends, and its ways.” The influence of Percy’s *Reliques* became the immediate inspiration of Beattie’s *Minstrel*.

Similarly Blair like Thomas Gray and Edward Young belonged to the Churchyard School. He was gloomier than Young and Gray. The immediate echo of Young’s *Night Thoughts* is heard in Blair’s *Grave* which consists of about hundred lines of bland verse and dwells with a sort of morbid enjoyment on the horrors of the tomb. The poem offers the same common place ideas, and is marked with seriousness and gravity. The following lines about the world from the poem display the gloomy pessimistic tone of Blair:

“What but a spacious burial field unwilled Strewed with death’s spoils of animals
Savage and tame and full of dead men’s bones! The very turf on which we tread once lived
And we that live must land our carcasses To cover our own offsprings.”

Macpherson did much to popularise the literature of Middle Ages and the Highland publishing two books *Fingal*, an epic poem in six books in 1762 and *Temora*, in eight books in 1763, alleging that the books were his translation of the poems of an ancient Celtic bard called, Ossian. The fact is that half of the ‘Ossaianic’ poems were made up by Macpherson out of his own head. They include striking descriptions of wild nature, and they are cast in a rhythmic and melodious prose that is meant to reproduce the original Gaelic poetic measure.

“Above all, Macpherson new how to imbue his epic prose with the rhythm of song, to give it a cadenced flow that was at once expressive and stately, and which harmonised with the grandeur and emotion of the theme, to arrange his recitative into paragraphs which take the place of stanza, and to construct each sentence according to periodic measure of solemn meditative ton, which is none other than that of the English Bible itself.”⁷

Fergusson's poems deal with the Scottish life, and he prepared the way for Burns. His best poems are short descriptive pieces dealing with Scottish life. Fergusson gives clear and accurate descriptions of Scottish life in a vigorous and natural language. Mark Akenside's best known book is *The Pleasures of the Imagination* (1744) a long and rambling blank verse poem. The style is somewhat Miltonic genius.

"The poem has some loud but rather fine descriptive passages, especially dealing with his native type, for the beauty of which he shows a laudable enthusiasm."⁸

Thus, we can conclude that the undercurrent streams of Romanticism in the prosaic soil of the 18th century English Literature run throughout the century, though Mathew Arnold calls the century the age of prose and reason.

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Predecaments of Museum Profession In India In 21st Century

Sweta Chatterjee *

It is the nature of a man to gather things that he finds both distinctive and attractive in some way. This inborn nature appears to have played a role in the development of the museum.

The term museum was derived from the Greek word "museion", which literally translates as the place where the museion is kept. The term "Museum" refers to a source of inspiration or a place where men's minds may get detached from the stresses of everyday life.¹ It is the purpose of this study to discuss the issues that India's art and archaeological museums are experiencing at present.

Museum Profession : The concept -

Prior to delving into the aforementioned issues, it is necessary to define the term 'Profession'. Profession comes from the Latin word 'Profession' which basically means as "public declaration or acknowledgment"²

The particular phrase is defined by the Cambridge dictionary as any form of profession that necessitates specialized training or a specific ability and that is respected because it needs a high level of education.³

As a result of above definition it can be stated that a group of people who have a high level of expertise and who work together in a shared vocation that allows them to earn a living.

A professional was mainly associated with religious life throughout the middle ages of Europe referring to a commitment or pledge made while entering monastic order. Gradually the religious connotation of the word faded and it came to signify the act of joining a group that made a public promise. The term "museum professional" refers to these who work in museums.

Museum Profession in India :

After the 68 years of inception of museology course in India still museum work could not develop as profession in the country. Presently there are several universities and institutions in India offering museology as degree or diploma course. Museology is a purely professional discipline that empowers a museum professional to manage various aspects of Heritage, museum and museology both complement each other. The pioneer institution which started the museology course in the country was Maharaja Sayaji Rao University Baroda in 1952. After that a two years P.G. Diploma Course was started by Banaras Hindu University in 1968, being satisfied with the performance on the course in 1979 it was upgraded as two years M.A. Degree course by University Grant Commission. University of Calcutta started the course in 1959. Aligarh Muslim University and National Museum Institute started the course in 1973 and 1989 respectively. Currently there are several Universities of India offering degree course in Museology. Apart from these some institutions, are offering Diploma course in the subject also. Despite all it is very unfortunate that museum profession in India yet not get recognition as it deserves.

The development of the museum profession in the country has been hampered by a number of obstacles. These are the following :

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Selection of inefficient employees:

Museology is the subject that enables a person to understand his heritage both in tangible and intangible form. But unfortunately it is not an essential qualification for getting job in museums of India. Most of the staff come here through UPSC and SSC and they do not have the capacity to understand the functionaries of museums and the result is actual museum professionals are not getting job in the museums and museums are also not getting right staff. It is really a threatening situation for the existence of museums.

Dearth of visitor engagement activities :

It has been said that museum has two legs; one is its collection and another is its visitors. Visitors are the essential element to run a museum successfully. Without visitors museum is redundant. Due to the recruitment of unskilled staff most of the museums of India are fail to attract its visitors. Though some museums are doing well to attract its visitors but the number of such museums are very few.

Exclusion of intangible aspects :

Most of the museums in India are still now unaware to include the intangible aspects of Indian culture to their collection. The main purpose of the most of the museums of the country is to focus on the tangible aspect that is artifacts. They ignore the intangible side.

The intangible aspects must be documented so that the complete story of an artifact can be presented. For example displaying Phulkaridupatta is not enough for a textile museum, along with this they have to arrange a session where the process of making of these dupattas can be demonstrated.

Lack of inclusiveness :

Museum should be inclusive means senior citizen, people from rural areas and people with special needs also be the part of the museum. Earlier people with special needs have been excluded from our society they were considered as an object of pity or charity but due to the various conventions and laws now they are being taken seriously and considered as an important part of the society. United Nation's Convention on Rights of Persons with Disabilities (CRPD), which was adopted on 13 December 2006, The article 30 of the convention titled "**Participation in cultural life, recreation, leisure and sport**" allows the person with disabilities to access the places for cultural performances and services. Such as theatres, museums, cinemas, libraries and tourism services and as far as possible enjoy access to monuments and sites of national and cultural importance (2006, art: 30. Para-1).⁴ Some museums in India like National museum, New Delhi, Indian museum, Kolkata etc are trying to meet the requirements of these special group of visitors. National museum Delhi is the shining example of this kind of efforts. The museum established a tactile gallery named 'Anubhav' with 22 tactile replicas of museum objects. Some braille labels have been created and installed by Indian museum, Kolkata at their 'Bharhut Gallery'. But such museums are confined themselves only to the visually disabled and physically challenged visitors. Other disabilities have not got recognition in the museums of the country.

Improper handling, conservation and preservation practices :

Wrong handling, preservation and conservation practices are also responsible for the loss of museum collection. Few years ago two invaluable pieces of art one was a Yakshi statute of 2nd century B.C. and another was a Mauryan lion of 3rd century B.C. found damaged in a renowned museum of the country.

Accussing museum authority archaeological survey of India said careless handling is responsible for this irreversible loss.⁵

How to cop up with :

- The first and foremost step is to make a degree in museology an essential qualification for getting a job in museums. So that at least such candidates can enter the museums profession who has an understanding of heritage and know how to manage and preserve them.
- Along with tangible component the intangible components must be documented **Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (CSMVS)**, Mumbai often organises workshops on art and craft with a local non-governmental organization known as '**Paramparik Karigar**'. In these workshops the artists, craftsmen from different states come and conduct a day long workshop for interested individuals and group. Workshop on Madhubani Painting, Phad painting, Bagru painting etc has been organized.⁶ In 2013 **Gurusadey Museum, Kolkata** organized an 10 days long exhibition titled "Kantha of Bengal" along with this exhibition a workshop on embroidery work on Kanthawas also conducted.⁷ These type of activities will help to drive more audience. But very few museums of the country are organising such activities.
- Training programme in collaboration with some national, international museums or some organisations active in Heritage preservation activities should be developed. This kind of activities help the museum professionals to upgrade their expertise.
- Museum should try to involve private or corporate sector so that infrastructural and technological development can be done through funding and experts.
- Museum should try to remove physical and attitudinal barriers from their premises. Metropolitan museum of art, New York, organises a **Disability Equality Workshop** for their staff where staff transform their languages, attitudes and behaviors that leaves negative impact on visitors with disabilities.

Conclusion :

The museum is a reliable source of information for its visitors and it is a place to find answers to some big spiritual and philosophical concerns like who we are, where we came from, and where we are heading. It protects and preserves humanity's history and culture as guardian of heritage. There will be no heritage, no history to discuss if there is no museum. Museums provide us with a forum to discuss various cultural concerns.

Recognizing the role of museums, the ministry of culture conducted a survey of its museums in 2009, which led to the creation of the '14 point Agenda', a museum reform initiative. The programme emphasised the development of museum marketing strategies and visitor experiences, as well as improving collection management. The agenda also emphasized the use of multi-tech approaches to improve collection understanding. Museum, as institution that disseminates knowledge, must adhere to this agenda in order to continue to exist. They will undoubtedly conquer the challenges they face if they follow these guidelines.

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Ethanol Blending in Petrol : Challenges and Opportunities in India

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Energy security has been an important global policy issue of world. Biofuel like bioethanol have taken considerable attention in recent years as a solution of heavy dependence on imported crude oil and petroleum fuels which destabilize the growth of economy and also affect serious environment problem. In 2003, Ethanol Blended Petrol programme was launched under India's Biofuel Policy with an aim to promote the use of renewable and environment-friendly fuels as well as reduce India's import dependence for energy security. Starting with 5% blending, a target of 10% ethanol blending by 2022 and increases it up to 20% by 2030 has been set. The government of India notified the National Policy on biofuel 2018 (NPB-2018) to gain its target 20% blending of ethanol in petrol by 2030. The current study examines the economic feasibility of sugarcane bioethanol in India with considering food security and without affecting cost of food production in India. This paper also analyses the other sources like food grain maize, bajra, fruit and vegetable waste etc. to produce ethanol. Blending ethanol with petrol will not only help India strengthen in energy security but also enable local enterprises and farmers to participate in the energy economy as well as reduce vehicular emission.

Keywords : Biofuel; Ethanol blending; Energy Security; Renewable energy

Introduction

In India, the demand of energy is rising due to an expanding economy, increasing population and urbanization, growing lifestyles and raising the spending power. About 98% of the fuel requirement is accomplished from fossil fuels and the remaining 2% by biofuels. Today, India imports 85% of its oil requirement from other countries. Domestic biofuels policy of our country provides strategic opportunity by reducing the nation's dependence on imported fuels. Biofuel are considered to be environmentally friendly, sustainable and renewable energy sources. Biofuel policy can also help to generate new employment, promote Make in India, Swachh Bharat Abhiyan, doubling of farmers' incomes and promote Waste to Wealth generation. Ethanol is an alternative biofuels, which is naturally produced by the fermentation of sugars or via hydration of ethylene by petrochemical processes. The National Policy on Biofuels – 2018 launched Ethanol Blended Petrol (EBP) Programme which provides a target of 10% ethanol blending by 2022 and 20% by 2030. Currently petrol with 10% ethanol blend (E10) is being retailed by various Oil Marketing Companies (OMCs) in India, wherever it is available but sufficient quantity of ethanol is not available for E10. Therefore, the current level of average ethanol blending in the country is 5% Ethanol Supply in year 2019-20. The MoRT&H has notified BS-VI emission norms which are applicable to all vehicles post 1st April 2020 and newer vehicles on E-20 will have to also meet BS-VI norms and follow safety requirements for type approval of pure ethanol, flex-fuel & ethanol-gasoline blended vehicles. Currently, the 2 wheelers & 4 wheelers vehicles in the country are designed for running on pure gasoline and can be tuned to suit ethanol blended fuels ranging from E0 to E10 depending on the type. However, with the proposed target of E20, the vehicles are now required to become both materials compatible and tuned for use of E20 fuel.

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The Central Government has allowed sugarcane and other food grain-based raw materials for ethanol production in the National Policy on Biofuels, 2018 due to limitation of ethanol production from C-Heavy molasses and its usage in potable and chemical sectors. NITI Aayog estimated that sugarcane and paddy are using 70% of the country's irrigation water, depleting water availability for other crops. Hence, there is a need for change in crop pattern, to reduce dependence on one particular crop and to move to more environmentally sustainable crops for ethanol production. Cereals, particularly maize, bajra and Second Generation (2G) biofuels with suitable technological innovations offer promise of a more environmentally benign alternative feedstock for production of ethanol.

Ethanol Blending In Petrol By Other Countries

Global transportation sector is facing three major challenges, namely depletion of fossil fuels, volatility in crude oil prices and stringent environmental regulations. Ethanol is considered to be one of most suitable alternative blending, transportation fuel due to its better fuel quality and environmental benefits. The percentage of world production of ethanol by United States of America (USA) 53%, Brazil 30%, European Union 5%, and China 3%, India 2%, Canada 2% Thailand 2% and rest world is 3%. Brazil has the largest and most successful bio-fuel programs in the world. National policy of Brazil continues the mandate for blending of 18-27.5% of ethanol in gasoline which originally started from 2015. This is currently at 27% and Flexi-fuel vehicles in Brazil run from 0% ethanol (E0) to 100% ethanol (E100). United States produces and consumes more ethanol fuel than any other country of the world. Most of the vehicles in the USA can run on road by using 10% ethanol blended petrol. The most of the motor vehicles companies like Ford, Chrysler and GM manufacturers and sell flex-fuel vehicles that can use pure gasoline and ethanol blended petrol ranging from 0% ethanol to 85% ethanol. In 2013, about 11 million E85 compatible vehicles in USA roads and about 3028 fueling stations selling E85 blended petrol. European Union (EU) aims to have 10% of the transport fuel of every EU country come from renewable sources, such as bio-fuels by 2020. The consumption of ethanol blended petrol in EU is largest in Sweden, France, Spain and Germany. Sweden is the leading country of European Union for using ethanol blended petrol and it is compulsory to all filling station required at least one alternative fuel. In France, E85 market grow rapidly from 2015 and by 2019 it is easy to find E85 station everywhere which is the about 50% cheaper than petrol but in Germany E85 completely disappeared from the country's service stations due to tax incentives withdrawn by the federal government in 2015. Today, biofuel is taxed the same as regular fuel in German. In China, the Chinese government in September 2017 announced legislation proposing the use of ethanol in fuel for all of China with the target of 10% ethanol blending. In Thailand, Alternative Energy Development Plan (ADEP) targets the share of renewable and alternative energy from biofuel to increase from 7% of total fuel energy use in 2015 to 20% in 2030.

Why Ethanol Blending Can Be Beneficial For India

The blending of ethanol in petrol have many advantage such as increasing the octane number (greater the octane number of fuel lesser the knocking of engine), contain embedded oxygen about 34.78%, higher flame speed and less the vehicles emission such as CO, CO₂, hydrocarbons etc. These properties of ethanol help for complete combustion to produce - 1366.95 kJ/mol of energy but calorific value (heat of combustion per gram is -29.72 kJ) is low which is 2/3 times of petrol that means more amount of ethanol blended petrol is required for same power of engine run with petrol. This problem is resolved by increase the efficiency of engine due to high octane number of ethanol, engine can be operated with high compression ratio without knocking.



The ethanol blending in petrol is very beneficial for India because India is the one of the largest sugarcane producer country in the world and second, next to Brazil. In 2018, about 50-60 lakh tons surplus sugarcane were produced in India. If surplus sugar can be diverted for ethanol production then this would help to increase the farmer's income and decrease the dependency on imported gasoline. There is a large quantity of raw materials in India for first generation fuel derived from edible portion of plants such as surplus sugar, grains, seeds, rice in FCI and second generation fuels derived from non edible plants such as forest and farm residues, municipal waste, agricultural waste (such as straw, stalk and crops husks), bagasses produce from sugar cane etc. In 2017, about 18 million kilo-litres of cellulosic ethanol produce by 60 million tons of begasse and other production trash which will help to 20% blending.

The second benefit for using blended petrol is its cheaper value. Currently, a litre of ethanol is priced at ₹ 62 while petrol is above ₹ 90 so ethanol blending reduce the fuel cost. India imports about 85% of gasoline which translate a large amount of fuel bill as a foreign exchange but by blending of petrol around 4 billion USD save by government of India every year on petroleum imports. The other benefit of blending of petrol in India is to reduce environmental pollution and reduce the vehicles emission of oxide of carbon, nitrogen and sulphur. Since, ethanol is non-toxic, biodegradable fuel so it is safe to handle store and transport.

Challenges For Blending of Petrol In India

Despite enormous opportunities there are various challenges to be addressed to achieve the target of E20 by the year 2030 are as follows:

Production of ethanol : Currently, domestic production of bioethanol is not sufficient to meet the demand for bio-ethanol for blending with petrol at Indian OMCs Sugar mills which are the key domestic suppliers of bio-ethanol to OMCs, were able to supply only 57.6% of the total demand. Sugar mills do not have the financial stability to invest in biofuel plants. There are also concerns among investors on the uncertainty on the price of bioethanol in the future as the prices of both sugarcane and bio-ethanol are set by the central government. To gain E20 blending in India by 2025-26 required 60 LMT surplus sugar to diverted to produce 684 crore litres of ethanol and about 165 LMT of food grain required to produce 666 crore litres of ethanol. To supply 1350 crore litre of ethanol in 2025-26 require 760 molasses based and 740 grain based distilleries required. The production of enormous amount of ethanol is challenging step for India. The following graph shows (Fig. 1) Demand Projection of fuel supply year 2019 to 2026.

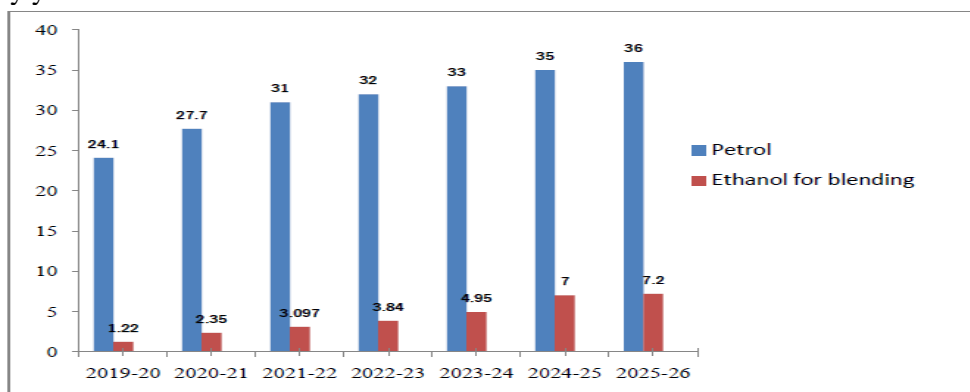


Fig.1 Demand Projection of fuel supply year 2019 to 2026.

Challenges to vehicle manufacturers: Even though, Vehicles manufactured in India are material compatible with E10 and fuel-efficient compliant with E5 since 2008. With the proposed target of E20, the vehicles are now required to become both materials compatible and fuel-efficient compatible for E20 fuel. However, there are certain inherent challenges in changing E10 to E20 such as change in material of piston ring, fuel pump, piston head etc. The retail outlets will require additional storage tank and alteration in nozzle calibration. Hence, some more money spent for change the infrastructure. The cost of E20 and E100 (Flex fuel vehicles) is higher than normal petrol vehicles. Generally the estimated cost of E100 four wheelers vehicles will be ₹18000 to ₹ 25000 and two wheelers vehicles will be ₹ 5000 to ₹ 12000 higher than normal petrol vehicles. Although four wheeler and two wheelers vehicles cost is higher only ₹ 3000 to ₹ 5000 and ₹ 1000 to ₹ 2000 higher respectively so E20 vehicles is more suitable for our country. The fuel efficiency of E20 engine is less than petrol engine about 6% to 7% for four wheeler and 3% to 4% for two wheeler vehicles so some modifications in engine hardware also require for optimization of engine for blending. The durability and storability of engine in hot and cold condition with E20 also challenges.

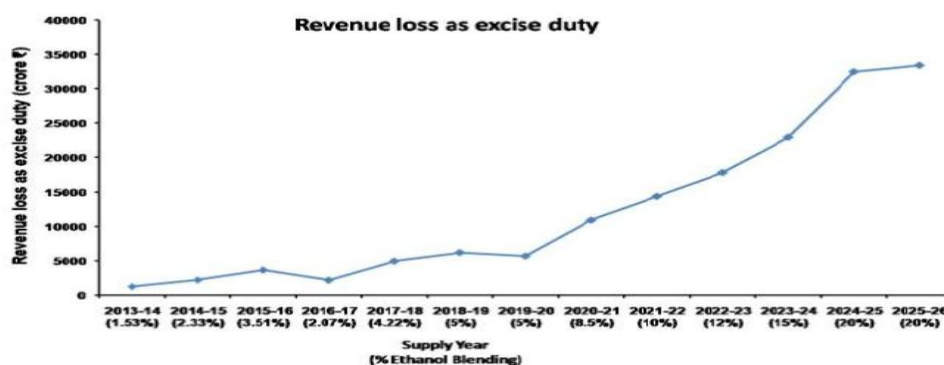
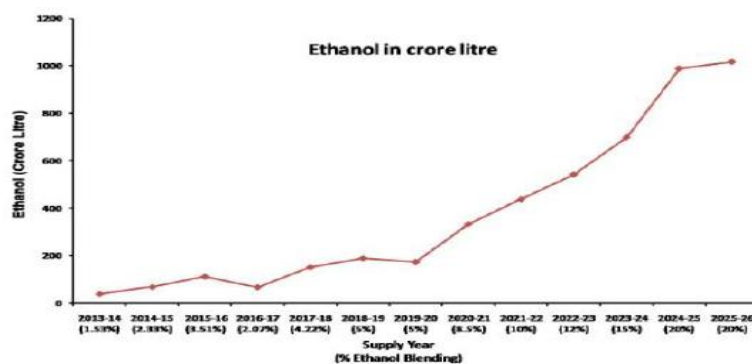
Challenges on supply and transportation of ethanol in India: Ethanol is not produced or available in some states for ethanol blending. Although the central government amended the Industries Development and Regulations Act to ensure smooth implementation and transportation of ethanol across the country but most of the state have not implemented the amended provisions. As a result, states that produce ethanol more than the requirement for blending cannot transport the Ethanol to other states. The transport of ethanol to different places for blending will increase the cost of logistics and transport-related emissions.

Challenges on water conservation: Sugarcane and rice paddy is a water-intensive crops used 70% of irrigation water of country for production of these crops. For production of one kilogram of sugar require 1600 to 2000 litre of water. To produce 100 kg of sugar and 70 litre of ethanol require one tonne of sugarcane that means for production of one litre of ethanol from sugar cane require 2860 litre of water. Since, the source of water for production of sugarcane is rain-water or ground water so for conservation of water other option required which supply the drinking water otherwise it will eventually lead to water scarcity.

Other challenges for blending in petrol : The Central Government of India impose excise duty about ₹ 32.90 per litre in petrol but no excise duty in ethanol. In 2020-21, if 8.5% ethanol is blended in petrol then total 332 crore litre of ethanol will be required costing about ₹ 10992 crore per year revenue losses and in 2025-26 for E20 blending 1016 crore ethanol will be required accounting for total revenue loss to become ₹ 33426 crore per annum. Fig. 2 shows revenue loss for blending E0 to E20. The other challenges is that in future if crops produce ethanol is affecting due to flood or drought then cost of ethanol will become higher than petrol so consumer would have to pay more money for ethanol blended petrol. The first generation (1G) biofuels are obtained from edible part of plants like sugar cane, food grains and seed (rice, maize, bajra) fruits and vegetable waste. So, production of 1G fuel challenges the food security of India except by molasses. The second generation biofuel derived from non edible parts of plant and municipal solid waste but the cost of enzyme that convert cellulose to ethanol is higher.

Table 1: Requirement of ethanol and revenue loss in ethanol blended petrol

Ethanol supply year	% Ethanol	Ethanol (crore litre)	Revenue loss (Crore ₹)
2013-14	1.53%	38	1250
2014-15	2.33%	67.4	2217
2015-16	3.51%	111.4	3665
2016-17	2.07%	66.5	2189
2017-18	4.22%	150.6	4948
2018-19	5%	188.6	6198
2019-20	5%	173	5691
2020-21	8.5%	332	10922
2021-22	10%	437	14377
2022-23	12%	542	17831
2023-24	15%	698	22964
2024-25	20%	988	32505
2025-26	20%	1016	33426



Opportunities of Ethanol Blending In India

The Government of India launched pilot project in 2001 for supply of 5% ethanol blended petrol (E5) to retail outlets. After field trials, the Ethanol Blended Petrol (EBP) programme in 2003 was launched in nine states and four Union Territory and then extended to 20 states in 2006 but 2001 to 2013-14 only 0.1% to 1.5% blending obtained. After 2014, the NDA government work continue on blending and open the alternate route for production of ethanol for first and second generation engine and set up many bio-refineries and sugar plants and pass act 2016 for uninterrupted supply of ethanol for blending. In 2018, government updated this programme as a ETHANOL BLENDING PROGRAMME (EBP-2018) or Bio-fuel policy-2018 and allowed the conversion of B and C molasses, sugar cane,

damaged food grain like maize, bazara, surplus rice in FCI to ethanol and extend the EBP programme to all over the India except Andaman Nicobar and Lakshadweep. Oil Marketing Company (OMC) increase its storage capacity from 5.39 crore litre in 2017 to 513 crore litre till 2022 and provided off-take agreement and guarantee to agency and bankers who supporting the supply of ethanol. OMC also sanction bank loan about ₹ 3600 crore to sugar mills for 31 project for preparing 102 crore litre of ethanol. 39 more projects will be completed in the year of 2022 to increase the total capacity of ethanol about 513 crore litre. Government of India have aim for 238 such project with capacity 583 crore litre and sanction loan ₹16000 crore which approved by DFPD. To achieving 10% blending target required 437 crore litre ethanol in 2021-22 and 1016 crore litre in 2025-26. The targeted amount of ethanol are not obtained from only first generation fuel so Government of India planned to set up 12 commercial plants and 10 demonstration plants for bio-refineries under PM-JIVAN scheme in that areas where more availability to produce bio-ethanol and sanction ₹ 1969 crore for this scheme. These plants use feedstock's such as rice straw, corn cobs, wheat straw, bagasse, bamboo, corn stover and woody mass etc. Currently, 426 (231 distilleries) plants are molasses based and 258 (113 distilleries) for grain based plants working for production of ethanol but to complete target of 1016 crore litre for E20 in 2025-26 require 760 molasses based and 740 grain based plants. The Ministry of New and Renewable Energy of India have promoted second generation biofuel like Algae based biofuel, cellulosic ethanol and bio oil. Cellulosic ethanol technology will be used to set up 10 tonne/day biomass plants to produce about 3000 litres per day of bio-ethanol.

Conclusion

Ethanol blending of petrol is not only a national imperative but also an important strategic requirement. There is enormous growth potential for blending program in India for use as a fuel in transport sector. Apart from lucrative promises of ethanol as an alternate fuel, it provides cleaner and greener environment and it will help India strengthen its energy security, less dependency on import of crude oil. Enable local enterprises and farmers to participate in the energy economy. In order to implement ethanol blending program (EBP-2018) throughout the country, all the concerned policy makers, regulators, producers and OMC must agree on the point that while allocating as transport fuel we should not neglect its huge amount in chemical industries and its revenue potential in portable sector. Distilleries in India are not lagging behind in technology as well as capacity to produce required ethanol to meet its demand in India. Instead they struggle between the availability of raw material.

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Law relating to Pharmaceutical Patents: A Conceptual Analysis

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Pharmacy like any branch of science is expanding with the technological advancements which gives more than just a window of opportunity to invent, ameliorate, innovate or create for the betterment of the world at large. Owing to this, Pharmaceuticals need patent to preserve and protect the interests and to monopolise the fruit of the hard work. In this paper an attempt has been made to analyse the present jurisdictions the overlook pharmaceutical patents, further a comment has been made as to whether or not the existing jurisdictions are efficiently working.

Keywords: *Patent, Invention, Law, Statute, Pharmaceutical, TRIPs*

In this paper a quest is made to find out if there exists a concept of Pharmaceutical Patents. If so, is it different from the concept of patents already existing and it requires a different treatment.

For the sake of convenience this paper is divided into four parts. Part I introduces the topic. Part II explains the patent law. Part III explains and explores the meaning and scope of the pharmaceutical patents. Part IV analyses whether the patent law of US, UK, EU and India is TRIPs complaint are not. Part V concludes the paper on the basis of the conclusions arrived at.

Introduction :

The Gujarat High Court reiterating the object of the patent law as explained in *Bishwanath Prasad RadheyShyam v. Hindustan Metal Industries*¹, in *Garware-Wall Ropes Ltd. v. Mr. AnantKanoi*,² further stretching the object of patent law, observed as under:

[O]bject of the patent law is to encourage scientific research, new technology and industrial progress. I have to simply add to the observations made by the Apex Court that the object of the patent law is not to discourage the marketability of a product, which is different from what has been registered, nor the object, is to protect a fraud or misrepresentation. A monopoly is created in favour of a person because he has brought into existence something new either in the form of a process or in the form of a product, but, patent may not be granted in favour of someone, who very cunningly makes an application to the authority for grant of the patent without even disclosing that what is new in his item and how it was not known to the public previously. A patent, ordinarily, cannot be granted in favour of some applicant if the product is known and there is no involvement of an inventive step or bringing into existence a specific inventive invention.³

There is no doubt that every world jurisdiction which recognises the patent right tries to encourage scientific research, new technology and industrial progress. But the question is whether all the scientific and technological advancements are given similar treatment or whether there exists any preferential or restrictive treatment. In this paper an attempt has been made to analyse the position, status and the treatment accorded to the pharmaceutical patents by the four major jurisdictions of the world and further it has been analysed that patent laws of these jurisdictions are in compliance with the provisions of TRIPs are not.

To encompass the clear picture it is the first thing that has to be understood first. It is therefore we have to have a general understanding of the patent law.

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Patent Law

Patent law grants a limited monopoly to the inventor, innovator and the discoverer⁴ on the fulfilment of the requirement of the statute of the jurisdiction.⁵ The chief characteristics of patent law may be summarised as under:

- i) It is a statutory law and is subject the interpretation of the courts;
- ii) It is a law of tort,
- iii) The liability in this law is strict one.
- iv) The grant of the administered by the patent office, which is quasi-judicial body (generally) and on the issue of the infringement of patent right the proceedings takes place before the court of law.
- v) It grants a limited monopoly.

Broadly speaking the patent is granted for an 'invention'. What constitute invention under patent law, we have to analyse the meaning of this term given in the statutes of US, UK, EU and India.

Invention

The 35 U.S.C. § 100 (a) defines the word "Invention" as "invention" means invention or discovery. However, a more elaborative description may be fathomed when it is read with 37 C.F.R. §501.3(d) of the US⁶, which further defines the term "Invention" as:

The term *invention*, as used in this part, means any art or process, machine, manufacture, design, or composition of matter, or any new and useful improvement thereof, or any variety of plant, which is or may be patentable under the patent laws of the United States.

Section 2 (1)(j) of the Patents Act, 1970 defines the term "invention" as:

Invention means a new product or process involving an inventive step and capable of industrial application.⁷

The UK statute does not defines "invention". Instead, Section (2) of the Patents Act, 1977 of UK, defines as to "what is not an invention" for the purposes of considering it as patentable invention. It lays down:

It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of -

- (a) a discovery, scientific theory or mathematical method;
- (b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;
- (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;
- (d) the presentation of information;

But the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.

In *Novartis AG v. Union of India*⁸: it was held that:

Section 2(1)(j) defines "invention" to mean, "a new product or ...", but the new product in chemicals and especially pharmaceuticals may not necessarily mean something altogether new or completely unfamiliar or strange or not existing before. It may mean something "different from a recent previous" or "one regarded as better than what went before" or "in addition to another or others of the same kind" [*The New Oxford Dictionary of English*, Edn. 1998.]. However, in case of chemicals and especially pharmaceuticals if the product for which patent protection is claimed is a new form of a known substance with known efficacy, then the subject product must pass, in addition to clauses (j) and (ja) of

Section 2(1), the test of enhanced efficacy as provided in Section 3(d) read with its Explanation.

According to Donald S. Chisum⁹, invention has several meanings in patent law. It may mean an act of invention through original conception and reduction of practice, subject matter claimed or described in patent, first developed by the courts and now subsumed in the statutory requirement of non-obviousness.¹⁰

The verb “invent” comes via Middle English from the Latin word *invenire*, which means to find or contrive. *Inventio* is the noun form. According to dictionaries, ‘to invent’ means to create by thought, to originate, or to devise. For the purpose of patent law, invention can be considered as the legal term of the art. The problem is that invention is something which cannot be defined or fully known in advance. Its definitions may come from policies espoused from time to time by the patent legislations or as interpreted as per legal criteria by the courts and tribunals.¹¹

Invention means ‘the action of inventing something, typically a process or device’¹², ‘the act or operation of finding out something new’.¹³ According to Black’s Law Dictionary, ‘in patent law, the act or operation of finding out something new; the process of contriving and producing something not previously known or existing, by the exercise of independent investigation and experiment. Also the article or contrivance or composition so invented. (*Smith v. Nichols*, 88 U.S. (21 Wall.) 112, 22 L. Ed.,566; *Hollister v. Mfg.*, 113 .S.59, 5 S. Ct.717, 28 L.Ed.901).¹⁴

To invent is to create something for the first time. ‘Invention’ means: A patentable device or process created through independent effort and characterized with extraordinary degree of skill or ingenuity; a newly discovered art or operation. *Invention* embraces the concept of nonobviousness. The act or process of creating such a device or process. Generally, anything that is created or devised.¹⁵

In *McClain v. Ortmyer*, explaining about ‘invent’ the court expressed:

What shall be construed as invention within the meaning of the patent laws has been made the subject of a great amount of discussion in the authorities, and a large number of cases... turn solely upon the question of novelty. By some, ‘invention’ is described as the contriving or constructing of that which had not before existed; and by another, giving a construction to the patent law, as ‘the finding out, contriving, devising, or creating something new and useful, which did not exist before, by an operation of the intellect.’ To say that the act of invention is the production of something new and useful does not solve the difficulty of giving an accurate definition, since the question of what is new, as distinguished from that which is a colorable variation of what is old, is usually the very question in issue. To say that it involves an operation of the intellect, is a product of intuition, or of something akin to genius, as distinguished from mere mechanical skill, draws one somewhat nearer to an appreciation of the true distinction, but it does not adequately express the idea. The truth is, the word cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not. In a given case we may be able to say that there is present invention of a very high order. In another we can see that there is lacking that impalpable something which distinguishes invention from simple mechanical skill. Courts, adopting fixed principles as a guide, have by a process of exclusion determined that certain variations in old devices do or do not involve invention; but whether the variation relied upon in a particular case is anything more than ordinary mechanical skill is a question which cannot be answered by applying the test of any general definition.¹⁶

Sometimes, invention and discovery are used interchangeably. It is therefore necessary to clarify the meaning of two terms and the difference if any. It may be noted that invention and discovery have two different meanings. A Patent law is not applicable for a discovery, a natural phenomenon brought to light by man, but it does protect an invention, a creation of man when his imagination is crossed with nature. That is predominantly because a discovery is just an uncovering of a truth which pre-exists in nature around us where it takes an imagination to scale new heights to invent something which was non-existing earlier.

In *Raj Prakash v. Mangat Ram Choudhary*¹⁷ it was held that:

Invention is to find out or discover something not found or discovered by any one before and it is not necessary that the invention should be anything complicated and the essential thing is that the inventor was the first one to adopt it and the principle. Therefore it is that every simple invention that is claimed, so long as it is something novel or new, would be an invention and the claims and the specifications have to be read in that light and a new invention may consist of a new combination of all integers so as to produce a new or important result or may consist of altogether new integers and the claim for anticipation by the defendant has to be either by prior user or by prior publication.

The earlier provisions of the Indian and UK patent statutes defined “invention” as a manner of manufacture. Whereas, Section 2(8) of the Indian Patents and Designs Act, 1911¹⁸ defines “invention” a manner of new manufacture,¹⁹ similar to the Section 101(1) of the UK Patents Act, 1949.²⁰ The Patents Act, 1977 of UK defines under Section 1 (1) about the conditions of an invention to be patentable as:

Patentable inventions: Section 1(1):

A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say -

- (a) the invention is new;
 - (b) it involves an inventive step;
 - (c) it is capable of industrial application;
 - (d) the grant of a patent for it is not excluded by subsections (2) and (3) or section 4A below;
- and references in this Act to a patentable invention shall be construed accordingly.

Moreover, the Patents Act, 1977 of UK under Section 130(1) defines “patented invention” and “patented product” as under:

“patented invention” means an invention for which a patent is granted and “patented process” shall be construed accordingly;

“patented product” means a product which is a patented invention or, in relation to a patented process, a product obtained directly by means of the process or to which the process has been applied.

It seems that “law relating to pharmaceutical patents” as such has not been discussed in any of the patent law statutes or TRIPs. Therefore, the component terms have been to understand the concept has been discussed hereunder:

Law relating to Pharmaceutical Patents

In order to analyse law relating to pharmaceutical patents, it becomes necessary to examine the meaning of certain relevant terminologies. Following steps have been taken for finding the meaning of these concepts. *First*, exploring the statutory²¹ provisions of the patent laws of the concerned legal systems and as interpreted by the courts. *Second*, wherever statute has not defined a concept, help has been taken directly from case law jurisprudence. *Third*, in cases where neither a statute nor case law defines a term, reference to the other lexicological sources such as dictionary meaning has been resorted to. The concept of pharmaceutical

patent has traditionally been subsumed in the general scheme of the patent statutes. For an objective operational understanding and a matrix view of the above terms these have been represented in a tabular form to project an instant comparison between and amongst the legal systems.

To understand the concept of law relating to pharmaceutical patents it is necessary to understand the constituents thereof, namely (i) law, (ii) pharmaceutical, (iii) pharmaceutical invention.

Law

For the purposes of this paper the meaning of the term law is limited to its functional meaning only. It does not intend to extend to its jurisprudential meaning. “Law” means patent statute and precedents of the four legal systems.

Statute

The term “statute” includes the legislations of the four legal systems i.e. Acts and Rules, Directives and Regulations.

Pharmaceutical

None of the statutes of the respective legal systems defines “pharmaceutical”. However, its popular meaning can be traced as, ‘connected with making and selling drugs and medicines’²², or in essence ‘a drug or a medicine’²³. The WHO glossary defines ‘Pharmaceutical (Medicine, Drug)’ as:

A pharmaceutical is any substance or pharmaceutical product for human or veterinary use that is intended to modify or explore physiological systems or pathological states for the benefit of the recipient. In this document, the terms drug, medicine, and pharmaceutical are used interchangeably.²⁴

In order to understand, as to what constitutes “pharmaceuticals”, a quick reference to US law may be taken as a sample example. In US the Food and Drug Administration (herein after referred to as FDA) plays a pivotal role in regulating the pharmaceutical drugs, which classifies them as “patented” or “branded” or “brand-named” and “off patented” or “generics” as “non-branded” drugs.

Pharmaceuticals include both brand-name drugs and generic drugs, two competing segments within the industry. Brand-name drugs or new chemical entities represent innovative research-intensive drugs that have not received prior approval from FDA while generic drugs represent copies of already approved brand-name drugs whose patents have expired. Brand-name drugs typically have high prices which reflect their therapeutic advantages over existing remedies. In contrast, the prices of generic drugs are often much lower than the prices of branded drugs.²⁵

Generally the word “Pharmaceutical” is often seen to be addressed in a shortened form namely “pharma”. [T]he addition of the suffix “Pharma” is suggestive of the goods to which the mark relates.²⁶ Moreover, the expression “pharmaceutical” means a chemical used in medicine (see page 959 of Chambers 20th Century Dictionary, *ibid*).²⁷

Pharmaceutical Form

The WHO glossary defines ‘Pharmaceutical Form’ as:

The pharmaceutical form is the pharmaceutical-technological form in which an active substance is made available. Pharmaceutical may be administered in solid form (e.g. tablets, powers), in semi-liquid form (e.g. ointments, pastes), in liquid form (e.g. drops, injectables, infusions) or in gaseous form (inhalation).²⁸

Pharmaceutical Chemicals

Pharmaceutical chemicals means chemicals having prophylactic or therapeutic value and used solely or predominantly as drugs.²⁹

Pharmaceutical Products

The meaning of “pharmaceutical products” may be explained as, “[A]ny patented product, or product manufactured through a patented process, of the pharmaceutical sector needed to address public health problems and shall be inclusive of ingredients necessary for their manufacture and diagnostic kits required for their use.”³⁰ The aforementioned meaning is provided as *Explanation* under Section 54(3) of the Patents (Amendment) Act, 2005 (15 of 2005).

Since, the particular Section talks about the provisions of compulsory license, therefore, the meaning of the ‘pharmaceutical products’³¹ has been restricted exclusively to patented products only. However, for the general purposes of the study, it may be considered as to apply for any kinds of pharmaceutical products whether patented or not. Hence, the meaning may be considered to apply generally to pharmaceutical products *mutatis mutandis*.

The WHO glossary defines ‘Pharmaceutical Product’ as:

A pharmaceutical product is a unique product defined by its active pharmaceutical ingredient, the strength of the active pharmaceutical ingredient, its pharmaceutical form and route of administration.³²

In WHO guidelines the following definition for “Pharmaceutical product” is found under the Glossary at page 101 published in the WHO Technical Report Series, No. 961³³:

Any material or product intended for human or veterinary use presented in its finished dosage form or as a starting material for use in such a dosage form, that is subject to control by pharmaceutical legislation in the exporting state and/or the importing state.

Moreover, Section 2(g) of Medicinal and Toilet Preparations Excise Duties Act, 1955³⁴ “medicinal preparation” includes all drugs which are a remedy or prescription prepared for internal or external use of human beings or animals and all substances, intended to be used for or in the treatment, mitigation or prevention of disease in human beings or animals.

According to the definition given by Good Clinical Practice Guidelines for Clinical Trials in India, “Any substance or combination of substances which has a therapeutic, prophylactic or diagnostic purpose or is intended to modify physiological functions, and presented in a dosage form suitable for administration to humans.”³⁵

Pharmaceutical Substance

The phrase has been defined under the Patents Act, 1970 under Section 2 (1)(ta) as “pharmaceutical substance” means any new entity involving one or more inventive steps. However, the term has been more substantively explained in Patents Act 1990 of Australia.³⁶

Pharmaceutical Composition

Typically a pharmaceutical composition is claimed in terms of its pharmacological effect, for example, “An (analgesic, antihypertensive, neuroleptic, etc.) composition comprising an (analgesic, antihypertensive, neuroleptic, etc.) effective amount of a compound having the formula ... and suitable carrier thereof.”...³⁷ It has been discussed and clarified as to what significance, if any, is to be attributed to the adjectives “pharmaceutical” and “diagnostic”? One cannot describe a composition as a “pharmaceutical composition” unless it has some utility as such. In this context “pharmaceutical” means suitable for use as a medicine for the treatment of a disorder. A similar approach applies to a “diagnostic composition”. These adjectives require the compositions to “be of use as such”.³⁸

Pharmaceutical Inventions

“Pharmaceutical Invention” has not been defined under any of the statutes considered by this study.³⁹ Therefore, for the purposes of the study a conjunctive reading of the definitions of the two words “pharmaceutical” and “invention” may be considered to refer as “a new product or process involving a feature that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention non-obvious to a person skilled in the art and capable of industrial application”⁴⁰. Wherein such product or process is pertaining to “human or veterinary use that is intended to modify or explore physiological systems or pathological states for the benefit of the recipient. ... the terms drug, medicine, and pharmaceutical are used interchangeably.”⁴¹

Pharmaceutical Patent

“Pharmaceutical patents” has not been defined by the statutory patent laws of the above mentioned legal systems nor has it been defined under the provisions of the TRIPs⁴². However, ‘medicines’ or ‘drugs’ form a part of the ‘pharmaceuticals’. Therefore, it may be safe to conclude that ‘pharmaceutical patents’ include ‘medicine patents’ or ‘patented drugs’. In *Aphali Pharmaceuticals Ltd Case* it was explained that:

To be a patent medicine one would be required to have a patent. A patented article means an article in respect of which a patent is in force. “Patent” means a patent granted under ... the Patent Act, 1970. A patent medicine will, therefore, mean medicine in respect of which a patent is in force. ... Patent means a grant of some privilege, properly, or authority, made by the Government or sovereign of a country to one or more individuals. A proprietor is one who has the legal right or exclusive title to [a thing]. It is synonymous with owner.⁴³

Characteristics of Pharmaceutical Patents

The word ‘Pharmaceuticals’ is a contested one. Some dictionary meanings suggest it synonymous to ‘medicine’ or ‘drug’, while others portray it as ‘a chemical used in medicine.’⁴⁴ [T]he addition of the [word] ‘Pharma’ is suggestive of the goods to which ... [it] relates.⁴⁵ The “pharmaceutical industry”⁴⁶ plays a cardinal role in shaping the national patent laws. Given the fact that the rules of the game on patent laws had been broadly guided and fixed by the various international conventions to achieve a certain degree of harmonisation⁴⁷, the nations retain the flexibility to customize the “patent laws” and the related laws that directly influence the “pharmaceutical industry” as a whole. In this way each nation has chosen its own unique ways to lay down the game plan to tackle the “pharmaceutical patents” nationally. This leads to the fact that there exists certain characteristic features which makes “pharmaceutical patents” somewhat unique. The possible ways to protect “pharmaceutical patents” and the mechanisms adopted by specific legal systems to neutralize the loss of term of protection typical to a “pharmaceutical patent” by providing term extensions are noteworthy.

What makes Pharmaceutical patents special? The importance of pharmaceuticals in the realm of patents law may be traced back to the English history, when “in 1435-36 two successive Commissions were appointed to inquire into the feasibility of making the philosopher’s stone for medicinal and other purposes.”⁴⁸ It is argued that [t]he patent protection of chemical and pharmaceutical inventions and the practice concerning such protection does not differ significantly from that of other, nonchemical, non-pharmaceutical inventions, such as machines, integrated circuits, and so forth. Of significance, however, are the statutory patent term extensions and other non-patent, *de facto* monopolies related to pharmaceuticals and pharmaceutical inventions.⁴⁹

It was observed by the US Federal circuit Court that:

Usefulness in patent law, and in particular in the context of pharmaceutical inventions, necessarily includes the expectation of further research and development. The stage at which an invention in this field becomes useful is well before it is ready to be administered to humans. Were we to require Phase II testing in order to prove utility, the associated costs would prevent many companies from obtaining patent protection on promising new inventions, thereby eliminating an incentive to pursue, through research and development, potential cures in many crucial areas such as the treatment of cancer.⁵⁰

It is argued often that “one of every 5000 new chemical entities discovered makes it to the market as a new drug, and it takes an average of twelve years to discover and develop a new drug at an average cost of \$359 million.”⁵¹

Moreover, discussing the specialty and the nature of patent in the pharmaceutical industry, it is asserted that:

It is often argued that the best case for patents is in the pharmaceutical industry. The fixed cost of innovation is large, with estimates of the average cost of bringing a single new drug to market as high as \$800 million in current dollars. Patent protection is more limited than in other industries: because of the lengthy gap between discovery and approval of a new drug, the effective monopoly protection is estimated to last only 12 years – plus the 3- 5 year extensions, as allowed by the Drug Price Competition and Patent Term Restoration Act (Hatch-Waxman) of September 1984.

Indeed, according to industry surveys, the only industry in which patents are thought to play an important role in bringing new products to market is the pharmaceutical industry. The pharmaceutical industry is worthy of special consideration also for another, complementary, reason. The technology operated by the pharmaceutical industry – the chemical and industrial processes, through which medicines are produced, packaged, and shipped – seems to fit the constant returns to scale hypothesis almost perfectly. That is, the cost of shipping the ten millionth container of medicine is about the same as that of shipping the first. Thus the many complaints about the pharmaceutical companies not shipping medicines to poor countries – even poor African consumers would be willing to pay the actual few additional cents needed to produce the medicine.⁵²

A comparative look as to how a pharmaceutical patent is different than those in other contemporary industries such as computer hardware, may be illustrated by considering the fact that “[i]n pharmaceuticals, unlike disciplines such as the computer hardware industry, the patent is, more often than not, for the ultimate product.”⁵³ It is argued that:

To illustrate the difference, imagine all of the parts of a printer attached to your home computer, every motor, every wheel, even the exterior design of the printer itself is probably patented, but it is unlikely that the whole finished product is patented. Contrast that with a pharmaceutical product. The patent is not for the pill shape, or the fillers that are inevitably part of the production process, no, the patent is for the active ingredient (and most likely to structurally similar analogs as well). The illustration points out why patents are so much more valuable to the pharmaceutical industry....[This] points out why patents are so much more valuable to the pharmaceutical industry. Without a patent, a competitor can reverse engineer your drug and then sell the exact same product, thus, making the investment in discovering the therapy worthless.⁵⁴

One of the peculiarity of characteristics of the pharmaceutical patents as compared to the same in other industries has been the requirement of “utility” or “usefulness”. An argument on the pretext is that, “The pharmaceutical industry poses special problems because

of its characteristics. Its products are subject to intense public scrutiny, and the industry generally receives its greatest publicity after a tragedy involving pharmaceuticals. Because of the public's general lack of knowledge concerning the scientific characteristics of drugs and the resultant reliance upon manufacturers' assurances, the industry is the object of strict governmental regulation."⁵⁵

Moreover, [i]t must constantly be borne in mind that a pharmaceutical patent does not grant the right to sell the drug but merely confers the right to exclude others from selling.⁵⁶ Therefore, in essence a pharmaceutical patent is a clear example of a negative right to the patentee and the general public cannot be physically hurt or adversely affected by the mere grant of a patent pending approval by the respective drug authority. This may not be the case with patenting in the other industries.

Secrecy about an invention can be maintained until product is ready for marketing. This general proposition may not be true with pharmaceutical patents, in which case the term of the patent takes a hit from either ends, i.e. on one hand there is an urgency to file for a patent at an early date whereas on the other hand it needs to await clearances from the respected authorities (e.g. Food & Drugs Authorities, FDI etc.) before an actual marketing to reap benefits. This peculiar characteristic lead to concepts such as "Data Protection", "Patent Term Extensions", "Patent Linkages" etc. to balance out the losses.

Yet another unique characteristic of the pharmaceutical patents is that the principle of "buyer be aware" is much lower with the pharmaceutical products when compared with other inventions from I.T., ITeS or such other industries. However, regulatory norms such as FDI clearances, safety tests and clinical trials etc. are unique to the pharmaceutical industry.

Protection of Pharmaceutical Patents: Ways

The protection of pharmaceutical patents are done by various ways. Each form of protection is considered to best suit a particular purpose of protection. An account of the kinds of forms of protection of pharmaceutical patents has been effectively explained as under⁵⁷:

Several types of patents are available to pharmaceutical companies: product patents, composition patents, and process patents.⁵⁸ The product patent refers to the chemical structure defining a chemical compound;⁵⁹ this typically is the end product consumed by the consumer. In pharmaceuticals, the product patent is the most desirable patent because it grants protection regardless of the method used to produce the compound or the intended use of the compound.⁶⁰ Composition patents are similar to product patents in that they provide protection for a formulation or mixture of chemicals.⁶¹ One difference between the two types of patents is that mere manufacture of the ingredients is insufficient for infringement of the product patent; the preparation or the sale of the entire formulation must also occur.⁶²

Process patents are directed at protecting the "means of obtaining" an end result.⁶³ Process patents protect two things: first, the process of making the product, and second, the process of using the product to treat disease.⁶⁴ The first type, the process of making the product, is patentable in many countries.⁶⁵ However, policing such patents is difficult unless the process is the only economically feasible process to create the end product.⁶⁶ Typically many different processes may make the same chemical compound.⁶⁷ In order for a patentee to prove infringement of a process patent, it must show that the compound was made using the exact chemical steps of the patented process.⁶⁸ Thus, this method provides little protection to the inventor of a pharmaceutical product.⁶⁹ If a company is infringing the process in a country where the process is not patented, the patentee has little recourse to prevent the sale of the product in countries where the process is patented.⁷⁰

The second type of process patent, the process of using the product, is also difficult to enforce, especially where the process relies on a compound not itself patentable.⁷¹ In these cases, a would-be infringer can simply substitute a competitor's similar compound to avoid infringement of the process.⁷²

Patent Term Extension in Pharmaceuticals

The European Council of Ministers considering the need for pharmaceutical organizations to file patent applications at an early stage while the product or process is still in its R&D stage advocated for a regulation for suitably extending the term of pharmaceutical patents.⁷³ It introduced the Supplementary Protection Certificate (hereinafter referred to as SPC). The recitals 2 and 3 of the Regulation state that:

“[M]edicinal products, especially those that are the result of long, costly research will not continue to be developed in the Community and in Europe unless they are covered by favourable rules that provide for sufficient protection to encourage such research ... [A]t the moment the period that elapses between the filing of an application for a patent for a new medicinal product and authorization to place the medicinal product on the market makes the period of effective protection under the patent insufficient to cover the investment put into the research.”

In terms of its effects the certificate functions much like a regular patent⁷⁴ as it extends the initial patent protection by up to 5 years⁷⁵. However, the patent holder cannot enjoy more than 15 years of combined patent and SPS exclusivity from the first authorization in the Community⁷⁶. The certificate can be given in respect of products already enjoying the protection of a valid patent⁷⁷ and if different parties hold patents relating to the same product, each of them is entitled to a separate SPC⁷⁸.

The European Court of Justice (hereinafter ECJ) laid down the principle of applicability of the SPC in the case of medical products. The conjoint case of *Novartis AG and others v. Comptroller-General of Patents Designs and Trade Marks for the United Kingdom*, and *Ministre de l'Économie v Millennium Pharmaceuticals Inc.*⁷⁹, the ECJ held that:

Article 13 of Regulation No 1768/92 concerning the creation of a supplementary protection certificate for medicinal products is to be read, for the purposes of the application of the Agreement on the European Economic Area, as providing that the certificate is to take effect at the end of the lawful term of the basic patent for a period equal to the period which elapsed between the date on which the application for a basic patent was lodged and the date of the first authorization to place the product on the market in the territory of one of the States covered by the EEA Agreement, reduced by a period of five years.⁸⁰

Grant of Pharmaceutical Patent

There is no special requirement for the grant of the 'Pharmaceutical Patent' in all four jurisdictions. The grant of the Pharmaceutical Patent is governed by the same legal provisions which governs the grant of patent.

Scope of Patent Rights in relation to Pharmaceutical Patent

The scope of the patent rights particularly in the case of pharmaceutical patents is limited due to the fact that patent term is generally reduced as compared to other fields of technology. This anomaly is differently addressed by the various legal systems. While US, UK and EU recognizes the issue and statutorily provides for term extension mechanisms, India does not.

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Patent Law of USA, UK, EU, India & TRIPs

Whether the law relating to pharmaceutical patents of US, UK, EU and India are in compliance to the provisions of TRIPs is examined here by comparing the provisions of the TRIPs with the statutory provisions of patent laws of US, UK, EU and India. To avoid the brevity the comparison is drawn in tabular form as under:

Bases of Comparison	U.S. ⁸⁸	U.K. ⁸⁹	E.U. ⁹⁰	India ⁹¹	TRIPS
Patent	Not defined	Defined ⁹²	Defines “European Patent” ⁹³	Defined ⁹⁴	Not Defined
Invention	Defined ⁹⁵	Not defined ⁹⁶ . It defines what is “not an invention”. ⁹⁷	Does not define “invention” but speaks about what inventions are patentable	Defined ⁹⁹	Not Defined. It provides which inventions may be excluded from patentability. ¹⁰⁰

			and what are not. ⁹⁸		
Pharmaceutical Product	Not defined. However, The term “Drug Product” is defined. ¹⁰¹	Not defined. “drugs and medicines” referred under exception provisions. ¹⁰² The word “pharmaceutical” has been referred under exception provisions. ¹⁰³	Not defined.	Defined ¹⁰⁴	Not defined
Pharmaceutical Invention	Not defined.	Not defined.	Not defined.	Not defined.	Not defined
Pharmaceutical Patents	Not defined.	Not defined.	Not defined.	Not defined.	Not defined
New Chemical Entity (NCE)	Not defined.	Not defined.	Not defined.	Not defined.	Not defined
Active Pharmaceutical Ingredient (API)	Not defined.	Not defined.	Not defined.	Not defined.	Not defined
Compulsory License	Not defined.	Not defined.	Not defined.	Not defined.	Not defined.

Conclusion

On the basis of the above analyses it can safely be concluded that though the ‘Pharmaceutical Patent’ has not been defined by the statutory patent laws of the above mentioned four major jurisdictions and under the provisions of the TRIPs¹⁰⁵, yet it includes ‘medicines’ or ‘drugs’ form a part of the ‘pharmaceuticals’. Therefore, it may be concluded that ‘pharmaceutical patents’ include ‘medicine patents’ or ‘patented drugs’. In *Aphali Pharmaceuticals Ltd Case* it was explained that:

To be a patent medicine one would be required to have a patent. A patented article means an article in respect of which a patent is in force. “Patent” means a patent granted under ... the Patent Act, 1970. A patent medicine will, therefore, mean medicine in respect of which a patent is in force. ... Patent means a grant of some privilege, properly, or authority, made by the Government or sovereign of a country to one or more individuals. A proprietor is one who has the legal right or exclusive title to [a thing]. It is synonymous with owner.¹⁰⁶

¹ [1979] 2 SCR 757; AIR1982SC1444; (1979) 2 SCC 511.

² MANU/GJ/8265/2006.

³ MANU/GJ/8265/2006, para 27. See also *Bilcare Limited v. Amartara Pvt. Ltd.*, MANU/DE/0889/2007, para 50.

⁴ Patent is granted on discovery in USA. See 35 U.S.C. § 100 (a) “invention” means invention or discovery.

⁵ As patent right is territorial.

⁶ The Code of Federal Regulations of the United States of America, Title 37, Patents, Trademarks and Copyrights, revised as of July 1, 1998 (Washington: U.S. Government Printing Office, 1998). Also see, [37 CFR § 501.3(d).]” 60 Am. Jur. 2d Patents § 894, at 601 n.98 (1987).

⁷ Section 2 (1) (j) of the Patents Act, 1970, No. 39 of 1970.

⁸ *Novartis AG v. Union of India*, (2013) 6 SCC 1 : (2013) 3 SCC (Civ) 227 : 2013 SCC online SC 271 at page 186.

⁹ DONALD S. CHISUM, CHISUM ON PATENTS, Vol.1, (New York: Lexis Nexis Publications, 2000).

¹⁰ Ibid.

¹¹ David Vaver, INTELLECTUAL PROPERTY RIGHTS-CRITICAL CONCEPTS IN LAW, Vol.3, 65(New York: Routledge Publishing House, 2006).

¹² JUDY PEARSALL (ed.), NEW OXFORD DICTIONARY OF ENGLISH, 960(New York: Oxford University Press, 2001).

¹³ P.RAMANATHA AIYAR, ADVANCED LAW LEXICON, Vol.2, 3rd ed., 2444 (Nagpur: Wadhwa and Company, 2005).

¹⁴ HENERY CAMBELL BLACK, BLACK’S LAW DICTIONARY WITH PRONUNCIATION, 7th ed., 824(Minneapolis, West Publishing, 1999).The dictionary also explains it further that, invention is a concept, a thing involved in the mind, it is not a revelation of something which exists and was unknown, but is creation of something which did not exist before, possessing elements of novelty and utility in kind and measure different from, and greater than, what the art might expect from skilled workers. (*Pyrene Mfg. Co. v. Boyce*, C.C.A.N.J., 292 F. 480, 481). The finding out—the contravening, the creating of something which did not exist, and was not known before, and which can be made useful and advantageous in the pursuits of life, or which can add to the enjoyment of mankind. Not every improvement is invention; but to entitle a thing to protection it must be the product of some exercise of the inventive faculties and it must involve something more than what is obvious to person skilled in the art to which it relates. Mere adaptation of known process to clearly analogous use is not invention. (*Firestone Tire and Rubber Co. v. U.S. Rubber Co.*, C. A. Ohio, 79 F.2d 948. 952. 953).

¹⁵ BRYAN A. GARNER Ed., BLACK’S LAW DICTIONARY, 9th Ed., 901(Dallas: Thomson Reuters, 2004).

¹⁶ Justice BROWN, *McClain v. Ortmyer*, 141 U.S. 419, 427 (12 S.Ct. 76, 35 L.Ed. 800), Decided: November 2, 1891.

¹⁷ *Raj Prakash v. Mangat Ram Choudhary*, AIR 1978 Del 1. Also see, *Thomsom Brandt v. Controller of Patents*, AIR 1998 Del 249.

¹⁸ Act No.2 of 1911.

¹⁹ Under the Indian Patents and Designs Act, 1911, Section 2(8) defines “invention” as under: “an invention means any process of new manufacture and includes an improvement in an alleged invention.”

²⁰ Section 101(1) of the Patents Act, 1949, defines “invention” as:

“invention” means any manner of new manufacture the subject of letters patent and grant of privilege within section six of the Statute of Monopolies and any new method or process of testing applicable to the improvement or control of manufacture, and includes an alleged invention.

²¹ Statutory provision includes the Acts under the US, UK and India and Directives under the EU.

²² See New Oxford Advanced Learner’s Dictionary, 7th Ed., (New York: Oxford University Press, 2005), at 1131.

²³ Ibid.

- ²⁴See, English Glossary of WHO. Available at: www.who.int/medicines/areas/coordination/English_Glossary.pdf. Last accessed on 14-02-2020 Also, see: WHO A model quality assurance system for procurement agencies Geneva 2007, can be found online at: <http://apps.who.int/medicinedocs/documents/s14866e/s14866e.pdf>.
- ²⁵PETER NEWMAN (Ed.), THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW, Vol.3, 40 (London: Macmillan Reference Limited, 1988).
- ²⁶*IA Pharma GMBH v. The Joint Registrar Trade Marks*, MANU/IC/0054/2012, Decided On: 20.04.2012.
- ²⁷*Alembic Chemical Works Co. Ltd. v. Commercial Tax Officer, Assessment Wing*, MANU/ST/0001/1994, Decided On: 23.03.1994. Also see, *Arun Agencies v. Collector of Customs*, MANU/CE/0047/1984, decided on: 18.06.1984.
- ²⁸See, English Glossary of WHO. Available at: www.who.int/medicines/areas/coordination/English_Glossary.pdf. Last accessed on 14-02-2020. Also, see: OECD – Pharmaceutical Pricing Policies in a Global Market, at: http://www.oecd.org/document/36/0,3343,en_2649_33929_41000996_1_1_1_37407,00.html.
- ²⁹See, P RAMANATH AIYER, ADVANCED LAW LEXICON: THE ENCYCLOPAEDIC LAW DICTIONARY WITH LEGAL MAXIMS, LATIN TERMS AND WORDS & PHRASES, 3rd Ed., 3583(Nagpur: LexisNexis ButterworthsWahwa, 2009). Also see, *Arun Agencies v. Collector of Customs*, MANU/CE/0047/1984, decided on: 18.06.1984, wherein, the tribunal considered that the Customs authorities had classified the goods under Heading No. 29.01/45(13) of the First Schedule to the Customs Tariff Act, 1975, “Pharmaceutical chemicals, that is, chemicals having prophylactic or therapeutic value and used solely or predominantly as drugs, not elsewhere specified.”
- ³⁰The Section 92(A) of the Patents Act, 1970, No. 39 of 1970, creates an *Explanation* specific to Section which talks about the compulsory license.
- ³¹In *Beecham Foods Limited v. Commissioners of Customs and Excise*, (1972)1 WLR,241(H.L.)MANU/UKWA/0085/1970, decided on: 03-12-1970. Lord Justice Edmund Davies held that, “by pharmaceutical means a pharmaceutical product is manufactured”.
- ³²See, English Glossary of WHO. Available at: www.who.int/medicines/areas/coordination/English_Glossary.pdf. Last accessed on 14-02-2020. Also, see: ICH Consensus Guideline Released for Consultation on 10 May 2005, at: <http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM073307.pdf>.
- ³³See, Glossary in, [WHO Expert Committee on Specifications for Pharmaceutical Preparations - WHO Technical Report Series, No. 961 - Forty-fifth Report \(Geneva, 18–22 October 2010\)](http://www.who.int/medicines/areas/coordination/English_Glossary.pdf), available at: <http://apps.who.int/medicinedocs/en/d/Js18652en/>. Last accessed on 14-02-2020.
- ³⁴[Act, No 16 of 1955], came into force on 1-4-1957.
- ³⁵Good Clinical Practice Guidelines for Clinical Trials in India, a policy issued CDSCO (2005).
- ³⁶The Patent Act, 1990, Act No. 83 of 1990 as amended . Also available at: http://www.austlii.edu.au/au/legis/cth/consol_act/pa1990109/s119a.html, last visited on 20-06-2015., defines the term under “Definition” in Section 3 at Schedule 1:
pharmaceutical substance means a substance (including a mixture or compound of substances) for therapeutic use whose application (or one of whose applications) involves:
(a) a chemical interaction, or physico-chemical interaction, with a human physiological system; or
(b) action on an infectious agent, or on a toxin or other poison, in a human body; but does not include a substance that is solely for use in *in vitro* diagnosis or *in vitro* testing.
- ³⁷JEROME ROSENSTOCK, THE LAW OF CHEMICAL AND PHARMACEUTICAL INVENTION, 2nd Ed., 2-6 (New York: Aspen Publishers, 2005).
- ³⁸Hooper, Lewison and Robin Jacob, JJ. in *Eli Lilly and Company v. Human Genome Sciences, Inc.*; England and Wales Court of Appeal (Civil Division) No. A3/2008/2673, decided on 05.09.2012.
- ³⁹The definition is also not traced in the dictionaries or other sources referred.

⁴⁰ A proposition constructed out of two provisions i.e. Section 2 (1) (j) and (ja) of the Patents Act, 1970, No. 39 of 1970.

⁴¹ See, English Glossary of WHO. Available at:

www.who.int/medicines/areas/coordination/English_Glossary.pdf. Last accessed on 15-02-2020. Also, see: WHO A model quality assurance system for procurement agencies Geneva 2007, can be found online at: <http://apps.who.int/medicinedocs/documents/s14866e/s14866e.pdf>.

⁴² See, for the purposes of understanding the rare definition, pharmaceutical patent – As per the Section 119(A) (3) of the Patents Act, 1990 of Australia the “pharmaceutical patent” has been defined as:

Pharmaceutical patent means a patent claiming:

- (a) a pharmaceutical substance; or
- (b) a method, use or product relating to a pharmaceutical substance, including any of the following:
 - (i) a method for producing a raw material needed to produce the substance;
 - (ii) a product that is a raw material needed to produce the substance;
 - (iii) a product that is a pro-drug, metabolite or derivative of the substance.

⁴³ G.L. Oza and K.N. Saikia, JJ.(DB), *Aphali Pharmaceuticals Ltd. v. Respondent: State of Maharashtra and Ors.*, AIR 1989 SC 2227; MANU/SC/0757/1989.

⁴⁴ See Chambers 20th Century Dictionary, 959 (1988).

⁴⁵ See, Hon’ble Smt. Justice PrabhaSridevan, Chairman and Hon’ble Shri V. Ravi, Technical Member; in *IA Pharma GMBH, A German Company of Keltenring 1 + 3, 82041 Oberhacing, Germany v. The Joint Registrar Trade Marks*, MANU/IC/0054/2012; Decided on: 20.04.2012.

⁴⁶ Pharmaceutical industry, the discovery, development, and manufacture of drugs and medications (pharmaceuticals) by public and private organizations.

The modern era of the pharmaceutical industry—of isolation and purification of compounds, chemical synthesis, and computer-aided drug design—is considered to have begun in the 19th century, thousands of years after intuition and trial and error led humans to believe that plants, animals, and minerals contained medicinal properties. The unification of research in the 20th century in fields such as chemistry and physiology increased the understanding of basic drug-discovery processes. Identifying new drug targets, attaining regulatory approval from government agencies, and refining techniques in drug discovery and development are among the challenges that face the pharmaceutical industry today. The continual evolution and advancement of the pharmaceutical industry is fundamental in the control and elimination of disease around the world.

The following sections provide a detailed explanation of the progression of drug discovery and development throughout history, the process of drug development in the modern pharmaceutical industry, and the procedures that are followed to ensure the production of safe drugs.

Available at <http://www.britannica.com/EBchecked/topic/1357082/pharmaceutical-industry>. last visited on 14-02-2020.

⁴⁷(a). The TRIPS Agreement which is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994. Available at http://www.wto.org/english/docs_e/legal_e/27-trips_01_e.htm, last visited on 14-09-2012.

(b). The Fourth WTO Ministerial Conference was held in Doha, Qatar from 9 to 14 November 2001.

⁴⁸ Wyndham Hulme, *The History of the Patent System under the Prerogative and at Common Law*, 12 *L.Q.R* 141, 144 (1896).

⁴⁹ JEROME ROSENSTOCK, *THE LAW OF CHEMICAL AND PHARMACEUTICAL INVENTION*, 2nd Ed., 1-3 (New York: Aspen Publishers, 2005).

⁵⁰ Miguel F. Brana, et al., in *re Brana*, 51 F.3d 1560, 1568 (Fed. Cir. 1995).

⁵¹ Prepared Statement of Gerald J. Mossinghoff, President, Pharmaceutical Research and Manufacturers of America, Before the Committee on Governmental Affairs United States Senate July 27, 1994, Fed. News Serv. Wash. Pkg. (July 28, 1994) available in WESTLAW, 1994 WL 8372760, in Theresa Beeby Lewis, *Patent Protection by Pharmaceutical Industry: A Survey of Patent Laws of Various Countries*, 30 *Int’l L.* 842, 835 1996.

⁵² Michele Boldrin and David K. Levine, Chapter 9: *The Pharmaceutical Industry* in ECONOMIC AND GAME THEORY AGAINST INTELLECTUAL MONOPOLY, Cambridge University Press, 241 (New York: 2008). Available at: <http://levine.sscnet.ucla.edu/general/intellectual/againstfinal.htm>. Last accessed on 10-02-2020.

⁵³ BRUCE LEHMAN, THE PHARMACEUTICAL INDUSTRY AND THE PATENT SYSTEM 7 (2003), Available at, <http://www.earth.columbia.edu/cgsd/documents/lehman.pdf>. Last visited on 11-02-2020.

⁵⁴ Christopher M. Jackson, *The War on Drugs: How KSR v. Telexis and Merck v. Integra Continue the Erosion of Pharmaceutical Patent Protection*, 36 Cap. U. L. Rev. 1030, 1029 2007.

⁵⁵ Deborah H. Brand, *Utility in a Pharmaceutical Patent*, 39 Food Drug Cosm. L.J. 480 (1984).

⁵⁶ Ibid.

⁵⁷ Theresa Beeby Lewis, *Patent Protection for the Pharmaceutical Industry: A Survey of the Patent Laws of Various Countries*, 30 Int'l L. 835, 842 (1996).

⁵⁸ Gerald J. Mossinghoff, *Research-Based Pharmaceutical Companies: The Need for Improved Patent Protection Worldwide*, 2 J.L. & TECH. 307, 311 (1987).

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Alan Wright, *The North American Free Trade Agreement (NAFTA) and Process Patent Protection*, 43 AM. U.L. REV. 603, 606 (1994).

⁶⁴ Thomas G. Field, Jr., *Pharmaceuticals and Intellectual Property: Meeting the Needs Throughout the World*, 31 IDEA: J.L. & TECH. 3, 7 (1990).

⁶⁵ Supra note 58.

⁶⁶ Supra note 64.

⁶⁷ Supra note 58.

⁶⁸ Ibid.

⁶⁹ R. Michael Gadbow & Timothy J. Richards, *Introduction, in INTELLECTUAL PROPERTY RIGHTS: GLOBAL CONSENSUS, GLOBAL CONFLICT?* 1 (R. Michael Gadbow & Timothy J. Richards 1988), at 109, 131. Also see, Gerald J. Mossinghoff, *Research-Based Pharmaceutical Companies: The Need for Improved Patent Protection Worldwide*, 2 J.L. & TECH. 307, 311 (1987). The Argentine Supreme Court ruled that a patent directed to a pharmaceutical process, which was used to create a rare product only obtainable through one process, was the equivalent of a product patent and thus unenforceable.

⁷⁰ Supra note 64.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Council Regulation 1768/92, of 18 June 1992, concerning the creation of a supplementary protection certificate for medicinal products, [2.7.1992] OJ L 182.

⁷⁴ See Article 5 of the Council Regulation 1768/92.

⁷⁵ See Article 13 of the Council Regulation 1768/92.

⁷⁶ See Recital 8 of the Council Regulation 1768/92.

⁷⁷ See Article 4 of the Council Regulation 1768/92.

⁷⁸ See Article 3(2) of Regulation 1610/96, of 23 July 1996, concerning the creation of a supplementary protection certificate for plant protection products, [8.8.1996], OJ L 198, According to the Recitals of Regulation 1610/96, the provisions of Article 3(2) are for the interpretation of Article 3 of Regulation 1768/92.

⁷⁹ Cases C-207/03 *Novartis v. Comptroller General* and C-252/03 *Ministre de l'Economie v Millenium Pharmaceuticals*, [2005] RPC 33.

⁸⁰See para 26 in Cases C-207/03 *Novartis v. Comptroller General* and C-252/03 *Ministre de l'Economie v Millenium Pharmaceuticals*, [2005] RPC 33.

⁸¹Council Regulation 1768/92, of 18 June 1992, concerning the creation of a supplementary protection certificate for medicinal products, [2.7.1992] OJ L 182.

⁸²See Article 5 of the Council Regulation 1768/92.

⁸³See Article 13 of the Council Regulation 1768/92.

⁸⁴See Recital 8 of the Council Regulation 1768/92.

⁸⁵See Article 4 of the Council Regulation 1768/92.

⁸⁶See Article 3(2) of Regulation 1610/96, of 23 July 1996, concerning the creation of a supplementary protection certificate for plant protection products, [8.8.1996], OJ L 198, According to the Recitals of Regulation 1610/96, the provisions of Article 3(2) are for the interpretation of Article 3 of Regulation 1768/92.

⁸⁷Cases C-207/03 *Novartis v. Comptroller General* and C-252/03 *Ministre de l'Economie v Millenium Pharmaceuticals*, [2005] RPC 33.

⁸⁸Under United States Code Title 35 – Patents i.e. 35 USC and The Code of Federal Regulations of the United States of America, Title 37, Patents i.e. 37 CFR.

⁸⁹Under the Patents Act, 1977.

⁹⁰Governed by the European Patent Convention. The 16th edition of the European Patent Convention (EPC) contains the revised texts of the Convention and its protocols which entered into force on 13 December 2007, and the Implementing Regulations as in force since 1 May 2016; also included is an amendment to those regulations which enters into force on 1 November 2016. The rules of procedure of the European Patent Office's boards of appeal and Enlarged Board of Appeal are included for the first time. When the revised Convention – or “EPC 2000” – entered into force, the text valid until that time (“EPC 1973”) ceased to apply. The attribute “2000” is therefore omitted whenever the revised EPC is cited.

⁹¹Under the Patents Act, 1970, No. 39 of 1970, Section 2(1) (m).

⁹²Under the Patents Act, 1977, Section 130(1).

⁹³Article 2 of the Convention on the Grant of European Patents or the European Patent Convention “EPC” defines European patent:

- (1) Patents granted under this Convention shall be called European patents.
- (2) The European patent shall, in each of the Contracting States for which it is granted, have the effect of and be subject to the same conditions as a national patent granted by that State, unless this Convention provides otherwise.

⁹⁴See, Section 2 (1) (m) of the Patents Act, 1970, No. 39 of 1970.

⁹⁵See, 37 CFR § 501.3(d). The Code of Federal Regulations of the United States of America, Title 37, Patents, Trademarks and Copyrights, revised as of July 1, 1998 (Washington: U.S. Government Printing Office, 1998). Also see, [37 CFR § 501.3(d).]” 60 Am. Jur. 2d Patents § 894, at 601 n.98 (1987).

⁹⁶The word “invention” has not been defined under the Patents Act, 1977 of UK but, Section 1 of the Act describes the conditions of an invention which shall qualify patentability.

⁹⁷Under the Patents Act, 1977, Section (2) lays down:

It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of -

- (a) a discovery, scientific theory or mathematical method;
- (b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;
- (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;
- (d) the presentation of information;

but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.

⁹⁸ Article 52: Patentable inventions:

- (1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.
- (2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:
 - (a) discoveries, scientific theories and mathematical methods;
 - (b) aesthetic creations;
 - (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;
 - (d) presentations of information.
- (3) Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.

⁹⁹ See, Section 2 (1)(j) of the Patents Act, 1970, No. 39 of 1970.

¹⁰⁰ Article 27(2) and (3), Agreement on Trade-Related aspects of Intellectual Property Rights (TRIPS), Annex 1C, 319, at 331.

¹⁰¹ Under United States Code Title 35 – Patents, § 156 (f) Extension of Patent Terms, The term “drug product” means the active ingredient of –

- (A) a new drug, antibiotic drug, or human biological product (as those terms are used in the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act), or
- (B) a new animal drug or veterinary biological product (as those terms are used in the Federal Food, Drug, and Cosmetic Act and the Virus-Serum-Toxin Act) which is not primarily manufactured using recombinant DNA, recombinant RNA, hybridoma technology, or other processes involving site specific genetic manipulation techniques including any salt or ester of the active ingredient, as a single entity or in combination with another active ingredient.

¹⁰² See, Section 55(1)(a)(ii), 55(1)(b), 56(2)(b), 56(4), of the Patents Act, 1977 of UK.

¹⁰³ See, Section 56(4)(a)(ai)(i) & (iii), of the Patents Act, 1977 of UK.

¹⁰⁴ See, Explanation under Section 54(3) of the Patents (Amendment) Act, 2005 (15 of 2005).

¹⁰⁵ See, for the purposes of understanding the rare definition, pharmaceutical patent – As per the Section 119(A) (3) of the Patents Act, 1990 of Australia the “pharmaceutical patent” has been defined as:

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 - (i) a method for producing a raw material needed to produce the substance;
 - (ii) a product that is a raw material needed to produce the substance;
 - (iii) a product that is a pro-drug, metabolite or derivative of the substance.

¹⁰⁶ G.L. Oza and K.N. Saikia, JJ.(DB), *Aphali Pharmaceuticals Ltd. v. Respondent: State of Maharashtra and Ors.*, AIR 1989 SC 2227; MANU/SC/0757/1989.

Comparison of Aerobic, Anaerobic and Body Composition of Defenders and Attackers of Football Players

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Background : The purpose of the study was to compare the Aerobic, Anaerobic and Body Composition of Defenders and Attackers of Football players. Method: A total of 100 subjects were selected from Gorakhpur University and Lucknow University. Ages of the subjects were ranging from 20 to 30. Fifty subjects were selected as Defenders and fifty subjects were selected as Attackers. Aerobic, Anaerobic and Body Composition (Lean Body Mass, Lean Body Fat and Lean Body Weight) were selected as a variable for the purpose of study. Independent Sample t-test was used. Result: It was concluded that there was significant difference in Aerobic, Anaerobic and Body Composition (Lean Body Mass, Lean Body Fat and Lean Body Weight) between Defenders and Attackers of Football players at .05 level of significance.

Key Words: Aerobic, Anaerobic, Body Composition, Defenders and Attackers of Football players

Introduction:

Football, which is excellent around team sport, has been widely accepted as a highly competitive as well as a recreational game throughout the world. It is now recognised as one of the most breathtaking and dramatic sport of the Olympics both from the players and spectators view point (Nicholas, A. 1979). In this present advanced and computerised world, the research and product oriented sports authorities, throughout the world every much prefer to investigate, analyse and find out the various components desired to be developed in young athletes for various sports competitions from club to international level. In advanced countries like Germany, Russia, Australia, Britain and besides others, rapid progress in the field of games and sports like athletics, basketball, soccer and hockey etc. has taken place and their international achievements have been possible only due to research, experimentation and application of scientific knowledge (William, HF. 1980). Aerobic (or cardiovascular exercise, a term attributed to this kind of exercise because of its various benefits in cardiovascular health) refers to exercise that involves or improves oxygen consumption by the body. 4 Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic 5 or energy generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time. This intensity can vary from 50-80% of maximum heart rate. Running a long distance at a moderate pace is an aerobic exercise, but sprinting is not. Playing tennis, with near continuous motion, is generally considered aerobic activity, while doubles tennis, with their brief bursts of activity punctuated by more frequent breaks, may not be predominantly aerobic (Wilmore, J. & Knuttgen, H. 2003). Anaerobic exercise is the type of exercise that enhances power and builds muscle mass. Muscles trained under anaerobic conditions develop differently, leading to greater performance in short duration, high intensity activities, which last up to about 2 minutes. 6 The most common form of anaerobic exercise is strength exercise. Strength exercise is the use of resistance to muscular contraction to build the strength, anaerobic endurance and size of skeletal muscles. There are many different methods of strength training, the most common of

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which are weight and resistance exercise. These two types of exercise use gravity (through weight stacks, plates or dumbbells) or machines to oppose muscle contraction, and the terms can be used interchangeably. When properly performed, strength training can provide significant functional benefits and improvement in overall health and Wellbeing including increased bone, muscle, tendon and ligament strength, toughness and endurance, improved joint function, reduced potential for injury resulting from weak muscles, improved cardiac function and elevated “good” HDL cholesterol. It can also help maintain lean body mass (important for individuals attempting weight loss), decrease the risk of osteoporosis and develop coordination and balance (Bouchard, C. Arthus, S. & Leon, DC. 1999). Body Composition is leanness or fatness of body. The interest in body composition is centered mainly on the presence of obesity, defined as the excessive accumulation of the body’s total fat tissue. It was contended that obesity has four types of hazard to health, disturbance of various normal functions of the body. Increases risk of developing diseases and adverse psychological effects. According to Guyton, when greater quantities of energy (in form of Food) enter the body, they are expended and the body weight increases. Therefore obesity is obviously caused by excess energy input over energy output. For each 9.3 calories, energy entering the body one-gram fat is stored (Arthur, CG. 1976).

Objective of the study

The objective of the study was to compare the Aerobic, Anaerobic and Body Composition of Defenders and Attackers of football players.

Methodology

Selection of Subjects: For the purpose of the study 100 Football players (50 selected as Defender and 50 selected as Attacker) were selected from Gorakhpur University and Lucknow University. Ages of the subjects were ranging from 21 to 30 years. **Selection of the Variables:** Following variables were selected for the purpose of study:

1. Aerobic Capacity.
2. Anaerobic Capacity.
3. Body Composition.
 - a) Lean Body Mass
 - b) Lean Body Fat
 - c) Lean Body weight

Criterion Measures

1. Aerobic Capacity: It was measured by means of Cooper’s 12 minute run/walk test and it was recorded in meters.
2. Anaerobic Capacity: It was measured by using 50meters dash. It was recorded in 1/100th of a second.
3. Body composition: It was measured with the help of skin fold caliper and recorded in Kilograms. The thickness was taken from the following four sites:- (i) Biceps, (ii) Triceps, (iii) Sub scapula and (iv) Supra iliac.

Statistical Techniques

To compare the Aerobic, Anaerobic and Body Composition of Defenders and Attackers of Football players by applying Descriptive Statistics i.e. Mean, Standard Deviation & Independent

Sample t-test. The level of significance was set at 0.05.

Findings

Table – 1: Comparison of Aerobic Capacity between Defenders & Attackers of Football Players

Groups	N	Mean	Std. Deviation	Std. Error Mean	T-ratio
Defenders	50	2.99	154.93	21.91	-3.06*
Attackers	50	3.08	145.43	20.51	

* Significant at 0.05 level of significance

T-value required to be significant at 98 df = 1.98

Table-1 revealed that significant difference was found between Defenders & Attackers of Football players in relation to Aerobic Capacity, since T-value of -3.06 was found higher than the required tabulated value of 1.98 with 98 df at 0.05 level of significant. Attackers possessed greater Aerobic Capacity in comparison to Defenders of Football Players

Table-2: Comparison of Anaerobic Capacity between Defenders & Attackers of Football Players

Groups	N	Mean	Std. Deviation	Std. Error Mean	T-ratio
Defenders	50	6.66	31	.04	2.30*
Attackers	50	6.53	24	.03	

* Significant at 0.05 level of significance

T-value required to be significant at 98 df = 1.98

Table-2 revealed that significant difference was found between Defenders & Attackers of Football players in relation to Anaerobic Capacity, since T-value of 2.30 was found higher than the required tabulated value of 1.98 with 98 df at 0.05 level of significant. Defenders possessed greater Anaerobic Capacity in comparison to Attackers of Football players.

Table-3: Comparison of Lean Body Mass between Defenders & Attackers of Hockey Players

Groups	N	Mean	Std. Deviation	Std. Error Mean	T-ratio
Defenders	50	56.62	5.05	.71	.38*
Attackers	50	56.24	5.04	.71	

* Significant at 0.05 level of significance

T-value required to be significant at 98 df = 1.98

Table-3 revealed that significant difference was found between Defenders & Attackers of Football players in relation to Lean Body Mass, since T-value of .38 was found higher than the required tabulated value of 1.98 with 98 df at 0.05 level of significant. Defenders possessed greater Lean Body Mass in comparison to Attackers of Football Players

Table-4: Comparison of Lean Body Fat between Defenders & Attackers of Hockey players

Groups	N	Mean	Std. Deviation	Std. Error Mean	T-ratio
Defenders	50	5.83	1.50	.21	-.56*
Attackers	50	6.01	1.59	.22	

* Significant at 0.05 level of significance

T-value required to be significant at 98 df = 1.98

Table-4 revealed that significant difference was found between Defenders & Attackers of Football players in relation to Lean Body Fat, since T-value of -.56 was found higher than the required tabulated value of 1.98 with 98 df at 0.05 level of significant. Attackers possessed greater Body Fat in comparison to Defenders of Football players.

Table-5: Comparison of Lean Body Weight between Defenders & Attackers of Hockey players

Groups	N	Mean	Std. Deviation	Std. Error Mean	T-ratio
Defenders	50	62.94	5.23	.74	-.22*
Attackers	50	63.18	5.42	.76	

* Significant at 0.05 level of significance

T-value required to be significant at 98 df = 1.98

Table-5 revealed that significant difference was found between Defenders & Attackers of Football players in relation to Lean Body Weight, since T-value of -.22 was found higher than the required tabulated value of 1.98 with 98 df at 0.05 level of significant. Attackers possessed greater Body Weight in comparison to Defenders of Football players.

Discussion

Significant difference was found between Defenders & Attackers in football players in relation to Aerobic Capacity because football requires multiple repeated sprint efforts with short recovery time within the period of a game. Higher sports performance would be anticipated with the ability to repeat sprint efforts at or near maximal intensity and another reason is due to the similar pattern of training, undergone by both the groups and in certain situation the total football players remove the limitations between Attackers and Defenders; i.e. the Attackers and Defenders both have to involve themselves in both attacking and defending. Where along with the ball possession with Attackers, Defenders also will take part in attacking. Same, during defending, the Attacker will move back with Defender to prevent the goal which is to create compactness in front of the goal mouth. Additionally, maximal aerobic capacity was reduced from pre- to postseason. These findings suggest a need for aerobic training throughout the college football season. Significant difference was found between Defenders & Attackers in football Players in relation to Anaerobic Capacity because football players are constantly fighting fatigue during as game progresses. You will notice a significant decline in energy levels and skill execution the longer the game. Fatigue is caused by lactic acid which builds up in the muscles and blood. Lactic acid builds up in both the upper and lower body and leads to slower movement and the burning sensation in the muscles that is sometimes felt at the end of a shift and another reason is due to the similar nature of work out done by the University team. The diet provided was same to all players. Significant difference in Body Composition was found because of the similar nature of the workout,

nutrition, daily scheduled and maybe the fact that the entire subject being from University, admission as the selection procedure to the institution might be significantly favouring the body composition. Body Composition variable are great importance in the selection of appropriate athletes for appropriate sports. The primary reason for determining an athlete's body composition is to obtain information that may be beneficial in improving athletic performance. The nature of the game is similar for both Attackers and Defenders in football players.

Conclusions

On the basis of the findings of the study, the following conclusions are drawn:

1. Significant difference was found on Aerobic Capacity between Defenders & Attackers of football players, Attackers had higher mean than Defenders of football players.
2. Significant difference was found on Anaerobic Capacity between Defenders & Attackers of football players, Defenders had higher mean than Attackers of Hockey players.
3. Significant difference was found on Lean Body Mass between Defenders & Attackers of football players, Defenders had higher mean than Attackers of football players.
4. Significant difference was found on Lean Body Fat between Defenders & Attackers of football players, Attackers had higher mean than Defenders of football players.
5. Significant difference was found on Lean Body Weight between Defenders & Attackers of football players, Attackers had higher mean than Defenders of Hockey players.

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Role of Yoga Nidra and Cognitive Therapy on ADHD and Autism Patients : A Thematic Paper

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Abstract

One of the prime reasons for conducting the study is to create awareness and think about the yogic and cognitive therapy among ADHD and Autism patients. It is necessary to identify such children because the disorder affects their day to day life academic performance. Instead of giving them proper treatment they are ill-treated punished and sometimes even beaten up by the teachers in schools and by parents at home. They are often compared with their peers and siblings. The study is initiated to provide help to children having ADHD. Disorders like ADHD and Autism are prevalent in India; however, one of the major obstacles is lack of awareness of these disorders. The higher the awareness among health-care professionals and school authorities, the earlier the identification of affected children and referral for appropriate intervention can begin and the fewer children will remain undetected. Some researchers have suggested that attempts to raise awareness of, and access to, interventions for children suffered with Autism and ADHD should be made using locally acceptable models, focusing more on educational and religious interventions as opposed to the medications and psychiatric labels of the biomedical model.

Key Words : ADHD, Autism, Yoga Nidra, Cognitive Therapy

1. Introduction

Yoga Nidra is derived from the tantras, it is a powerful technique in which you learn to relax consciously. In Yoga Nidra, sleep is not regarded relaxation. People feel that they are relaxing when they collapse in an easy chair with a cup of coffee, a drink or a cigarette, and read a newspaper or switch on the television. But this will never suffice as a scientific definition of relaxation. These are only diversions. True relaxation is actually an experience far beyond all this. For absolute relaxation you must remain aware. This is Yoga Nidra, the state of dynamic sleep.

Yoga Nidra is a systematic method of inducing complete physical, mental and emotional relaxation. The term *Yoga Nidra* is derived from two Sanskrit words, *yoga* meaning union one-pointed awareness, and *nidra* which means sleep. During the practice of Yoga Nidra, one appears to be as asleep but the consciousness is functioning at a deeper level of awareness. For this reason, yoga nidra is often referred to as psychic sleep or deep relaxation with inner awareness. In this threshold state between sleep and wakefulness, contact with the subconscious and unconscious dimensions occurs spontaneously.

Cognitive Behavioral Therapy (CBT), After a lifetime of mistakes, mishaps, and missed deadlines, is it any wonder that adults with attention deficit hyperactivity disorder (ADHD or ADD) suffer dangerously low self-esteem and perpetually negative thoughts? Cognitive behavioral therapy (CBT) is a short-term, goal-oriented form of psychotherapy that aims to change these negative patterns of thinking and change the way a patient feels about her self, her abilities, and her future. Consider it brain training for ADHD.

Originally a treatment for mood disorders, CBT is based on cognitive restructuring, or the recognition that cognitions lead to emotional difficulties. Automatic thoughts are

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spontaneous interpretations of events. These impressions are susceptible to distortion, such as unfounded assumptions about yourself (or others), a situation, or the future. Such unhealthy internal dialogs hinder an individual from working toward an intended goal, working to develop productive new habits, or generally take calculated risks.

CBT aims to change irrational thought patterns that prevent individuals from staying on task or getting things done. For an individual with ADHD who thinks, "This has to be perfect or it's no good," or "I never do anything right," CBT challenges the truth of those cognitions. Changing distorted thoughts, and the resulting change in behavior patterns, is effective in treating anxiety, and other emotional problems.

ADHD is increasingly associated with poor health outcomes (Nigg, 2013). The characteristics of inattention, impulsivity, and poor planning likely contribute to poor health behaviors, but ADHD may also be influenced by these same behaviors (Nigg, 2013; Nigg & Holton, 2014). Population survey data have suggested that lifestyle behaviors such as media time, physical activity, and sleep disturbance (Lingineni et al., 2012; van Egmond-Frohlich, Weghuber, & de Zwaan, 2012) are individually associated with ADHD. Undesirable lifestyle factors could contribute directly to inattention and/or hyperactivity symptoms, could lead to other long-term health issues, and could affect scholastic outcomes. Numerous mechanisms exist that could mediate such effects, such as secondary effects on energy level, immune function, and epigenetic change. However, first, it is important to evaluate the association of ADHD with the overall number of healthy lifestyle factors followed. As noted, a handful of national survey studies show an association of ADHD with individual lifestyle factors (Lingineni et al., 2012; Sivertsen et al., 2015; Touchette et al., 2009; van Egmond-Frohlich et al., 2012; Wiles, Northstone, Emmett, & Lewis, 2009), but further research is needed to assess the overall number of healthy lifestyle behaviors followed, while also addressing the limitations of survey research.

Although these studies have the important advantage of population representation, they have not evaluated the potential for combined effects from following multiple healthy lifestyle factors. They also have important limitations. In particular, ADHD is not well characterized, often assessed only by a single survey question about past diagnoses. There is reason to suspect the accuracy of those ADHD assignments. For example, prevalence in some of these surveys for ADHD is more than 10%, yet the best scientific evidence for ADHD true prevalence is in the 2% to 3% range (Erskine et al., 2013). Furthermore, as parents report on both ADHD status and lifestyle, shared source variance may inflate the association of ADHD with lifestyle behaviors in those studies. In addition, comorbidity effects are difficult to evaluate in those studies, because associated disorders such as depression or oppositional defiant disorder also are not able to be thoroughly evaluated. Clinic referrals also have their own biases. Thus, well-characterized case control studies of community-recruited samples are needed which can address these diagnostic issues and attempt to further evaluate the potential association between lifestyle behaviors and ADHD. The objective of this research was to investigate whether children with carefully characterized ADHD have fewer positive healthy lifestyle choices overall, as compared with children of a similar age without ADHD, in a well-characterized sample not ascertained by clinic referral.

Diagnosis of ADHD

Data are reported for children aged 7 to 11 years classified as having ADHD (n = 184) or as typically developing controls (n = 104) from a community-recruited observational cohort. Enrollment procedures and details on the multi informant testing procedures used in this cohort have been reported previously (Musser, Galloway-Long, Frick, & Nigg, 2013;

Musser, Karalunas, Dieckmann, Peris, & Nigg, 2016). Children were recruited from public advertisements and direct mass-mailing to all parents in the community with children in the target age range. Parents then completed structured diagnostic interviews (Schedule for Affective Disorders and Schizophrenia for School-Age Children–Epidemiologic Version [KSADS-E]; Orvaschel, 1994) with a trained interviewer who was a master's degree level clinician in social work or psychology. Interviewers were carefully trained with periodic quality checks, and their reliability with a master rater was $k > 0.70$ for all disorders evaluated. Parents and teachers each completed normed standardized rating scales: Conners-III parent and teacher ratings (Conners, Sitarenios, Parker, & Epstein, 1998; Purpura & Lonigan, 2009), Strengths and Difficulties Questionnaire (Goodman, 2001), and ADHD Rating Scale (DuPaul, Power, Anastopoulos, & Reid, 1998). Parents also completed an in-house standardized checklist of health conditions which included comorbid conditions of exclusion like psychosis, cerebral palsy, mental retardation, non-correctable vision problems, closed head injury, chronic sleep apnea, narcolepsy, and any neurological disorder such as epilepsy, autism, schizophrenia, or brain tumor. Past treatments and medications were evaluated with a modified Services for Children and Adolescents-Parent Interview (SCAPI) (Jensen et al., 2004). Children completed a short IQ screen (a Wechsler Intelligence Scale for Children– Fourth Edition [WISC-IV] short form comprising vocabulary, information, and block design subtests) and an academic screen (the Wechsler Individual Achievement Test, Second Edition [WIAT-II] reading and math subtests; Wechsler, 2005). They also completed self-reported ratings of mood using the Children's Depression Inventory (Kovacs, 1985) and the Multidimensional Anxiety Scale (March, Parker, Sullivan, Stallings, & Conners, 1997). The clinician interviewed the child, and the psychometrician and clinician each made detailed behavioral observations of children. Then a best estimate diagnostic procedure was implemented. To do this, a diagnostic team consisting of two experienced clinicians, a board certified child psychiatrist, and a licensed clinical child psychologist reviewed all available information listed above to arrive at a judgment about Diagnostic and Statistical Manual of Mental Disorders diagnosis of ADHD and other comorbid psychiatric disorders. They made these judgments independently, with inter-rater agreement $k > 0.80$ for ADHD and $k > 0.70$ for all disorders with base rate $> 5\%$ in the sample. Disagreements were resolved by consensus discussion.

Autism is one of the behaviorally defined developmental disorders of brain function. It has a variety of genetic and nongenetic etiologies, with etiology being unknown in the majority of children. Boys are more frequently affected than girls. Manifest in the preschool years, autism always affects sociability, communication, and the child's repertoire of activities and interests. Autism encompasses children with a broad range of severities and a variety of other signs of brain dysfunction. These include motor signs, notably stereotypies; abnormal responses to a variety of sensory stimuli; and disorders of affect and attention. A significant proportion of autistic children experience epileptic seizures and have abnormal EEGs. Neuroimaging, preferably magnetic resonance imaging, discloses abnormalities of brain development in a minority of autistic persons. The level of intelligence may range from profound mental deficiency to giftedness. The pattern of cognitive skills is likely to be uneven, typically with better nonverbal than verbal skills. In the preschool years, all autistic children have a developmental language disorder. Verbal expression may range from total lack of language to verbosity with echolalia; comprehension and language use are invariably impaired.

While there is no specific pharmacologic agent to mitigate the fundamental disorder, children may benefit from drugs to treat specific symptoms such as attention disorder and

seizures. Although autistic behaviors are the consequence of a static disorder of brain function, their character changes with maturation and appropriate intervention. Communication skills and sociability remain deficient but improve in all but the most severely affected children. Outcome is a function of both innate cognitive competence and the effectiveness of early intervention focused on the development of appropriate social skills and meaningful communication.

Role of Cognitive Therapy on ADHD

ADHD is a chronic, persistent delay of self-regulation skills, including executive functioning skills. Delays in EFs create procrastination, disorganization, poor time management, emotional dysregulation, impulsivity, and inconsistent motivation. Although these problems are not included in the official diagnostic criteria for ADhD, they are common in adults with the condition, making it hard for them to regulate their emotions and behaviors.

Individuals who grow up with ADHD (particularly if it has gone undiagnosed) encounter more frequent and frustrating setbacks in life situations — on the job, in social interactions, and everyday organization. Because of these many setbacks, adults with ADHD become self-critical and pessimistic. This, in turn, sometimes causes them to experience negative emotions, cognitive distortions, and unhealthy self-beliefs. It is common for individuals living with ADHD to think they are at fault when situations don't turn out well, when, in many cases, they aren't. They may bring the same pessimism to the future, imagining that tomorrow will go as badly as today.

Role of Cognitive Therapy on Autism

Cognitive behavioral therapy stems from “behaviorism”, a psychological approach that works under the assumption that all human behavior is learned. Therefore, from a behaviorist point of view, new behaviors can be learnt, and existing ones unlearned. The purpose of cognitive behavioral therapy is to change thinking and certain behaviors that prevent positive results.

While other psychotherapy methods involve exploring the past to learn about the feelings of the patient, CBT concentrates more on the “here and now” and on the patient's current thoughts and beliefs.

In CBT, the counselor helps the patient understand their problem by breaking it into smaller parts. As a result of this, they might find it easier to see how the parts are connected and the impact they have on their thoughts and emotions. The different components the counselor might explore include the situation, thoughts, emotions, physical feelings and actions.

When the patient can recognize these parts, they can easily determine the problem, its effects, and how to deal with it. As a result, with CBT, patients can learn to swap their negative thoughts with more positive ones.

CBT can help with various psychological disorders including anxiety, panic disorders, depression, eating disorders, stress, post-traumatic stress , obsessive-compulsive disorder, psychosis, and bipolar . More recently, it has also been used to treat other conditions such as autism spectrum disorder.

2. Review

Kathleen F. Holton, Joel T. Nigg (2016) the study was to examine whether children aged 7 to 11 years with very well-characterized ADHD, recruited from the community, have a similar number of healthy lifestyle behaviors as compared with typically developing children from the same community. Parents of children with (n = 184) and without (n = 104) ADHD completed a lifestyle questionnaire asking about water intake, sweetened beverage

consumption, multivitamin/supplement use, reading, screen time, physical activity, and sleep. A lifestyle index was formed from these seven domains (0-7), and multivariable ordered logistic regression was used to examine the association of ADHD status and total healthy lifestyle behaviors. Children with ADHD were almost twice as likely to have fewer healthy behaviors, even after adjustment for age, sex, intelligence quotient (IQ), ADHD medication use, household income, and four comorbid psychiatric disorders (odds ratio [OR] [95% confidence interval] = 1.95 [1.16, 3.30], $p = .01$).

Danial, John T. MA; Wood, Jeffrey J. PhD (2013) Cognitive behavioral therapy (CBT) is now commonly used for high-functioning children with an autism spectrum disorder. The objective of this article was to describe the methods and results of cognitive behavioral interventions for children with autism. This article reviews CBT programs targeting anxiety, disruptive behavior, and core autism symptoms for children with autism. There is emerging evidence suggesting that CBT is possibly efficacious for anxiety and autism symptoms, but methodological weaknesses must be addressed before clear conclusions can be drawn.

Jeffrey J. Wood, Amy Drahota, Karen Sze, Kim Har, Angela Chiu, David A. Langer (2009) for this study Forty children (7–11 years old) were randomly assigned to 16 sessions of CBT or a 3-month waitlist (36 completed treatment or waitlist). Therapists worked with individual families. The CBT model emphasized behavioral experimentation, parent-training, and school consultation. Independent evaluators blind to treatment condition conducted structured diagnostic interviews and parents and children completed anxiety symptom checklists at baseline and post treatment/post waitlist. In intent-to-treat analyses, 78.5% of the CBT group met Clinical Global Impressions-Improvement scale criteria for positive treatment response at post treatment, as compared to only 8.7% of the waitlist group. CBT also outperformed the waitlist on diagnostic outcomes and parent reports of child anxiety, but not children's self-reports. Treatment gains were maintained at 3-month follow-up. The CBT manual employed in this study is one of the first adaptations of an evidence-based treatment for children with autism spectrum disorders. Remission of anxiety disorders appears to be an achievable goal among high-functioning children with autism.

Ornella Santonastaso, Vittoria Zaccari, Cristiano Crescentini, Franco Fabbro, Viviana Capurso, Stefano Vicari, and Deny Menghini (2020) Mindfulness-oriented meditation (MOM) is a self-regulatory training used for attentional and behavioral problems. With its focus on attention, MOM is a promising form of training that is gaining empirical support as a complementary or alternative intervention for attention deficit/hyperactivity disorder (ADHD). In this study, we tested the preliminary efficacy of MOM training in children with ADHD, by comparing its efficacy with an active control condition (Emotion Education Program, EEP). Twenty-five children with ADHD aged 7–11 years participated in MOM training ($n = 15$) or EEP ($n = 10$) 3 times per week for 8 weeks. Neuropsychological and academic measures and behavioral, emotional, and mindfulness ratings were collected before and after the two programs. On average, MOM training had positive effects on neuropsychological measures, as evidenced by a significant mean improvement in all outcome measures after training. Moreover, positive effects on ADHD symptoms were found only in the MOM group. Although they are preliminary, our results documented that MOM training promotes changes in neuropsychological measures and in certain behavioral symptoms, suggesting it as a promising tool for ameliorating cognitive and clinical manifestations of ADHD.

3. Purpose of The Study

Children with Autism and ADHD have significant difficulty with any interaction that requires knowledge of other people and what they think or know. People with Autism are not able to understand the perspective of others, or even to understand that other people have a perspective that could be different from their own. They may also have difficulty understanding their own and particularly other people's beliefs, desires, intentions, knowledge, and perceptions. A child with Autism often has problem understanding the connection between mental states and actions. Autistic children have difficulty in understanding emotions.

1. To see the impact of Yoga Nidra on attention deficit hyperactivity disorder and Autism Patient among school going children.
2. To assess the effectiveness of cognitive therapy on attention deficit hyperactivity disorder and Autism patient.
3. To associate Attention Deficit Hyperactivity Disorder with their socio demographic variables.
4. To know about Neurotransmitter and its association with anxiety and impulsiveness
5. To understand the concept of intellectual ability at early aged and its association with Nervous system disorder.

4. Conclusion

Early life events and environmental factors may interact significantly with genetic vulnerability in the child. Recently, various types of investigations, including imaging studies, electro-encephalographic studies, tissue studies on autopsy material, and neuro- 4 chemical studies, have provided further evidence of a biological basis for Autism. The brains of individuals with Autism appear to have some structural and functional differences from the brains of other people, there are anomalies in the brain stem, and cranial nerves. Autism is a physical condition linked to abnormal biology and chemistry in the brain. The exact causes of these abnormalities remain unknown, but this is a very active area of research. There are probably combinations of factors that lead to Autism. Genetic factors seem to be important. For example, identical twins are much more likely than fraternal twins or siblings to both have Autism and Attention Deficit Hyperactive Disorder (ADHD). Similarly, language abnormalities are more common in relatives of autistic children. Chromosomal abnormalities and other nervous system (neurological) problems are also more common in families with Autism.

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Perceived Social Support and Satisfaction With Life Between Working and Non-Working Married Women

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Abstract

The study aims to examine the differences and associations in the perceived social support and satisfaction with life between working and non-working married women. The purposive sampling technique was used and the sample was comprised of 104 married women (working=52 and non-working=52) of the age range 24-54 years. The psychometric tools demographic data sheet, Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, and Farelly, 1988), and Satisfaction with Life Scale (Dinner, Emmons, Larson, and Griffin, 1985) were used. The finding of this study illustrate that though married working and non-working women differ significantly in regard to their perceived social support, no significant differences exist in regard to their satisfaction with life. In the case of both working and non-working married women, perceived social support and satisfaction with life were significantly correlated. In the case of working women, only family support significantly predicted satisfaction with life, whereas friend's support followed by family support emerged as the significant predictors for satisfaction with life among non-working women.

Key Words: Perceived social support, Satisfaction with life, Working women, Non-working women, Married women.

Introduction

Indian society has always been a patriarchal society, where women are treated only as a homemaker. They undertake more than half of the duties and responsibilities of the family (Verma, & Pandey, 2019). Their contribution was thought to be limited to homemaking but, due to quick globalization and numerous other advancements and modifications in the business environment, a radical change has occurred in the attitude of women and the society's outlook towards them. In the era of women empowerment, Indian women are equally participating in economic, social, political and technical areas.

In India, there is a considerable number of employed women and a large number of certified women professionals in healthcare services, information technologies, finance, and teaching. (Desai, Majumdar, Chakraborty, & Ghosh, 2011). Both family and work are a major aspect of working women's lives. Working women face lots of challenges in their day to day life due to dual roles related to both family (such as family stress, family conflict, and the family role and accountabilities) and work-life (such as job stress, job conflict, and job role demands). On the other hand, non-working women generally have roles and responsibilities related mostly to their families.

Perceived social support

Social support is a multifactorial or Meta construct. It is a psychological phenomenon in which social interaction provides individuals with assistance or embeds them in social relationships which are perceived to be loving, caring and available (Hobfall & Stoke, 1988; Dunn, & O'Brien, 2009). Social support refers to having friends and others, including family

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to turn to in times of need or crisis to give a broader focus and positive self- image. Social support provides us a purpose in life, it helps to enhance one's self-esteem and sense of belongingness (Banjare, Dwivedi, & Pradhan, 2015).

Perceived social support which refers to "emotional support", is the subjective belief or appraisal that one belongs to a communicative and caring social network (Cobb, 1976; Lakey, & Scoboria, 2005). There are two explanation of protecting benefits of perceived social support, the first one is the situation-specific model which claims that this support indicates a coping resource of relations and basically helps individuals to deal with stressful events or situations. Next, is the developmental perspective which emphasises that this support is an essential factor for the individual's social and personality development (Cohen, 1992; Pierce, et. al., 1996; Turner, & Brown, 2010).

Satisfaction with Life

Life satisfaction is a cognitive judgemental process. It is the cognitive component of subjective well-being (Andrews, & Withey, 1976). Life satisfaction is a global cognitive judgement of satisfaction with one's life, including job, relationships, health and finance (Dinner, Emmons, Larsen, & Griffin, 1985). It is a judgemental process in which individuals assess the quality of their life on the basis of their own unique set of criteria (Shin & Johnson, 1978; Pavot & Dinner, 2009). Life satisfaction is individuals' subjective evaluation of their lives, it is either overall or with specific dimensions such as family, friends, etc. (Syldo, & Hubner, 2004; Franke, Hills & Flory, 2019).

The psychosocial variables such as the size of social support, social support, and positive relations they all are highly associated with life-satisfaction (Antonucci, Sherman, & Akiyama, 1996; Villar, Asuma, Resana, & Triado, 2005). Life satisfaction is determined by various factors such as demographics, socio-economic, health, physical status, mental status, social support, social adjustment and number of morbidities (Banjare, Dwivedi, & Pradhan, 2015).

Review of Literature

Maheshwari and Singh (2009) in their study on religiosity, happiness, and life-satisfaction of ArdhaKumbhMela pilgrims, noted that there is a significant difference in satisfaction with life between male and female, and this satisfaction with life is significantly positively correlated with happiness and religiosity. Rey, Extremera, and Sanchez-Alvarez (2019) found that in elderly people, the three dimensions of perceived social support namely family, friends and significance to others are positively associated with satisfaction with life and happiness. Perceived social support is highly correlated with life-satisfaction and social skill training is also effective and increases the level of life-satisfaction of the individual (Kasprzak, 2010). An individual's perceived level of social support plays a positive and significant role in determining rural elderly persons' satisfaction with life (Banjare, Dwivedi, & Pradhan, 2015).

Nathawat and Mathur (1993) advocated that there is a significant difference between marital adjustment, well-being and life-satisfaction of working and non-working women. However, a study of "Influence of Women Works Status on the Well-Being of Indian Couples" noted that there is no significant difference between the level of social support and well-being in couples with working and non-working women (Andrade, Postma & Abraham, 1999).

Due to the traditional authority structure of Indian society, women play twin roles in their life and therefore face lots of tensions, stress, and conflict in their life (Wentling, 2003). Social support is positively correlated with anxiety, depression, and stress between working

and non-working women. Social support also plays a moderator role in marital cohesion, affections, stress, and depression (Jaffar, et. al., 2018). No significant difference was reported in marital adjustment and level of depression between working and non-working women (Hasmi, Khurshid, & Hassan, 2007; Kumari, 2014).

Rationale of the Study

Literature review revealed that only a few researches have been done on the association between perceived social support and satisfaction with life. Also, inconsistent findings exist in this regard. Thus, this issue serves as an important research issue for investigation. The present study is an empirical endeavour, in indigenous settings, to study the differences and relationship between perceived social support and satisfaction with life of working and non-working married women.

Objectives of the study

On the basis of the review of relevant literature following objectives were framed:

1. To examine and compare the levels of perceived social support and the perceived satisfaction with life amongst working and non-working married women.
2. To examine the relationship of perceived social support with life satisfaction of working and non-working married women.

Hypotheses

On the basis of the review of relevant literature and by reviewing the objectives underlying this study, it was hypothesised that:

H1 (a) There will be a significant difference in the levels of perceived social support by working and non-working married women.

H1 (b) There will be a significant difference in the perceived level of satisfaction with life by working and non-working married women.

H2 (a) There will be a positive relationship between dimensions of perceived social support and satisfaction with life of married working women.

H2 (b) There will be a positive relationship of perceived social support with satisfaction with life of married non-working women.

Method

Sample

The sample of the present study comprised of 104 married women (Working=52 and Non-working=52) of age range 22-54 years, from middle and high socioeconomic status. The convenience sampling technique was used for drawing out the sample.

Tools

Biographical Datasheet - A demographic sheet measuring the biographic data of the participants was used for the present study. It measured variables like age, family structure, years of marriage, educational qualification and socio-economic status, etc.

Multidimensional Scale of Perceived Social Support (MPSS) - This scale developed by Zimet, Dahlem, Zimet, and Farelly (1988). This scale contains three subscales Family, Friends and Significant other. This is 12 items seven-point Likert type scale from very strongly disagree to very strongly agree. The 12 items MPSS was designed to measure the perceived adequacy of support from the following three sources: Family (items 3, 4, 8 and 11), Friends (items 6, 7, 9 and 12) and significant others (items 1, 2, 5 and 10). The Cronbach's alpha value of each subscale Family, Friends and Significant others is 0.91, 0.87 and 0.85 respectively.

Satisfaction with Life Scale (SWLS) - This scale developed by Dinner, Emmons, Larson, and Griffin (1985). SWLS comprising 5 items seven-point Likert type scale from very strongly disagree to very strongly agree. The Cronbach's alpha value of the scale is 0.87.

Procedure

A convenient sample of 150 married women both working and non-working of age range 22-55 years, selected were approached. Out of those 104 (Working=52 and Non-working=52) consented for the tests to be administered on them. The tools required were arranged in proper order and subjects were contacted as per their convenience. The participants were briefed about the purpose of this study. After establishing a good rapport with them they were being requested to carefully indicate the answer according to the available keys.

After data collection, careful scoring of data was done. The obtained raw scores were organized, standardized for comparative purposes using appropriate tools provided in the respective manuals of the scales being used for the study. The data were entered in computer software for data analysis. Data were statistically analysed using appropriate statistical tests such as mean, S.D., t-test, correlation and regression analysis for testing the hypotheses of the study.

Results

Table 1
Comparison of Working (N=52) and Non-working (N=52) married women on Perceived Social Support and Satisfaction with Life

Variables	Working Women		Non-working Women		t-value
	Mean	S.D.	Mean	S.D.	
Family support	22.76	4.35	21.25	5.48	1.56 (NS)
Friends Support	22.30	3.16	18.28	5.76	4.40***
Significant Others Support	21.63	4.67	20.76	5.73	0.84 (NS)
Perceived social Support	66.71	9.11	60.30	11.53	3.14**
Satisfaction with Life	24.48	6.47	24.38	6.18	0.07 (NS)

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 1 demonstrates that the mean difference in working and non-working married women on the sub scales of perceived social support and satisfaction with life. The mean difference was found to be significant on Friend support ($t_{(102)} = 4.40$, $p < .001$) and overall perceived social support ($t_{(102)} = 3.14$, $p < .01$). It implies that married working women are higher on friends' support and overall perceived social support as compared to married non-working women. Results also illustrate that working and non-working married women had non-significant differences in family support, significant other support, and satisfaction with life.

Table 2
The correlation coefficient between different dimensions of Perceived Social Support and Satisfaction with Life of married Working women

	Family Support	Friends Support	Significant Others Support	Overall perceived Social Support
Satisfaction with life of Working Women	0.57***	0.38**	0.34**	0.58***

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 2 shows the correlation between the married working women's perceived social support and satisfaction with life. The correlational matrix indicates that with regard to

married working women, the overall perceived social support ($r=0.58, p<.001$) and its dimensions viz., Family support ($r=0.57, p<.001$), Friends support ($r=0.38, p<.01$), Significant other support ($r=0.34, p<.01$) have a positive and significant correlation with Satisfaction with Life.

Table 3
The correlation coefficient between different dimensions of Perceived Social Support and Satisfaction with Life of married Non-working women

	Family Support	Friends Support	Significant Others Support	Overall perceived Social Support
Satisfaction with life of Non-working Women	0.42***	0.43***	0.36**	0.59***

*** $p<.001$; ** $p<.01$; * $p<.05$

Table 3 shows the correlation between married non-working women’s perceived social support and satisfaction with life. The correlational matrix indicates that with regard to married non-working women, the overall perceived social support ($r=0.59, p<.001$) and its dimensions viz., Family support ($r=0.42, p<.001$), Friends support ($r=0.43, p<.01$), Significant other support ($r=0.36, p<.01$) have a positive and significant correlation with Satisfaction with Life.

Table 4
Summary of stepwise regression analysis for married working women’s satisfaction with life as a predictor and dimensions of perceived social support as a criterion

Model		Unstandardized Coefficients		Standardized Coefficients	R^2	ΔR^2	F
		B	Std. Error	Beta			
1	(Constant)	5.065	3.993				
	Family Support	.853	.172	.57***	.329	.329	24.49***

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 4 shows that family support ($\beta=0.57, p<.001$) are positively predict satisfaction with life of married working women’s, and it explains variance of 32.90% in it.

Table 5
Summary of stepwise regression analysis for married non-working women’s satisfaction with life as a predictor and dimensions of perceived social support as a criterion

Model		Unstandardized Coefficients		Standardized Coefficients	R^2	ΔR^2	F
		B	Std. Error	Beta			
1	(Constant)	15.996	2.626				
	Friends Support	.459	.137	.43**			
2	(Constant)	8.539	3.484				
	Friends Support	.394	.129	.37**	.183	.183	
	Family Support	.407	.136	.36**	.310	.127	10.99***

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 5 shows that both friends support ($\beta=0.37, p<.01$) and family support ($\beta=0.36, p<.01$) are positively predicting satisfaction with life of married non-working women’s, and they both together explain the variance of 31% in it. While friends support explains a higher

variance of 18.30% followed by a 12.70% variance explains by family support of married non-working women satisfaction with life.

Discussion

The major purpose of this study was to examine the differences and associations in the perceived social support and satisfaction with life of married working and non-working women. The findings of this investigation illustrate that there is a significant difference in the levels of perceived social support among married working and non-working women, with working women having higher levels of perceived social support. Hence the findings supported the hypothesis (H1a) which proposed that there will be a significant difference in the perceived social support between working and non-working married women. This may probably due to the presence of a larger support network for working women, opposed to non-working women who mostly have their life constrained to the limited few members in the family. For instance, in spite of a woman having a less supportive familial network (husband, in-laws, children, neighbours, etc.), she can have higher overall perceived social support if her work-related social network (peers, seniors, supervisor, manager, etc.) is strong.

On the basis of previous researches, it was hypothesised that there will be a significant difference in the perceived level of satisfaction with life between married working and non-working women. Based on the results the hypothesis (H1b) “There will be a significant difference in the perceived level of satisfaction with life between working and non-working married women.” was not supported by the results. This finding is consistent with the findings of earlier studies on satisfaction with life (Andrade, Postma, & Abraham, 1999).

Results of this study illustrate that there is a significant and positive correlation on dimensions of perceived social support and satisfaction with life in both married working and non-working women. Hence both hypotheses (H3 a and b) which stated that “there will be a positive relationship of perceived social support with satisfaction with life of married working women.” and “there will be a positive relationship of perceived social support with satisfaction with life of married non-working women.” were supported. These findings are consistent with the previous researches on perceived social support and satisfaction with life on varying samples (Kasprzak, 2010; Banjare, Dwivedi, & Pradhan, 2015; Rey, Extremera, & Sanchez-Alvarez, 2019).

This research also found family support to be the sole predictor of satisfaction with life in working women and to be next to support by friends in regard to predicting life satisfaction of non-working women. Spouse support has established linkages with lowered stress, enhanced psychological well-being and reduced mental health complications for working women. Michel, Kotrba, Mitchelson, Clark, and Baltes (2011) found that support whether it be having organizational, family, or social, has been found to lead to family-to-work conflict. Support by family also helps the employee in better fulfilling his/her family roles effectively (Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Utilizing these linkages, it could be inferred that by leading perceived familial support predicts the experience of satisfaction with life, in the instance of working women. In the case of married non-working women, their lives are centred around their close ones (family, friends, or relatives), and hence the support lent by them are significant in determining their experience of satisfaction with life.

Limitations and Future research direction

The present study has some limitations. The sample size was not very large. Data has been collected primarily from the self-report questionnaires. The sample is homogenous as

the majority of the working participants were from the education sector, and so generalization of findings to women in different fields is not possible. In future research, a more heterogeneous sample involving women from diverse sectors such as banking, nursing, and police, etc. Should be included. For more reliable and extensive findings, further studies considering demographic variables like husband support, husband job status and level of income, childcare, and support, etc., and larger sample size need to be included.

Conclusion

This study attempted to examine and compare the levels of perceived social support and satisfaction with life of working and non-working married women. The study found that though married working and non-working women differ significantly in regard to their perceived social support, no significant differences exist with regard to their satisfaction with life. In the case of both working and non-working married women, perceived social support and satisfaction with life were positively correlated. Also, while only family support significantly predicted the satisfaction with life of working women, friend's support followed by family support were the significant predictors of non-working women's satisfaction with life.

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Judicial Reforms And Impact of Judicial Assessment

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Introduction

Judicial reform is the complete or partial political reform of a country's judiciary. Judicial reform is often done as a part of wider reform of the country's political system or a legal reform. Areas of the judicial reform often include: codification of law instead of common law, moving from an inquisitorial system to an adversarial system, establishing stronger judicial independence with judicial councils or changes to appointment procedure, establishing mandatory retirement age for judges or enhancing independence of prosecution. The growth and development of any society is measured by the socio- economic standard of the people of that country. The judicial system plays a vital role in promoting and protecting the socio-economic rights of the people. In our country, judiciary is one of the three pillars of democratic structure. Over the years judiciary in India has been facing various problems. The rapidly rising population of the country besides the rapid growth in the industrial and technological fields has given rise to litigation which has resulted in increased workload on judiciary. With the increase in the rate of pending cases and declination of pronouncement the perception of society about the Judicial system has changed adversely and it is considered that, justice delayed is justice denied. The judiciary, day by day, due to its delayed process is loosing the faith of people to whom it is obliged to provide justice. The Supreme Court of India by its decision has also confirmed that the speedy trial is deemed as the fundamental right included in the Constitution of India.

Judicial Reforms

The judicial delivery system in India has become costly which not only deprives a large poor section of society an access to justice but also provides an opportunity to economically well-off to manipulate laws to their advantage. Thus, it is said that courts are deemed to exist for judges, lawyers and wealthy and not for the public seeking justice.

Recommendations of various commissions and committees have suggested judicial reforms, and based on these suggestions the Government of India is concerned and curious to take proper initiatives in this regard. In India judicial reforms encompass a wide range of issues such as infrastructure upgradation, skill upgradation, legal change and finding, alternative dispute resolution mechanism to dispose of the cases pending.

Some Judicial Reforms

- (i) Disposal level of the national system should be raised from 60 per cent of total case load (as of now) to 95-100 percent of total case load in five years. This will require this target to be established at the court, district, state levels as well.
- (ii) Each court to ensure that not more than five percent of the cases in that court should be more than five years old (5 x 5 rule) within the next three years; and in five years to ensure that not more than one percent of the cases should be more than one year old (1 x 1 rule).
- (iii) Timetables to be established for every contested case and monitored through a computerized signaling system (NIA has developed and piloted a model).
- (iv) Case numbers to indicate "litigation start dates" prominently in addition to filing dates.

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- (v) Use of ADR for civil cases and plea bargaining for criminal cases to be enhanced and monitored through a nation-wide computerized tracking system.
- (vi) Bottleneck monitoring: Four key bottlenecks causing delays in civil and criminal process to be monitored through a computerized system and special attention to be provided through a special cell at the high court and district level to resolve issues in coordination with executive agencies:
 - a) service of process;
 - b) adjournments;
 - c) interlocutory orders; and
 - d) appearance of witnesses and accused.

Suggested Reforms

- 1) Resorting more and more to the Alternate Dispute Resolution (ADR) methods like Lok Adalats, and use of methods such as conciliation and mediation for resolving minor disputes can go a long way in decongesting the Courts.
- 2) Streamlining the appointment procedure, particularly in the higher judiciary. For this, an independent body of eminent persons (like the National Judicial Council) can be charged with the selection of the judges. As of now it is the judiciary itself that selects and appoints its members in the higher judiciary. However, this process has not proved to be totally effective and has the potential of turning the judiciary into a ‘Self perpetuating oligarchy’.
- 3) The National Judicial Council (NJC) needs to be formed urgently. And apart from the judges themselves, it also needs to include a few more eminent persons from different walks of life in order to ensure adequate accountability and effectiveness. Further the NJC needs to be provided with enough teeth to enable it to discharge its functions in the most effective fashion.
- 4) Though the judicial system of our country has worked well over the years but with the passage of time all established institutions are subject to change, thus judiciary is no exception to this rule. Therefore, it is essential for any vibrant institution to positively respond to these changing trends while upholding its core values and principles. So Judicial reforms will not help itself by reformation but it will help the entire nation, thus it will contribute in the socio-economic development of India in long term.
- 5) Thus, judicial reforms have become one of the most crucial challenges before India today.

All-India Judicial Service

The competence and quality of judges in trial courts is critical for the integrity and credibility of the whole justice system. Therefore there is a strong case for creation of an All-India Judicial Service, in line with the IAS and IPS. FDR/Lok Satta in 2010 urged three eminent jurists – Sri Justice MN Venkatachaliah, (late) Sri Justice JS Verma, and (late) Sri Justice VR Krishna Iyer – to examine the issue of creation of an Indian Judicial Service. They gave their joint view as follows:

“We agree with the urgent need to constitute the All India Judicial Service envisaged by Article 312 of the Constitution of India, at par with the other All India services like the I.A.S. to attract the best available talent at the threshold for the subordinate judiciary, which is at the cutting edge of the justice delivery system to improve its quality. Moreover, the subordinate judiciary is important feeder-line for appointments to the High Court. The general reluctance of competent lawyers to join the Bench even at the higher levels adds an additional urgency to the problem. AIJS will, in due course of time, also help to improve the

quality of the High Courts. The modalities for creating the AIJS to achieve its avowed purpose, and the necessary constitutional changes and the legal frame-work can be worked out after acceptance of the proposal in principle.”

Article 312 of the Constitution provides for the creation of an All-India Judicial Service (AIJS) common to the Union and the States. Such a service can be created and regulated by the Parliament by law, provided that the Council of States has declared by resolution supported by not less than two-thirds of the members present and voting that it is necessary or expedient in the national interest to do so.

Implementation of The Gramnyayalaya

The Government through the President's address to Parliament gave a commitment to make dispensation of justice simpler, quicker and more effective, and to double the number of courts and judges in the subordinate judiciary in a phased manner. The government also announced its commitment to a policy of zero tolerance for violence against women, and to strengthen the criminal justice system for its effective implementation.

As a result of FDR/Lok Satta's efforts towards speedy, accessible and affordable justice the Parliament has enacted the Gram Nyayalayas Act in 2008 (Act 4 of 2009), providing for rural local courts for speedy justice through summary procedure, as an integral part of independent justice system. Under this law local courts should be appointed at intermediate Panchayat level. One of the problems of our justice system is many simple cases – civil or criminal – do not even reach the courts because of inaccessibility, cost and delays. Often people suffer injustice silently, or resort to rough and ready justice through extra-legal, often violent means. Local Courts with summary procedures can provide speedy relief and justice in many simple cases at a low cost.

However, as of December 2013, only 172 Gram Nyayalayas have been notified in nine states, only 152 have been functional. There is urgent need to create these local courts. Even at one local court per block, we can create 5000 courts at a low-cost in rural areas. In addition, there is increasing petty crime in urban areas, including harassment of women and eve-teasing. Growing urbanization and impersonal lives are eroding social and family controls. Young men who behave obediently at home often become a menace to women in public places. Daily harassment, eve teasing, inappropriate remarks, touching without permission in public transport vehicles – all these have become increasingly common. For women to be safe it is not enough to impose severe punishment for serious sexual offences; we need to create a culture and climate of complete safety from daily taunts and humiliation. When routine daily insults and humiliation are unchecked, serious crime against women becomes much more likely.

By expanding local courts all over the country, especially in urban areas, we can create an acceptable, simple mechanism for ensuring speedy justice in cases of ill-treatment of women, as well as many simple civil and criminal cases. Also for simple offences of eve-teasing and harassment, swift punishment and assured follow up will have great deterrent effect. For instance, if a person is held guilty of eve-teasing or harassment in a bus or train, the trial in a local court can be completed within days, and the person, in case of first offence can be imposed a fine and the conviction can be entered in his academic and employment record, with the condition that the entries can be deleted by the court after three years of good conduct. A second minor offence can lead to a month's jail term, rustication from college and a permanent entry of conviction in his records. Such swift and sure action with follow up will create a culture of zero tolerance of all forms of harassment of women, ensuring women's safety and dignity in public places. Provisions may be made in the criminal law for providing

for summary trial and speedy justice in local courts in all minor cases of sexual harassment like eve-teasing, harassment etc.,

Causes of Judicial Delay

There are million cases currently pending in various courts in India including the Supreme Court. The problem of delay in Indian Judicial System has been studied extensively by the Indian Law Commission over the years. Prior to 1999, there was no limit on the number of trial adjournments courts could grant. The 1999, Amendment fixed an upper limit of three adjournments that courts could grant during the hearing of suit. However in the 2005, case of Salem Advocate bar Association II 2005 Supreme Court interpreted this restriction as not curtailing the courts power to allow more than three adjournments.

Insertion of another time frame that was pivotal to curbing delays was introduced in 2002. Prior to 2002 a written statement could be filed within any time as permitted by the court. The 2002 amendment incorporated a mandatory outer time line for filing written statement by not allowing the courts to accept it beyond a period of 90 days from the date of service of summons. However in the 2005 judgment of Kailash vs Nanku (AIR 2005) SC 2241. The Supreme Court relax this statutory prescribed deadline by interpreting it as merely directed not mandatory.

Impact of Judicial Assessment

Judicial Impact Assessment (JIA) is a process whereby the government can anticipate the likely cost of implementing legislation through the courts and help deliver timely justice to litigants. Litigation demand depends on a variety of factors most of which are not factored in the making of laws This results in the court system being left with little or no extra resources to cope with additional cases generated by new laws. This is the main reason why despite increased disposals every year, courts are still crowded with mounting arrears of cases. Realising this structural imbalance in the system, the Supreme Court in the Salem Advocates Association Case (2005) gave a direction to the government to make an essential component of the Financial Memorandum of legislative proposals. The government, in turn, appointed task force to recommend a methodology and infrastructure for institutionalising JIA in the law making process. The committee headed by Justice N.J. Rao submitted its report to the government which is likely to come before the apex court for appropriate orders in the pending matter before it. In all likelihood judicial administration in the country is expected to see some welcome changes of far reaching significance in the near future.

The lack of adequate data on the working of the judicial system, particularly at the level of subordinate courts, has been serious impediment in planning and management of judicial reforms. The key element in JIA is the methodology for estimating judicial workload resulting from new legislations and determining the additional costs involved in Judgment and support services. The report has recommended multiple methodologies based on two field studies commissioned by it. One can identify at least three patterns in this regard. First, when legislatures make changes in civil or criminal procedure codes, they impact on litigation Amendment to Procedure Codes compelling recourse to pre-trial settlements is an example of direct impact on court work. Secondly, if laws are made or amended creating or extinguishing substantive rights, it impacts on the workload of courts. Thus, amendment of Section 138 of the Negotiable Instruments Act in 2005 generated 25 lakh additional Criminal cases in different courts in the country. Thirdly, when rights are interpreted narrowly or liberally by High Courts and the Supreme Court in the course of adjudication, it results in less or more litigation. For example, when Fundamental Right under Article 21 of the Constitution was

given a liberal interpretation or when the rule of *locus standi* was expansively interpreted, it led to more litigation and additional workload in the Constitutional Courts

Concluding Observation

To make JIA a success, therefore, the following factors are also to be kept in mind-

- (1) Before the enactment of new laws a survey should be done keeping in mind the factors such as litigation demand, cost involved implementation and the procedure involved in its processing and also the number of cases likely to be generated by the new legislation.

The Protection of Women from Domestic Violence Act 2005 which came into force on October 26, 2006 registered total of 8000 criminal cases India with Rajasthan accounting for maximum number of cases [3440] followed by Kerala [1028] and Punjab [172].

As subordinate courts dispose of 90 percent of the litigation, handling both Central and State laws, adequate cost input should be borne by both the Union and State Government [Administration of Justice Constitution and Organisation of all courts except the Supreme Court and the High Court being in the Concurrent list Entry 11-A of List III of Seventh Schedule]

- (2) Shortage of judges has always been a problem of our judicial system. The working strength of judges is far below than what is required to clear the arrears.
- (3) The enactment of new legislations should be supported by adequate budgetary allocation for building the infrastructure of courts along with proper training mechanisms for judges and staff.

The number of central laws which create rights and offences to be adjudicated in the subordinate courts are about 340. It is obvious that the Central Government must establish courts at the trial level and appellate level and make budgetary allocation to the states to establish these courts to cut down backlog of cases arising out of these central statutes.

The Indian judicial system is suffering from some lacuna. The Introduction of the Judicial Impact Assessment Technique and adoption of these measures can pave the way for timely delivery of justice to litigants and also see far reaching changes in the judicial system.

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Rural Non-farm Sector Employment: Issues and Prospects

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The annual growth rate of nonfarm employment in rural areas during 2000-2010 has gone down significantly compared to the preceding decade of 1990-2000. Importantly, the decline in the growth rate of nonfarm employment has been associated with a decline in the growth of total employment. The growth rates of total workers by usual and current weekly status registered a dramatic decline in the last five to seven years. Workforce participation rates (WPR) by usual status, defined as the percentage of male and female workers to the corresponding population, has shown fluctuations of around 23 per cent in rural India during 2003-04 to 2013-14

Another important dimension of change in the labour market in recent years is the process of casualization. The percentage of casual male workers was noted to have gone highly up during last few decades. Casualization of the labour force has been linked with exploitation and low productivity both in rural and urban areas. It has often been attributed to a deep penetration of markets as a result of economic reforms in the country. Indeed, this process has rendered many of the house holds based activities non-viable.

The major factor responsible for the high poverty level in the country would, therefore, be a lack of access to employment or economic sustenance. As a result, the growth of demand for food-grains has grown very slowly, much below what was predicted for decades by policymakers. It appears that the peripheries of urban centres are degenerating due to the pushing out of low productivity activities and the absorption of low skilled rural migrants. The other disturbing factor is the dismal performance and volatility of the agricultural sector, which provides employment to a large number of the poor. In the absence of any social security system in rural areas, negative or low growth in this sector can push many households below the poverty line. Stabilizing agricultural growth through infrastructural investment in the public sector should, therefore, be a major step in alleviating poverty on a sustainable basis in rural areas. The capacity of agriculture to absorb a large proportion of the incremental labour force is, however, limited. The percentage of people below the poverty line among the agricultural households has been noted as very high. It would, therefore, be erroneous to expect agriculture to take the major burden of labour absorption in future years. The only way that the incremental labour force in rural areas can be meaningfully employed is through sectoral diversification.

Keywords : fertility, crop pattern, productivity, casualization, literacy, poverty, sustenance

Since the early 1990s it has been argued that liberalization measures would have a positive impact on the growth of commercial and other service activities in rural India. But a section of scholars and policy makers, were skeptical about this notion. The NSS data of various previous rounds suggest that there has been an increase in the non-farm sector's share in total employment during 1973-93 and this trend has been maintained during the period 1993-2000. However, a more rewarding way of analysis would be to compute the growth rates of non farm employment for different periods and make a comparison. One can note that the annual growth rate of non farm employment in rural areas during 1993-2000 has gone down significantly compared to the preceding decade of 1983-93. The 1990s, thus, reflect a

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significant departure from the past trend. Importantly, the decline in the growth rate of non farm employment has been associated with a decline in the growth of total employment. The growth rates of total workers by usual and current weekly status registered a dramatic decline in the late 1990s, compared to the decade of 1983-93. The decline in the case of employment by daily status is most conspicuous, with the annual growth rate declining from 2.70 per cent to 1.07 per cent. The same was observed during 1991-2001, using data from population census. The percentage growth rate in main workers went down from 2.55 per cent in the 1980s to 0.91 per cent in the 1990s. One can also observe a decline in the percentage of subsidiary employment as also self employment in rural areas. The growth of casual employment has also slowed down during 1993-2000, compared to the preceding decade. The slowing down of employment growth during the 1990s can be observed also in the manufacturing sector. This is largely because of sluggish growth within the manufacturing sector, which was as low as 0.87 per cent. There was three times as much growth in the unorganized sector, the figure being 2.95 per cent. Unfortunately, the share of the unorganized sector in the total contribution of manufacturing has remained about the same, despite a significantly higher growth. This implies that productivity in this sector has declined in relation to that of the organized sector. This further reinforces the argument that the growth of non-farm activities in recent decades may not be a healthy manifestation in the Indian economy.

Growth of Non-farm Jobs in Rural India

Workforce participation rate(WPR) by usual status, defined as the percentage of male and female workers to the corresponding population, showed fluctuations of around 43 percent in rural India during 1973-74 and 1993-94, based on the data from the NSSO. The rate went up by about 1 per cent from 1987-88 to 1993-94. This was also the case in urban areas. Importantly, such an overall decline in WPR for all categories has not been observed in any previous year based on the NSS data. The decline in WPR indicates that the growth rate of employment (by usual status) was less than that of population during the late 1990s, compared to the previous decade and a half. Understandably, the former would be much lower than that of the 1980s or early 1990s, when the population growth rate was higher. Further, the share of subsidiary employment in the population also fell sharply during 1993-9 in all the categories, the decline in percentage figures being higher in the case of women. On the whole, the decline in WPR for the population of the 15+ age group is more pronounced in rural than in urban areas.

Another important dimension of change in the labour market in recent years is the process of casualization. The percentage of casual male workers was noted to have gone up during 1993-07. A similar increase but of a smaller magnitude, has been observed in case of females. Interestingly, the figures have also gone up in rural areas after 1993-94, both for males and females. The growth of casual employment, however, works out as much less during 2009-10 than the preceding five-year period.

The growth rates of non farm employment have gone down dramatically in the late 1990s, compared to the previous decade. The growth rate of non farm employments in rural areas was below that in urban areas during the 1980s and the gap widened during 1993-2000. Importantly, the decline in the growth rate of non farm employment for females is conspicuous both for rural and urban areas, compared to the male counterpart. As a consequence, the share of female non farm employment in total (female) employment in rural areas in 1999-2000 works out as less than that of 1987-88. One can, therefore, conclude that the slowing down of the process of sectorial diversification has adversely affected the more

vulnerable sections of population, such as the rural and female populations, much more than the others. Indeed, the growth in non farm employment has taken place largely within the urban informal sector, mostly for men at a low level of productivity.

The major factor responsible for the high poverty level in the country would, therefore, be a lack of access to employment or economic sustenance. As a result, the growth of demand for food-grains has grown very slowly, much below what was predicted by policymakers. Per capita cereal consumption has gone down systematically over the past few decades, both in rural and urban areas. The decline in rural consumption is indeed very substantial, the figure going down from 185 kg per year in 1980 to 165 kg in the mid-1990s. Correspondingly, the intakes of most of the major nutrients show a decline. The problems of serious malnutrition and hunger in the countryside can be attributed in no small measure to the worsening of the employment situation and lack of purchasing power. Importantly, agricultural production was stable during the first three years of the 1990s but thereafter has shown significant fluctuations -so much so that the index of production after a decade is just about 5 per cent above that at the beginning of the decade. All these have led to a paradoxical situation when the country is forced to build a huge buffer stock and maintain it at enormous cost, despite serious nutritional deficiency.

Nonfarm Employments and Poverty Alleviation

The analysis of the relationship between the incidence of nonfarm employment with the levels and nature of employment and unemployment, poverty and other socio-economic indicators suggest that high shares of nonfarm employment are not necessarily linked to healthy economic development in rural areas. The incidence of nonfarm employment is neither associated with levels of employment nor with the creation of adequate means of livelihood, leading to low levels of poverty. During 1987-93, there was a dramatic decline in the growth of nonfarm employment (particularly for females), compared to the preceding five-year period. Nonetheless, there was an increase in part-time, short duration, casual employment, resulting in a low rate of unemployment. The work participation rate increased primarily due to an increase in jobs by weekly and daily status. Although these offered low earnings to the workers, many among them could earn enough to pull themselves out of poverty. The slowing down in the growth of nonfarm employment during 1987-93, thus, was not seen as a negative phenomenon.

The development process in the late 1990s shows that the reasonably high growth in nonfarm employment in rural areas has not brought forth a significant increase in total employment -neither of a regular nor a self-employment variety. While it is not possible to argue that this has accentuated poverty, certainly a lack of demand for food grains, on the face of decline in off-take from PDS and dwindling intake of major nutrients in per capita terms, appear very alarming. The importance of the informal labour market in poverty alleviation, therefore, should not be underestimated, at least in the short run. Casualisation of the labour force has been linked with exploitation and low productivity both in rural and urban areas. It has often been attributed to a deep penetration of markets as a result of economic reforms in the country. Indeed, this process has rendered many of the households based activities non-viable. The late 1990s, however, witnessed a slowing down in the growth of casual employment. This, in the absence of formal job opportunities coming up in public or private enterprises, pushed up the unemployment rate, which has hit the sustainability of low-income households. It is important to note the decline in the rate of growth of nonfarm employments in the rural areas during 1993-2000, compared to 1983-93. In urban areas, however, the deceleration is much less. This certainly questions the proposition regarding dramatic slowing

down of the process of sectoral diversification at the national level. One can see that much of the growth in nonfarm employment has taken place in terms of the urban informal sector. The growth in nonfarm employment has taken place in small and medium towns and the peripheries of large cities, as there is no scope for its increase in the latter. Understandably, some of this growth must have spilled over to the rural hinterland of these cities.

However, analysis of the spatial variations in development and socio-economic amenities presents a disturbing situation. There is a sharp decline in the levels of per capita income in the rural areas within a distance of 0-15 Km, despite the high percentage of non-agricultural employment. This implies that the economic activities pushed out to the rural hinterland have a significantly lower earning/productivity than their counterparts in urban areas. Further, the wage rates in agriculture both for males and females have declined very sharply in the immediate hinterland, along with the size of the landholdings. Correspondingly, indicators of social development (enrolment at schools, per capita expenditure on education and health, etc) show a sharp decline with distance in the periphery. All these seriously question the hypothesis regarding the rural-urban continuum and healthy interdependencies between towns and their hinterlands.

It appears that the peripheries of urban centres are degenerating due to the pushing out of low productivity activities and the absorption of low skilled rural migrants. Given this trend, the growth of non-farm employment in small towns and city peripheries may not be viewed as a positive development. The other disturbing factor is the dismal performance and volatility of the agricultural sector, which provides employment to a large number of the poor. In the absence of any social security system in rural areas, negative or low growth in this sector can push many households below the poverty line. Stabilizing agricultural growth through infrastructural investment in the public sector should, therefore, be a major step in alleviating poverty on a sustainable basis in rural areas. The capacity of agriculture to absorb a large proportion of the incremental labour force is, however, limited. The percentage of people below the poverty line among the agricultural households has been noted as very high. It would, therefore, be erroneous to expect agriculture to take the major burden of labour absorption in future years. The only way that the incremental labour force in rural areas can be meaningfully employed is through sectoral diversification. However, mere growth of non farm employment need not be as healthy as this may occur due to people seeking shelter in activities outside farming, as a residual sector, as their last resort. Industries and some of the service activities that have high employment potential and are linked with other productive sectors should be encouraged to bring about sectoral diversification by creating jobs at higher levels of productivity. The number of jobs thus created within farm and non-farm sectors may not be high, but the infrastructural development strategy should result in higher productivity, which is the need of the hour. Special care must be taken to cover the backward states and drought-prone areas that still depend on the production of coarse cereals, demand for which has shrunk over the years. Indeed, the capacity of the government to generate employment directly through anti-poverty programmes would remain limited, due to the high cost of administration and leakages. Past experiences suggest that their impact in creating assets for income generation at house hold level, on a long-term basis, has been marginal. Banks and other financial institutions have shown an extreme unwillingness to finance these, as the risk of non-recovery is very high. The experience of involving the local bodies in the programmes has not been very encouraging, as it has created 'contractocracy'.

It is therefore, recommended that anti-poverty programmes should primarily be focused on the creation of economic infrastructure, provision of basic amenities and

strengthening the rural-urban linkages. These are likely to be more effective if the community can be involved in the projects through a process of social mobilization. Constitutional amendment for the decentralization of financial powers has proved to be inadequate for generating resources at the panchayat and town level. Efforts must be backed up by an actual devolution of powers and responsibilities and their use by the municipal bodies to enable them to take up anti-poverty programmes. It has been noted that manufacturing activities at the town level show a strong relationship with the availability of infrastructure and services. One may, therefore, argue that the provision of infrastructure and basic amenities, besides being a goal in itself, would help in generating non-agricultural employment and diversifying their economic base

in a select set of large villages and small towns. It is employment generation outside agriculture in a spatially dispersed manner that holds the key to the strategy of poverty alleviation in the country. This cannot be done without the state taking the responsibility of creating the appropriate economic environment and adequate infrastructural support for this purpose.

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Alcoholism : A Psychosocial Perspective

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The term alcoholic and alcoholism have been subject to controversy and used differently by different persons. WHO uses the term alcoholic to refer to any person with life problems related to alcohol. The USA, National Council on Alcoholism uses in a restrictive manner as certain diagnostic sign delineating extent and severity of abuse must be present for an individual to be classified as an alcoholic. Some psychologist recommend a more restrictive definition, they prefer to use the term problem drinkers for most alcohol abusers conceptualizing drinking as a continuum with alcoholics. In other study the term alcoholic was used to refer to individuals with serious drinking problems, where drinking impairs their life adjustment in terms of health, personal relationships and occupational functioning.

However alcoholism is a major problem in the society. In ruin the budget of family as well expands the budget for medical expenditure. The life span of the average alcoholic is about 12 years shorter than the normal man. It is a major cause of suicide Miles (1977) reported that about 10% alcoholic commit suicide and over 18% have attempts history of suicide. Apart from this alcoholics create serious problems for themselves as well as they pose serious difficulties for their mates, children, friends, employers and even some strangers in case of automobile accidents.

In general, majority of problem drinkers as men and women who are married and living with their families, who hold job. Traditionally alcoholism is considered to be more common among men but this problem is observed also among female. The ratio is 5:1 as male vs female. Efor, Keller & Gurioli (1974). People start taking alcohol as tasting but later it become habit. There is a Japanese proverb, "first the man takes a drink, then the drink takes a drink and then the drink takes the man" Alcohol is a depressant that affects the higher brain centers, impairing judgment and other rational process and lowering self control. Many investigators have maintained that alcohol is a dangerous systematic poison even in very small amount but for some people it is not harmful and may reduce the tension of everyday life stress (Hew, 1974). For a pregnant women this a believe to be dangerous.

Continuous use of alcohol develops serious types of impairment and some from of psychoses. There are four commonly recognized types of psychotic reactions and which are as :

1. Alcohol idiosyncratic intoxication (pathological intoxication) this is an acute reaction that occurs in persons whose tolerance to alcohol is chronically very low (such as epileptics or those of unstable personality) some may exhausted, emotional stress or other conditions. Following the consumption of even moderate amount of alcohol, there individual become disoriented state is usually followed by a period of deep sleep with complete amnesia.
2. Alcohol withdrawal delirium (Delirium treatment) : the common occurrence among those who drink excessively for a long time, this reaction may occur during a prolonged drinking spree or upon the withdrawal of alcohol after prolonged drinking. The delirium is preceded by a period of restlessness and insomnia during when person feel unwary and apprehensive.

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3. In chronic alcoholic hallucination/hallucinosis : The main symptoms are auditory hallucination. At first individual reports hearing a sound, a voice making certain statement, but with the time it extend to the voice of several people, all of them critical. The individual's inner most private concerns, particularly sexual ones may be itemized and discussed and horrible punishments proposed.
4. Alcohol amnesties disorder (Korsakoff psychosis). Main symptom is memory defect particularly with regard to recent events. Individual may not recognize picture faces, rooms and other objects.

Causes of Alcoholism

Researchers are not agree on a single point regarding the cause of drinking. Some stressed the role of genetic and biochemical factors; other viewed it as a mal adaptive pattern of adjustment to the stress of life, some as availability of alcohol and social approved of excessive drinking.

Under biological factor it is viewed that in the alcohol dependent person, cell metabolism has adapted itself to the presence of alcohol in the bloodstream and now demands it for stability. When the alcohol in the bloodstream falls below a certain level, there are withdrawal symptoms such as tremors, perspiration and weakness in mind form, in severe form nausea, vomiting, fever, rapid heartbeat, convulsions and hallucinations. The shortcut ending them it to take another drink.

Under psychosocial factors several points are raised such as

1. Psychological vulnerability : Some persons are emotionally immature and to require an inordinate amount of praise and appreciation, to react to failure with marked feeling of heart and inferiority, to have low frustration tolerance, to feel inadequate and unsure of their ability to fulfill expected male or female roles. Mann, Chassin and Sher (1988). Lutz & Snow (1985), found it associated with antisocial personality and addictive disorders.
2. Stress tension reduction and reinforcement : A number of investigators pointed out the typical alcoholic is not satisfied with his/her life situation and unable to tolerate tension and stress. Schaefer (1971) concluded that alcoholism is a conditioned response to anxiety. The individual use alcohol as a means of relieving anxiety, resentment, depression or other unpleasant feeling.
3. Marital and other intimate relationships : Excessive drinking begins during crises periods the marital or other intimate-personal relationships, particularly crises that lead to hurt and self – devaluation. Curlee (1969) found that the trauma appeared to trigger alcoholism was related to a change or challenge in the subject's role as wife or mother, such as divorce, menopause or children leaving home (so called empty-nest syndromes). Through excessive use of alcohol is the third most frequent cause of divorce where the two are financial and sexual problems.

Under Socio cultural factors it is viewed that our culture has become dependent on alcohol as a social drink and a means of reducing tension. Alcohol is demanded on the event of happiness and sorrow.

Bales (1946) outlined three cultural factor. That appear to play a part in determining the incidence of alcoholism in a given society :

- a. The degree of stress and inner tension.
- b. The attitude towards drinking and
- c. The degree to which the culture provides substitute means of satisfaction and other ways of coping with tension.

Unfortunately, alcoholics refuse to admit they have an alcohol problem or to seek assistance before they "hit bottoms". A multidisciplinary approach to the treatment of drinking problem are complex and require flexible and individual level treatment process. With progress it needs change. A variety of treatment measures ranging detoxification procedures to use of medication. In acute intoxication, the initial focus is on detoxification or elimination of alcohol substance from the individual's body of alcohol substance from the individuals body and physical rehabilitation. It can be handled in a hospital or clinic. Antabuse is effective in the treatment.

A part from this several therapeutical technique like group therapy behavior therapy and alcoholics anonymous may be used . Yoga and meditation is quiet effective in this journey.

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Environmental Sustainability Dimensions of Sustainable Development Goals – A Brief Discussion

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The United Nations Agenda 2030 has outlined a framework of 17 Sustainable Development Goals in September 2015. All countries are committed to plan a strategy at national, regional and local level to achieve these interconnected goals. UN Agenda 2030 focus on the socio-economic aspects of human life, especially in the environmental sphere to achieve sustainability. This paper discusses the concept of sustainability, in particular environmental sustainability. It traces the path from development to sustainable development and the SDGs. Finally, it briefly throws light on the criteria for integrating environment in the SDGs.

Keywords : United Nations, Sustainability, Environmental Sustainability, Sustainable Development, SDGs.

Environmental Sustainability Dimensions of Sustainable Development Goals – A brief Discussion : Development, as a concept, has been defined and interpreted differently by economic thinkers. Schumpeter envisaged development as a “spontaneous and discontinuous change in the channels of flow, disturbance of equilibrium which, forever alters and displaces the equilibrium state previously existing” (Schumpeter, 1961 cited in Emami Langroodi, Farrokh, 2017)). It is also defined as ‘an evolutionary process in which the human capacity increases in terms of initiating new structures, coping with problems, adapting to continuous change, and striving purposefully and creatively to attain new goals (Peet, 1999 cited in Du Pisani, 2006).

According to Amartya Sen (1999) development is ‘freedom’ it, “requires the removal of major sources of unfreedom: poverty as well as tyranny, poor economic opportunities as well as systemic social deprivation, neglect of public facilities as well as intolerance.”

Todaro and Smith (2006) define development as a multi-dimensional process involving economic growth as well as changes in socio-economic structure of an economy, eradication of absolute poverty reduction of inequality. Modernisation, Globalisation, New World Order, are many terms which are used to refer to the development process.

I. Sustainability - Economic and Social and Environmental : Sustainability means a capacity to maintain some entity, outcome or process over time (Basiago, 1999). In Development Economics, sustainability refers to the objective of improving and ‘sustaining’ over time a system of human development which is healthy both in socio-economic terms and its ecological impact. Sustainability is “use of the biosphere by present generations while maintaining its potential yield (benefit) for future generations”. (OCED 1997)

Sustainability thus implies developing an approach to sustain life and support the planet not only for satisfying the needs of the current generation but also the future through aneco system which controls the socio-economic activities across the nations. Sustainability in the development process implies ensuring that the policies of the nations are environmentally and economically sustainable, equitable and do not constraint the economy by negative environmental impacts.

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Sustainability stands on three conceptual pillars – ‘economic sustainability’, ‘social sustainability’, and ‘environmental sustainability’.

Economic Sustainability - With rapid growth of population, demand for food, clothing, housing have increased and the natural resources available cannot be increased to meet these demands forever. Further economic growth has many negative impacts on the economy or ‘costs’ like of natural resources, pollution and consequent climate change, depletion of Ozone layer, diminishing ice levels, and increasing concentrations of greenhouse gases etc. These negative effects on the environment should not be ignored to meet increasing demand for goods and services. Economic sustainability, requires use of policies like pollution control, use of renewable energy resources, equitable distribution and inclusion. Thus economic sustainability involves decision-making for growth with minimum harmful environmental trade-offs which have been witnessed in the past few decades.

Social Sustainability – Is a development process which focuses on policies of poverty alleviation and equity, empowerment, accessibility, equal participation. “Social sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life” (Barron and Gauntlett 2002). Social Sustainability can be achieved only when the policies’ adopted for poverty alleviation do not do so through unwarranted environmental destruction, wastage of limited natural resources or economic instability. Social sustainability is about inclusive societies where citizens. Social sustainability is also about expanding opportunities for all people today and tomorrow. The WACOSS states that, “Social Sustainability occurs when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and liveable communities. Socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life” (WACOSS, 2002)

Environmental Sustainability focuses on the natural environment and how to ensure that it remains productive for the future generation. The consequences of exponential industrial growth and energy use are clearly visible in the form of pollution, deforestation, climate change, global warming etc. Environmental sustainability aims at reversing these effects and preventing further damage to ensure a healthy Earth. According to OCED, environmental sustainability must aim that “natural resources continue to provide the resources and environmental services on which well-being relies”. (OECD, 2013a).

Barbier (1987) first represented the above three sustainability pillars as being interlined and interdependent through a Venn Diagram, as is shown in Fig.1. below:

Figure I: Three Pillars of Sustainable Development



Source: Barbier, Edward B. and Burgess, Joanne C., “ The Sustainable Development Goals and the Systems Approach to Sustainability”, *Economics*, Vol.11, no. 1, 2017

Thus, sustainability targets at the policies and models of social, economic and environmental growth and development which integrate within themselves the ecological integrity, human dignity and wellbeing i.e. sustainable development.

II. From Sustainable Development to Sustainable Development Goals

The Earth has a limited supply of resources and they have to be used judiciously so that the future generations are not at risk. It is important to understand and develop a mutual relationship between progress and nature. Progress cannot and should not be achieved by endangering the natural systems that support life on earth. Mahatma Gandhi had said “Earth provides enough to satisfy their needs but not any men’s greed.” This thought has emerged today in Economics as the concept of ‘Sustainable Development’.

The Brundtland Commission Report defines it SD as ‘development that meets the needs of the present, without compromising the ability of future generations to meet their own needs’ (Brundtland et al. 1987). Development policies in all countries today accept this definition and are committed to developing a mechanism which will ensure SD. The policy makers are committed to formulate the policies for improving standard of living, removing hunger and poverty alleviation without endangering the ecosystem of the planet and with minimum environmental challenges which result due to urbanisation and industrialisation such as climate change, extinction of species, air and water pollution, deforestation.

The Brundtland Report, entitled “Our Common Future” in 1987 by The World Commission on Environment and Development, raised the call for Sustainable Development and this led to the Rio Earth Summit 1992 by UNCED. In its Principle 4 it stated, “In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.” The key issues of the report were presented in Agenda 21 (Worster, 1993) which recommended that SD should be addressed to in all social, economic and environmental strategies across the globe. Strategies should be designed and developed to address economic, social and environmental aspects of sustainable development. OECD emphasised the need to better understand the “complex synergies and trade-offs” between the “three dimensions” of sustainable development. (OECD 2000).

The millennium declaration at the United Nations Millennium Summit in 2000 declared eight Millennium Development Goals MDG, of which the seventh goal was ‘Ensure environmental Sustainability’ and stated its Target 7.A. as “Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources”. This led to many good environmental practices being adopted for achieving developmental goals like the concept of “Green Economy”.

The World Summit on Sustainable Development (WSSD) in Johannesburg, in 2002, also known as Rio+10, reviewed the extent to which the Rio Summit 1992 outcomes were being implemented and developed a plan for implementation of Agenda 21. The report of the 2002 Earth Summit prescribed the need to “promote the integration of the three components of sustainable development—economic development, social development and environmental protection—as interdependent and mutually reinforcing pillars” (UN 2002). In 2012, Rio+ 20 i.e. United Nations Conference on Sustainable Development (UNCSD) the report ‘The Future We Want’ focused on the process for developing new SDGs, to ensure action on SD in global development policies.

In 2013, OCED stated that “Reconciling development with environmental protection and sustainable resource management is broadly agreed as a central concern for the post-2015 development agenda”. (OECD, 2013a).

III. The Sustainable Development Goals

The UN General Assembly adopted the finalised SDGs in 2015. It stated how the goals “integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental” (UN 2015)

The eight MDGs, for a 15-year period of 2000-2015, were a historic global movement to achieve socio-economic development. However not all the targets of these goals were achieved and the UN charted a new development roadmap, the 2030 Agenda (SDGs), to end poverty, promote wellbeing of people and protect the environment.

Table I - The 17 Sustainable Development Goals and their Sustainability Pillar

1.	No Poverty: End poverty in all its forms, everywhere (Economic Sustainability)
2.	Zero Hunger: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. (Economic Sustainability)
3.	Good Health and Well Being: Ensure healthy lives and promote well-being for all at all ages. (Economic Sustainability)
4.	Quality Education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. (Social Sustainability)
5.	Gender Equality: Achieve gender equality and empower all women and girls. (Social Sustainability)
6.	Clean Water and Sanitation: Ensure available and sustainable management of water and sanitation for all. (Economic Sustainability)
7.	Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all. (Economic Sustainability)
8.	Good Jobs and Economic Growth: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. (Economic Sustainability)
9.	Industry, Innovation and Infrastructure: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. (Economic Sustainability)
10.	Reduced Inequalities: Reduce inequality within and among countries. (Social Sustainability)
11.	Sustainable Cities and Communities: Make cities and human settlements inclusive, safe, resilient and sustainable. (Environment Sustainability)
12.	Responsible Consumption and Production: Ensure sustainable consumption and production patterns. (Environment Sustainability)
13.	Climate Action: Take urgent action to combat climate change and its impacts. (Environment Sustainability)
14.	Life Below Water: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. (Environment Sustainability)
15.	Life on Land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. (Environment Sustainability)
16.	Peace, Justice and Strong Institutions: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17.	Partnerships for the Goals: Strengthen the means of implementation and revitalise the global partnership for sustainable development.

Source: UN (2015) *Transforming our world: the 2030 Agenda for sustainable development. Resolution adopted by the general assembly on 25 September 2015 (A/RES/70/1)*. United Nations, New York <https://sdgs.un.org/2030agenda>

The 169 targets in these the 17 SDGs are evenly spread and balanced across the three dimensions of sustainable development. The ‘means of implementation’ of the SDGS – mobilisation of finance, capacity-building, transfer of data and technology have also been discussed for each goal. The resolution has also developed a Global Indicator Framework of 243 indicators for evaluating the progress of SDGs at global, national and regional levels.

IV. Environmental Sustainability Dimensions of Sustainable Development Goals

Environment was made an integral part of all SDGs directly because the discussions across the globe in the last fifty years reached the same conclusions, (UNEP 2013)

- “Environment is a prerequisite for socio-economic development....
- Human health and wellbeing depends on good environmental quality.....
- The integrity of the environment is important in itself because nature has educational, cultural, recreational, aesthetic, religious, spiritual and other intrinsic values.”

Studies revealed that the steady depletion of natural resources, green gas emissions, air and water pollution, deforestation and global warming are due to the rapid agricultural and industrial expansion for economic development. It was concluded that the wellbeing of the people and for the future generation cannot be achieved by sacrificing the ecosystem’s balance.

UNEP 2013, Discussion Paper- Embedding the Environment in Sustainable Development Goals, UNEP 2013 on the above issue of integrating environment with socio-economic development. Its criterion II states, “Goals and targets should be formulated to promote the decoupling of socioeconomic development from unsustainable depletion of resources and increasing environmental impact.”

The framework presented six criteria for this as shown in table II

Table II: Criteria for Embedding Environmental Sustainability in SDGs.

Criterion 1. Strong linkage with developmental goals
Criterion 2. Decoupling of socio-economic development from escalating resource use and environmental degradation.
Criterion 3. Coverage of critical issues of environmental sustainability such as important irreversible changes in the global environment.
Criterion 4. Take into account current global environmental goals and targets.
Criterion 5. Scientifically credible and verifiable.
Criterion 6. Progress must be “trackable”..

Source: UNEP (2013). Embedding the Environment in Sustainable Development Goals. UNEP Post-2015 Discussion Paper 1

All the SDGs have a set of complementary ‘integrated’ targets related to the three pillars of sustainability. They have been defined and it has been ensured that clearly and are measurable. The framework concludes that the idea of balancing the economic and environmental issues “conveys the message that environmental sustainability and investing in environmental goods and services provides a foundation for socio-economic development.”

Since the adoption of SDGs, annual reports from all nations provide an insight into the efforts being undertaken and the progress.

Conclusion : The SDGs have outlined the path of global partnership for sustainable development and have succeeded in aim of the UN Conference on Environment and Development Rio de Janeiro 1992 of integration of environment and development concerns. All nations are committed to achieve the goals and are making progress in this direction.

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Effect of Plyometric Training on Motor Abilities of Volleyball Players of Intercollegiate Level

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Abstract

The purpose of this study was to investigate the effect of plyometric training on the selected motor abilities of Bachelor of Physical Education student volleyball players. Thirty male volleyball players of intercollegiate level of R.MV Paithani, Pauri, Garhwal were selected as subjects for the study. The age of subjects varied between 21 to 25 years. The subjects were assigned to two groups: one experimental group and another control group, each consisting of 15 subjects. Selected motor variables were speed, leg strength, movement speed, agility. Results were that the plyometric training programme was adequate to produce significant development in the following variables: vertical jump, movement speed, flexibility, and agility. In case of control group it may be due to their non-participation in the training programme. In the experimental group there was no improvement in one variable i.e. speed (50 Mts. Dash). The reason may be that speed is a less trainable factor. Hence in a short duration of training programme no improvement can take place.

Key Words: *Plyometric training, Speed, Leg strength, Movement speed, Agility, etc.*

Introduction

Volleyball, which is an excellent around team sport, has been widely accepted as a highly competition as well as a recreational game throughout the world. It is now recognized as one of the most breath taking and dramatic sports of the Olympics both from the players and spectators view point. The game of volleyball offers opportunities for the development of strength, endurance, speed, agility, and neuromuscular skills and immediate action along with many precise educational outcomes. The game of volleyball requires a conditioning programme, which develops flexibility, muscular strength, power, and agility all of which must be integrated to achieve the optimum skill performance from each player.

Sports training are a process of athletics improvement, which is organized on the basis of scientific principles through systematic development of mental and physical efficiency, capacity and motivation to enable the athletes to produce outstanding and records breaking athletic performances. The athlete personality develops in accordance with the norms and standards of the society through a positive and conscious approach to the problem arising in the course of training.

Plyometric (plyo-more or greater; metric-measured or quantity) exercise is based upon the belief that a rapid lengthening of a muscles just prior to the contraction will result in a much stronger contraction. Plyometric training may be viewed as an extension of the "shock" method of strengthening muscles for athletic performance. The shock method consisted of rebounded jumps from a height to develop the reactive neuro-muscular apparatus of the athlete. Origin of term 'plyometrics' is derived from word plye theyeein which means to increase or from the Greek word 'Plio' and metric' which means 'more' and

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measure' respectively. Other terms used in conjunction with plyometric are depth jumping box jumping and jump training(Verkhoshanski, 1968).

Selection of Subjects

Thirty male Bachelor of Physical Education students who played volleyball at intercollegiate level of Raath Mahavidyalaya, Paithani, Garhwal were selected as subjects for the study. The age of subjects varied between 21 to 25 years, all the subjects were residents of the institute having similar routine, diet work rest, sleep, etc. the subjects were assigned to two group one experimental group and another was control group each consisted of 15 subjects.

Experimental Design

Random group design was adopted for this study. The subjects were randomly divided in two groups, one experimental and one controlled group, consisting of 10 subjects each.

Collection of Data

The data was collected by administering the following test items-

Variables	Test	Scoring/Unit
Leg strength	Vertical jump	Centimeter
Speed	50 yards Dash	1/100 th of second
Movement speed	Nelson hand recreation test	5/1000 of second
Flexibility	Shoulder and wrist Elevation	Best lift of two trials is subtracted from your arm length
Agility	Shuttle Run(4x10 Mts.)	1/100 th of a second

These test items were conducted on the track of Raath Mahavidyalaya Paithani Garhwal. The pre and post test data were collected prior and after the competition of experimental period of 6 weeks. The test used in the collection of data was explained to the subjects prior to the administration of the test. The subjects were given a chance to practice the test, so as to make them familiar with the test.

Administration of Plyometric Training Programmes

The experimental group was given a systematic and progressive programme of plyometric training whereas the control group followed the daily routine. The training schedule prescribed by the researcher was applied on the experimental group and training was personally supervised by the researcher with the help of B.P.Ed students. The training was carried out for 6 weeks. The subjects trained thrice a week i.e. Monday, Wednesday, and Friday.

Monday	Wednesday	Friday
Floor or jumping Exercise	Bench Exercises	Stair Exercises
Straight jump	Both leg Hop	Both leg Hop
Jumping Jack	Side Hop	Single leg Hop
Both leg Hop	One leg hop	Step up
Single leg Hop	Both leg bounce hop	face left side
Hanuman jump	Zig-zag hop	Face right side

Statistical Procedure

The analysis of co- variance (ANCOVA) is used at 0.05 level of significance for study the effect of Plyometric exercises on selected motor abilities of intercollegiate level male volleyball players.

Findings of The Study

The findings of the selected motor abilities i.e. leg strength, speed, endurance, movement speed, flexibility and agility are as follows.

Vertical jumps: -In order to find the significant was difference among the group on vertical jumps performance, analysis of covariance was applied. The result pertaining it are given in Table 1.

Table -1
Analysis of Co- Variance of the Score Means of Experimental Group and the Control group in Vertical jumps Performance

	Groups		Source of variance	Sum of square	df	Mean sum of square	F-Ratio
	Experimental	Control					
Pre test means	2.261	2.272	Among	.0006	1	.0006	.081
			Within	.1821	28	.008	
Post test means	2.312	2.367	Among	.014	1	.016	1.431
			within	.252	28	.013	
Adjusted means	2.332	2.363	Among	.012	1	.011	8.132*
			Within	.026	27	.001	

Significant at .05 level, $F_{.05} (1,27) = 4.23$

The analysis of covariance for vertical jumps indicated that the obtained F- ratio in case of pre test means was 0.081 which was found insignificant where obtain F-value 8.132 is significantly higher than the table value 4.23 value at 0.05 level of significance.

Table-1 shows that there was no significant difference existing between pre-test means and post test means as the calculated F-ratio .081 and 1.431 respectively were less than tabulated F-ratio at 0.05 level of significance. Where as in case of adjusted means there was significant difference found as calculated F-ratio 8.132 greater than tabulated F-ratio 4.23 at 0.05 level of significance.

Table-2
Analysis of Covariance of the Score means of Experimental group and the control Group in 50 meter Dash performance

	Groups		Source of variance	Sum of square	df	Mean sum of square	F-Ratio
	Experimental	Control					
Pre test means	5.349	5.954	Among	0.143	1	0.158	0.875
			Within	0.934	28	0.125	
Post test means	5.977	5.959	Among	0.012	1	4.373	0.174
			within	0.984	28	6.321	
Adjusted means	5.163	5.957	Among	2.361	1	2.395	5.376*
			Within	5.837	27	5.734	

Significant at .05 level, $F_{.05}(1,27) = 4.23$

50 meter Dash:-In order to find the significant as difference among the group on 50 meter dash performance analysis of covariance was applied. The result pertaining to it are given in Table-2 reveals that there was no significant difference between pre test means, post test means and adjusted means as the calculated F-ratio .875, .174 and 5.36 respectively were less than tabulated F-ratio 4.23 and 5.376 (adjusted means)at 0.05 level of significance.

Movement Speed: - In order to find the significant differences among the group on reaction time performance, analysis of covariance was applied. The results pertaining to it are given in table-3.

Table-3
Analysis of Co-Variance of the score means of Experimental group and the and the control group in movement speed performance

	Groups		Source of variance	Sum of square	df	Mean sum of square	F-Ratio
	Experimental	Control					
Pre test means	3.934	3.820	Among	0.432	1	0.5211	0.948
			Within	7.875	28	0.563	
Post test means	2.794	3.3211	Among	0.920	1	0.942	2.143
			within	8.914	28	0.425	
Adjusted means	2.934	3.882	Among	1.927	1	1.928	9.653*
			Within	3.147	27	0.262	

Significant at .05 level $F_{.05}(1,27) = 4.23$

The analysis of covariance for movement speed indicated that the obtained F-ratio in case of pre- test, post-test mean was .913 which was found insignificant at 0.05 level of significance where obtained F-ratio is higher than the value require f- 4.25 To be significant at .05 level of significance.

Table-3 reveals that there was no significant difference existing between pre-test, means and post test means as the calculated F-ratio 0.948 and 2.143 respectively were less than tabulated F-ratio 4.23 at 0.05 level of significance. Where in case adjusted means there was significant difference found as the calculated F-ratio 9.653 was greater than tabulated F-ratio 4.23 at 0.05 level of significance.

Shoulder and Wrist Elevation –In order to find the significant difference among the group on shoulder and wrist elevation performance, analysis of covariance was applied. The results pertaining to it are given in Table-4.

Table-4
Analysis of Co-variance of the score means of experimental group and the control group in shoulder and wrist elevation performance.

	Groups		Source of variance	Sum of square	df	Mean sum of square	F-Ratio
	Experimental	Control					
Pre test means	24.273	21.453	Among	64.761	1	65.810	5.196
			Within	261.10	28	15.564	
Post test means	42.300	22.716	Among	523.12	1	533.263	27.572*
			within	364.46	28	21.333	
Adjusted means	33.324	32.685	Among	146.84	1	146.841	44.651*
			Within	71.17	27	4.692	

Significant at .05 level, $F_{.05} (1,27) = 4.23$

The analysis covariance for shoulder and wrist elevation indicated that the obtained F-ratio in case of pre test and post test mean was 5.196 which was found insignificant at 0.05 level of significance were obtained F-ratio is higher than the value required $F = 4.23$ to be significant at .05 level of significance

Table-4 show that there was no significant difference found between pre test mean as the calculated F-ratio 5.196 was less than tabulated F-ratio 4.23 at 0.05 level of significance. Where in case of post test mean and adjusted mean there was significant difference as the calculated F-ratio 27.572 and 44.651 respectively were more than tabulated F-ratio 4.23 and 4.45 at 0.05 level of significance.

Shuttle run – in order to find the significant difference among the group on shuttle run performance, analysis of covariance was applied. The results pertaining in table-5.

Table-5
Analysis of Co-variance of the score means of experimental Group and the control group in shuttle run performance

	Groups		Source of variance	Sum of square	df	Mean sum of square	F-Ratio
	experimental	Control					
Pre test means	14.163	12.174	Among	0.991	1	0.993	3.679
			Within	7.324	28	0.566	
Post test means	14.535	14.708	Among	0.187	1	0.253	0.579
			within	6.592	28	0.273	
Adjusted means	13.397	13.834	Among	0.992	1	0.932	10.828*
			Within	1.987	27	0.199	

Significant at .05 level, $F_{.05} (1,27) = 4.23$

The analysis for shuttle run indicates that the obtained f-ratio in case of pretest means 3.679 which was found significant at 0.05 level of significant, where obtained f-ratio is higher than the value required $f = 4.275$ to be significant at 0.05 level of significance

Table -5 show that there was no significant difference exists between pre test means post test means as the calculated f-ratio 3.679 and 0.579 respectively were last than tabulated f-ratio 4.41 at 0.05 level of significance.

Where in case of adjusted means there was significant diff. found as the calculated f-ratio 10.828 was greater than tabulated f-ratio 4.23 at 0.05 level of significance.

Discussion of Findings

The raw data was computed and analysis of con=variance was applied which showed that the plyometric training improved significantly in the selected motor abilities of volleyball players excepting the speed endurance ability. The reason for better performance in experimental group may be due to the continuous participation in training and the load which was experienced by subjects in the training programme was adequate to produce significant development in the following variables i.e. vertical jump, movement speed, flexibility and agility. In case of control group it may be due to their non-participation in the training programme. In the experimental group there was no improvement in one variable i.e. speed (50 Mts. Dash). The reason may be that speed is less trainable factor; hence in a short duration of training programme no improvement can take place. Plyometric training is used at the latest methodology for developing the motor abilities. The activity which activates the stretch mechanism affects the body and come under the category of plyometric exercise.

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Advantages of Digital Marketing : A Paradigm Shift

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Abstract :

In this world of conversion, digital selling could be a vogue that's sweeping across the full world. The trend of digital selling is growing day by day with the ideas of net selling that's turning into a very important platform of digital selling together with the electronic gadgets just like the digital billboards, mobile, tablets and good phones, gambling consoles, and plenty of such gadgets that facilitate in digital selling. Flipkart with its innovative digital selling have created a distinct segment market in on-line stores competency with the traditional stores showing the facility of on-line selling. The case study analyses however Flipkart.com has brought in associate array digital and on-line selling methods to succeed and build it massive within the digital selling sector. The case conjointly discusses however Flipkart has had an enormous success within the on-line selling sector as they brought in new insights into the digital selling field. And some years from currently it'll be eventually seen that the traditional selling being replaced by digital selling. Digital selling goes to be prime on the agenda of the many marketers, and that they could be trying to find innovative ways in which to promote on-line, cut back value per lead, increase click-through rates and conversion rates, and see what's hot in digital selling.

Key Words : Digital Marketing, Electronics, Internet

Introduction

The importance of social media has been understood by most of the large corporates and MNC's, P&G the worlds largest advertiser has been increasing its budget by 28% over 2 years, but sales have not kept place, its now turning towards digital and social media campaigns like google and facebook where they expect the returns to be more efficient. Every Unilever manager remotely associated with the brand, studies online social media. Nearly a 5th of Maruti Suzuki's leads are seeded by digital marketing leads. P&G India is hiring commodity managers for social media marketing. A slow revolution is making a paradigm shift in the marketing scenario, from traditional marketing to social marketing, a growing percentage of funds are being sliced out of the budget and moving towards digital space. Companies like, HUL, P&G, Vodafone, Cadbury Kraft and the UB group are looking closely at cost effective and base to connect digitally with the consumers. Internet selling has become additional and additional standard today among businesses round the world. Once discovering the big selection advantages of net selling in promoting product and services on-line, it's presently become the leading medium for selling everywhere the planet. Unlike mass selling, that effectively piques the interest of the native audience by suggests that of radio spots, newspapers and medium, net selling permits corporations to nurture a additional relationship with their shoppers from everywhere the planet. With net selling, businesses will deliver content to their customers through customized and cost-efficient communication. With all the advantages that net selling offers your business, developing knowledgeable net selling campaign will attract additional customers to your product or whole to grow your business additional.

Objectives of The Study

1. To study about overview of digital marketing industry in India

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2. To study about the digital marketing advantages
3. To study the benefits of online marketing services

Methodology

1. Analysis sort: Descriptive analysis
2. Information assortment Technique: Secondary information collected through leading journals, reviews, book chapters etc.

Literature Review

Walters (2008) performed an in depth study on the ways in which during which net will facilitate a company in a very range of activities starting from development of recent business models, assessing and selecting the foremost applicable distribution channels, act customers and providing once sales info. any explaining results if his analysis on instrumentality of net for business organizations, Quelch and Klein (1996) United Nations agency explicit that the utilization of net is being utilized by customers to go looking and compare product and people organizations that have created their on-line presence secure, are expected to earn quite their competitors.

Hoffman (2000) rumored that net not solely affects the approach organizations style their business model, do their operations and manage the provision chain, however conjointly casts a major impact on however the product and services in today's marketplace ought to be promoted, marketed and publicized. He declared that the new technology, notably the changes within the world of net and also the ways in which organization are victimisation it, have brought a revolution within the world of net selling. By creating the web selling efforts vital significant} part of the organization's overall selling strategy works mutually of the foremost important determinants of success of the organization's selling efforts (Khalifa and Liu,2008).

Advantage In Digital Marketing**1. Convenience and fast Service**

The unimaginable convenience of selling| promoting on-line is one in every of the most important benefits of web marketing. The web has extraordinarily simple accessibility with shopper's victimization the web and reaching markets anyplace within the world. Thanks to this, getting merchandise from across borders currently reduces the price of transportation. For importers, this can be a large advantage because it suggests that they will order on- line right from the comforts of their home. Additionally, you'll simply track sales things on-line as they create their approach into delivery. You'll transfer digital product from the web with simply a click of a mouse. Web selling is nice for business because it offers shoppers a stronger and easier searching expertise.

2. Low price For Operations

One of the most benefits of on-line selling for businesses is its low overhead. You'll advertise cheaper with web selling than with ancient strategies of advertisement like ads in newspapers, on TV and on the radio. In on-line selling, you'll simply get a free listing during a wide selection of business directories. In addition, the web permits you to contact your customers additional as compared to however you'd contact them historically. On-line communication is more cost-effective than ancient communication strategies like causation mail and printing brochures. As an example, you'll send the identical data in associate email instead of a mail-out, saving you on printing, paper, and postage.

3. Live and Track Results

An aspect of web selling that's seldom out there with ancient selling is that the ability to live and track results. With on-line selling, your business will utilize variable tools for pursuit results of your advertising campaigns. Victimisation these tools, not solely are you

able to live and track however conjointly illustrate the progress of your selling campaign in elaborate graphics. Measuring and pursuit results offer your business a stronger plan of however your selling campaign is faring. It offers you a thought of however you'll higher grow your traffic, leads, sales, and conversions. While not the power to live and track your results, cannot alter or modify your selling campaign in order that it can higher deliver the results you want.

4. Demographic Targeting

Marketing your product and services on-line offers you the power to focus on audience supported human ecology. This enables you to concentrate your efforts on the audience that you simply really need to supply your product or services. With demographic targeting, you'll higher target your selling efforts on specific demographic regions. Demographic targeting offers you the power to focus on specific customers you think that are seemingly to buy your product or rent your services. whenever somebody visits your web site and fills during a type, it offers you a thought of United Nations agency your customers very are and enables you to discover vital details regarding them like age and interests, that higher shapes your services to match their desires.

5. World selling

The ability to promote your product and services globally is one in every of the most important benefits of worldwide selling for business. Among many months of aggressive SEO, you'll secure several viewers and reach large audiences from across the planet. With web selling, you'll simply reach on the far side your earth science to supply your product or services to customers worldwide. Where your target audiences are, you'll simply reach them 24/7 and from any country everywhere the planet. If your audience consists of over your native market, utilizing world selling offers you a good advantage.

6. Ability to Multitask

One of the core advantages of on-line selling is its ability to handling several customers at the identical time. As long as a website's infrastructure is economical, varied transactions will simply occur at the same time. However, even with an oversized variety of transactions happening, your web site is capable of providing satisfactory service to each client United Nations agency makes a sale on- line, while not the chance of diminished satisfaction. This high ability of web selling is a crucial profit that companies will cash in of to produce their shoppers the most effective searching expertise.

7. 24/7 selling

Internet selling reduces price and runs round the clock. This means that you're selling campaigns last twenty four hours every day, seven days per week Compared to ancient selling, web selling doesn't constrain you with gap hours. At the identical time, you'd not be worrying regarding overtime acquires your workers. In addition to the present, there's no regional or international time distinction for you to stress this can have an effect on the reach ability or handiness of your offers or on-line campaigns. Whenever somebody opens their laptop and connects to the web, there's the next probability of them seeing your selling campaign. Moreover, customers will search for your product at their most convenient time.

8. Automated, Tech-Savvy selling

Another advantage of web selling is that selling this manner is straightforward with a one-mouse-click automation. Compared to ancient offline selling wherever marketers delegate numerous tasks to the most effective hands and abilities, web selling takes advantage of a additional tech-savvy methodology. With web selling, everything will go machine-controlled. Internet selling offers you the possibility to show each side of your business's

operations into a completely machine-controlled system. All you would like to try and do is locate the correct tool and technology suited to your selling campaign and you're done. By automating your selling campaign, you'll prefer to do one thing more valuable along with your time.

9. Knowledge assortment For Personalization

Transactions through the web permit you to gather knowledge. Whenever a client purchases a product through a company's web site, the information is captured. Your business will use this knowledge in variable ways that. Most businesses analyze the information to search out what product and/or services sell of times. Furthermore, the information collected will facilitate phase customers, therefore your business will send them ads and alternative promotional materials supported their shopping for habits and interests. There are numerous ways in which you'll collect client knowledge together with client profiles or through their behavior whereas on your web site. The information collected through this methodology usually includes age, gender, and location, however they came to your website, what sites they visited once they left, viewed product and also the pages visited on your website. Another way of grouping client knowledge is that the use of web tools or with pursuit code. Compared to ancient selling, on-line selling permits for higher knowledge assortment likewise as personalization. Through this advantage of web selling, businesses will serve several customers with numerous things and product supported their personal interests. Thus, shoppers will simply get their desired product while not having to comb through the web all day.

10. Heterogeneous selling And Advertising

When targeting your audience, diversification plays a crucial role in your selling and advertising campaigns. Diversification means you'll use a spread of ways and methods so as to succeed in your prospects. With on-line selling, diversification becomes lots easier. Additionally to it, it's doable for you to run variable selling techniques at the same time to higher implement your selling campaign.

11. Simple Tweaking to Your selling And Advertising

Campaigns It is inevitable in selling and advertising that one thing must be tweaked so as to optimize your campaigns. Compared to ancient selling, on-line advertising is far easier to tweak. Whenever the campaign must be changed, on-line selling permits the modification to happen while not having to stress regarding period, service interruption or perhaps halting the whole system. This means that you simply will simply modification the looks of your on-line mall – your web site – by dynamical some lines within the CSS that link to the online page.

12. Instant group action Service

Executing transactions is straightforward and nearly instant on-line. You'll try this through a digital payment service in order that there's no would like for a money to travel between the seller and also the client to shop for and sell merchandise. This can be all doable because of payment process solutions dead by third party payment process firms like PayPal.

13. Higher Sales

Relationships In ancient selling, merchants typically provide their business cards or pamphlets to their customers once procurement. However, what happens is commonly on such occasions, the shoppers lose the cards or misplace it. The sole time the vendor would keep in mind regarding the cardboard was if they'd the intention of visiting the vendor once more. In the end, most customers don't keep in mind the vendor abundant less the cardboard, therefore this selling methodology doesn't work to convert consumers to come. Will be

completely different with web selling wherever the marketers can simply collect email addresses of their prospects and consumers that they will use in reaching out and forming a relationship with the client. The seller will use this email address to produce customers with valuable data like data regarding the purchased product, out there coupons on their product and services, special discounts and introducing new product. except for email addresses, they will conjointly use social media for consistent interaction with customers.

14. Time-Effective selling

Unlike ancient selling, web selling is straightforward to begin and fast to implement. You'll simply found a selling campaign at any time that's convenient for you. In fact, you'll founded email selling for your business among solely a matter of hours. Among the subsequent jiffy, you'll setup associate automotive vehicle communicator and make a selling list for your business.

Conclusion

The conclusion of digital selling has currently become a hot topic for discussion. Trendy technology has modified lots. Besides the expansion of recent technology, the technique of companies has conjointly modified. During this regard, digital selling involves take the leading position. Trendy generation doesn't need to travel to any search or mall to shop for something. They need to shop for everything on-line. So, the varied firms forever try and keep connected with their shoppers or customers via the web. to urge the most effective of it, shoppers and marketers should apprehend the advantage of digital selling. If you are doing not apprehend the advantages and harmful sides, then you won't get the complete advantage of digital selling.

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Relationship between Attitude & Aggression among Female Basketball Players

*Dr. Sarita Yadav**

The aim of present study was to investigate the relationship between attitude and aggression among inter-collegiate and inter-university level Female Basketball Players. The sample consisted of 50 Female Basketball players, who participated in the inter-collegiate and inter-university tournaments. The age range of samples was between 18 to 25 years. Sodhi Attitude Scale (SAS) and Smith's Aggressive Questionnaire were used for the purpose of data collection. Pearson's Product Moment Correlation Test was employed to find out the relationship between attitude and aggression among inter-collegiate and inter-university level Female Basketball Players and a descriptive statistical process was applied to analyse the data.

The findings revealed that Correlation coefficient 'r' between Attitude and the Sports Competition Anxiety for Female Basketball players is '0.96'. It was concluded that the relationship between attitude and aggression was significant for Female Basketball Players.

Keywords : Attitude, Aggression, Inter-collegiate, Inter-University tournaments and Pearson's Product Moment Correlation.

Introduction:

It is generally recognized that psychological factors are of crucial importance in high-level competitive sports. An attitude is defined by **Eagly and Chaiken** as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. **Jung** defined an attitude as "readiness of the psyche to act or react in a certain way". It comes in pairs: one conscious and other unconscious. As for as components of attitude are concerned, according to **William J. McGuire**, it contains many components such as cognitive, affective and behavioral. Attitude is defined as a tendency to react in certain way towards a designated class of stimuli or an object. Attitude of a person is degree of like and dislike for something and it may be positive and negative. A person may have possessed positive and negative attitude simultaneously towards the item in a problem. Attitude is a judgment which develops on affect, behaviour and cognition.

Aggression is behaviour or a disposition that is forceful, hostile or attacking. It may occur either in retaliation or without provocation. In narrower definitions that are used in social sciences and behavioral science, aggression is an intention to cause harm or an act intended to increase relative social dominance. Predatory or defensive behaviour between members of different species may not be considered aggression in the same sense. Aggression can take a variety of forms and can be physical or be communicated verbally or non-verbally. Aggression differs from what is commonly called assertiveness.

Like the general people, aggression is very common among sportsperson also. Physical offensive action against others is defined as aggression by **Barimani (2009)**. Aggression can be shown by using offensive words which are motivated to do psychological damage to others. Aggressive behaviour used by an individual or a player with the intention either to harm others or opponents or to prevent oneself from being harmed.

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Basketball is a complex and poly-structural activity (Drinkwater, Pyne & Mckenna, 2008); it means that participation in basketball has multiple influences on player's body. Psychological factors play an even more decisive role in a competition, differentiating between successful and less successful teams. The purpose of the present study was to find relationship between Attitude and Competitive Sports anxiety of among Female Basketball Players.

Methodology:

The sample of the study consisted of 50 female basketball players, who participated in the inter-collegiate and inter-university tournaments. The age range of samples was between 18 to 25 years. For this purpose, list of students who represented inter-collegiate and inter-university tournaments was prepared and from these players subjects (50 female) were selected using method of purposive sampling. In order to ensure the full co-operation from the subjects, the researcher had a meeting with them in presence of their coach/managers. The purpose of this study was made clear by giving a detailed explanation in order to ascertain that there was no ambiguity among the subjects regarding the efforts, which they had to put in the successful completion of the investigation.

All subjects voluntarily agreed to extend full cooperation and coaches/managers ensured that the subjects were made available for collection of data.

Data collection:

The age range of samples was between 18 to 25 years. Attitude has been assessed by using **Sodhi Attitude Scale (SAS)**. This test was constructed by G.S. Sodhi. The questionnaire is consisted of five parts first part consist of 12 questions, second part consist of 10 questions, third part consist of 19 questions, fourth part consist of 10 questions and fifth part consist of 20 questions total there are 71 questions in the questionnaire. The subjects have to give response in 'yes' or 'no' and if the value given in the scoring is positive and the response is 'yes' give +1 and if 'no' give -1 if marked '?' give 0. Conversely if the value shown for an item on the scoring key is negative and the subject has responded 'yes' give him -1 and if 'no' give him +1 and if '?' give him 0 in the case too. Score of all the five scale will be added and the final score will be obtained. The higher the score the more attitude is seen.

Aggression has been assessed using **Smith's Aggressive Questionnaire**. This test was developed by Smith. This test consists of four questions and each question has five levels of responses. The level changes from strongly disagree to strongly agree. The respondents were made to en circle the appropriate number which suited their attitude. The test was scored with the help of the scoring key that is '1' marks for strongly disagree, '2' marks for disagree, 3 marks for undecided, 4 marks for agree and 5 marks for strongly agree. The total range of score was from 4 to 20. The higher the score, the more aggressive the player is.

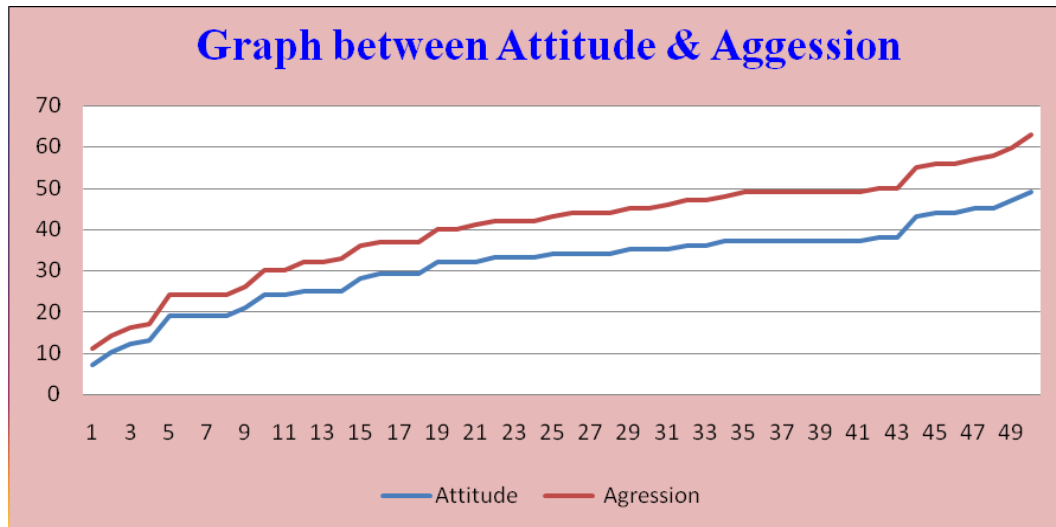
Statistical Analysis:

Relationship between Attitude & Aggression of female Basketball players were determined by using Product Moment Coefficient Test. The scores obtained as responses in questionnaire from Female Basketball Players were correlated and the data pertaining to this has been presented in the following table-

Table: Relationship between Attitude and Competitive Sport Anxiety of female Basketball players

Variable	SD	Covariance	r (Coefficient of Correlation)
Attitude	31.50	26.70	0.96
Aggression	9.2		

Graph



Results:

The results of analysis of this study reveals that correlation coefficient between Attitude & Aggression for Female Basketball players was 0.96, which is positive relationship of strong strength. The value of coefficient of correlation shows that the relationship between Attitude & Aggression was significant for Female Basketball players.

Conclusions:

On the basis of findings of this study it may be concluded that relationship between Attitude & Aggression was significant for Female Basketball players. This may be due to the fact that the inter-collegiate and inter-university female Basketball players have positive attitude towards Aggression.

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Biopesticides: Scope And Challenges In India

*Dr. Pramod Kumar**

Pests and pathogens cause a major loss of agricultural produce every year. Management of these menace using chemical pesticides and fungicides has come at the cost of long term agricultural sustainability. Globally, there are about 1400 biopesticide products being sold. It is estimated that the biopesticides sector is poised to have a 5 year compound annual growth rate of 16 per cent (compared with 3% for synthetic pesticides), which is expected to produce a global market of \$3.2 billion by 2014. In India, biopesticide production is currently dominated by antagonistic fungi and bacteria such as *Trichoderma* spp. and *Pseudomonas fluorescens*, but the production of nucleopolyhedrosis viruses (NPV), granuloviruses (GV), and entomopathogenic fungi are also established and expanding. In India, products based on four plants are registered under the Insecticides Act, 1968. These include Pyrethrum (*Chrysanthemum* sp. ex. *cinerariaefolium*, coccinium etc.), Neem (*Azadirachta indica* A.Juss), Nicotine (*Nicotiana* sp., for export only) and Citronella oil (*Cymbopogon nardus*). Many biopesticides have high levels of selectivity. Although, it is of great benefit in terms of not harming other natural enemies and wildlife, but it implies low profit potential. The features that make most of them so attractive from the standpoint of environmental and human safety also act to limit the number of markets in which they are effective.

Keywords: Biopesticides, Chemical pesticides, Scope, Challenges

Introduction

Pests and pathogens cause a major loss of agricultural produce every year. Management of these menace using chemical pesticides and fungicides has come at the cost of long term agricultural sustainability. Indiscriminate use of chemical pesticides in agriculture cause several adverse effects such as environmental pollution, ecological imbalances, pesticides residues in food, fruits and vegetables, fodder, soil and water, pest resurgence, human and animal health hazards, destruction of bio-control agents, development of resistance in pests etc. (Mensink., 2007). This non-judicious use of agrochemicals coupled with climate change worsened the situation leading to changes in pest and pathogen behaviour and development of resistance. Application of biopesticides in place of chemical pesticides is a sustainable approach for agriculture. Many microorganisms have secondary metabolites including antimicrobial peptides, volatiles, toxins and enzymes which can be used as biopesticides. Several microorganisms have been substantially utilized as biopesticides to control various phytopathogenic fungi, bacteria, nematodes and insect pests. Unlike their chemical counter parts, biopesticides aid to manage pests and pathogens without any adverse effects on soil health and environment. Microbial biopesticides developed with microorganisms like *Trichoderma*, *Beauveria*, *Metarhizium*, *Bacillus*, *Pseudomonas* are known for their role in management of pests and pathogens. Currently, about 20 microorganisms are registered as biopesticides with Central Insecticide Board and Registration Committee (CIB & RC). (Mukhopadhyay, A.N.,1992, 1994)

What Is Biopesticide?

Biopesticide is a form of pesticide based on micro-organisms or natural products"(European Union). According to the US Environmental Protection Agency (EPA), they

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"include naturally occurring substances that control pests (biochemical pesticides), microorganisms that control pests (microbial pesticides), and pesticidal substances produced by plants containing added genetic material (plant-incorporated protectants). Biopesticides belong to three categories:

- (1) Living organisms (i.e. natural enemies), which include invertebrates (e.g. predatory insects), nematodes and micro-organisms
- (2) Naturally occurring substances which include plant extracts and semiochemicals (e.g. insect pheromones)
- (3) Genetically modified plants that express introduced genes that confer protection against pests or diseases (plant incorporated products)

History Of Biopesticides In India

In India, interest on bio-pesticides begun with entomopathogenic fungi in 1910s. The insecticide resistance in cotton in 1980s led to revival of interest on baculoviruses. IPM programmes by Governments of India spurred the growth of bio-pesticides. Several universities and research institutes like G.B. Pant University of Agriculture and Technology, Pantnagar; IARI, New Delhi and Tamil Nadu Agricultural University, Coimbatore develop biopesticides for management of pests and diseases which was followed by Project Directorate of Biological Control at Bangalore(now National Bureau of Agriculturally Important Insects (NBAIL) (Mukhopadhyay, 1987). Later on Department of Biotechnology (DBT), New Delhi, Government of India established the National Biocontrol Network Programme (NBNP) in 1989 to study the management of key insect pests, diseases and weed of economically important crops such as cotton, sugarcane, oilseeds, pulses, vegetables and fruit crops. Key developments in research and development of biopesticides in India are as follows

- The DBT started a website for Bio-control strategies for eco-friendly pest management (www.dbtbiopesticides.nic.in).
- The National Agricultural Research System (NARS) plays a leading role in promoting biopesticides.
- The NBAIL is involved in testing the quality of biopesticides and training
- The National Centre for IPM routinely incorporates the use of biopesticides in its IPM validation programmes and demonstrations.
- Commodity research boards play a role in R&D of biopesticides for use in crops such as cotton, coffee, tea, and cardamom.
- The state governments play the main role in implementing IPM. Their IPM programmes for purchasing and distributing biopesticides to farmers have been vital to creating a market for and encouraging private commercial production of microbial pesticides.
- Tamil Nadu, Gujarat, Andhra Pradesh, and Maharashtra have been particularly active in promoting microbial pesticide use.
- The State Agricultural Universities are also producing biopesticides themselves and are advising companies in production.
- The Krishi Vigyan Kendras are also engaged in the promotion of local production of microbial pesticides.
- Indian companies have formed a biopesticide supplier's association, the All India Biotech Association, to co-ordinate the commercial sector's voice in developing government policy.

How To Register A Biopesticide?

OECD Guidelines

The Organization for Economic Cooperation and Development (OECD) Project on Biopesticides was initiated in 1999 to help OECD member countries harmonise the methods and approaches used to assess biological pesticides. This was to help governments work together to assess pesticide risks to man and the environment. The OECD agreed guidelines contain two formats:

1. For industry to use when making data submission (dossiers) for microbials and pheromones/semiochemicals
2. For governments to use when writing their evaluation reports.

Central Insecticide Board (CIB)

In India, biopesticides fall under the Insecticide Act (1968) under which any microbial organism manufactured or sold for pest and disease control should be registered with the Central Insecticides Board (CIB) of the Ministry of Agriculture. To promote registration, biopesticide products benefit from priority processing of registration, simplified registration procedures, and the acceptance of generic registration data for new products containing strains already registered.

Manufacturers can register their products under either 9(3B) (provisional registration) or 9(3) (regular registration). This system treats biopesticides as generally regarded as safe (GRAS) to become eligible for provisional registration. Data on product characterization, efficacy, safety, toxicology, and labeling must be submitted while applying for registration. Based on the OECD guidelines, the CIB has streamlined the guidelines and data requirements for registration as well as minimum infrastructure facilities in the manufacture of biopesticides. The CIB's established quality standards must be met, with reference to content, virulence of the organism in terms of LC50, moisture content, shelf-life, and secondary non-pathogenic microbial load. Protocols for assessing these quality parameters have been prescribed. (FAO, 2012; Chandler et al., 2011; Grieves and Grant, 2011).

Biopesticides Registered under section 9(3) of the Insecticides Act, 1968

Following Biopesticides Registered under section 9(3) of the Insecticides Act, 1968 for use in India (as on 15/10/2013). 1. *Azadirachtin* (Neem Products), 2. *Ampelomyces quisqualis*, 3. *Bacillus sphaericus*, 4. *Bacillus thuringiensis* var. israelensis, 5. *Bacillus thuringiensis* var. Kurstaki, 6. *Bacillus thuringiensis* var. Galleriae, 7. *Metarhizium anisopliae*, 8. Nuclear polyhydrosis virus of *Helicoverpa armigera*, 9. Nuclear polyhydrosis virus of *Spodoptera litura*, 10. *Pseudomonas fluorescens*, 11. Pyrethrins (pyrethrum), 12. *Trichoderma harzianum*, 13. *Trichoderma viride*, 14. *Verticillium lecanii*

Major Target Pests of Microbial Pesticides Used in India (Rabindra, 2005).

1. *Pseudomonas fluorescens* (Bacterium)-Soil borne diseases
2. *Ampelomyces quisqualis* (Fungus)-Powdery mildew
3. *Trichoderma harzianum* (Fungus)- Soil borne pathogens
4. *Trichoderma viride* (Fungus)-Soil borne pathogens
5. *Bacillus subtilis* (Bacterium)-Soil borne pathogens
6. *Bacillus thuringiensis* subsp. Israelensis (Bacterium)- Lepidopteran pests
7. *Beauveria bassiana* (Fungus)- Coffee berry borer, diamondback moth, thrips, grasshoppers, whiteflies, aphids, coding moth
8. *Metarhizium anisopliae* (Fungus)- Coleoptera and Lepidoptera, termites, mosquitoes, leafhoppers, beetles, grubs
9. *Paecilomyces fumosoroseus* (Fungus)-Whitefly

10. *Paecilomyces lilacinus* (Fungus)- Whitefly
11. *Verticillium lecanii* (Fungus)- Whitefly, coffee, green bug, homopteran pests
12. *Helicoverpa armigera* nucleopolyhedrosis virus (Virus)- *Helicoverpa armigera*
13. *Spodoptera litura* nucleopolyhedrosis virus (Virus)- *Spodoptera litura* Nematicides
14. *Verticillium chlamydosporium* (Fungus)- Nematodes

Scope of Biopesticides

Globally, there are about 1400 biopesticide products being sold. It is estimated that the biopesticides sector is poised to have a 5 year compound annual growth rate of 16 per cent (compared with 3% for synthetic pesticides), which is expected to produce a global market of \$3.2 billion by 2014. United States of America consumes maximum biopesticides (40%) of the global production followed by Europe and Oceanic Countries (20% each). Despite the promising impacts of biopesticides, the Indian biopesticide industry is growing at a very slow pace. The biopesticides accounted for approximately 0.2% during 2000 of the total global pesticides market and it increased to 4.5% by 2010. The market value is estimated to be around US\$ 1 billion. Out of total biopesticides used in India, the genus *Trichoderma* alone occupies 60% of their market share. Recent reports on *Trichoderma* and its genome from different parts of the world including India have clearly demonstrated its role as “multifunctional fungal plant symbiont” to enhance plant growth, productivity and plant disease management (Harman, 2011; Mukherjee et al., 2013). This area has tremendous potential and following advantages are conferred due to appropriate use of this technology:

- Increased seed vigour and plant growth, especially of roots and shoots
- Induction of systemic resistance against diseases and stress factors to host plants.
- Use of appropriate species/ strains of *Trichoderma* having the above attributes in addition to disease management could help formulating quality biopesticides of *Trichoderma* origin.

Biopesticide Production In India

In India, biopesticide production is currently dominated by antagonistic fungi and bacteria such as *Trichoderma* spp. and *Pseudomonas fluorescens*, but the production of nucleopolyhedrosis viruses (NPV), granuloviruses (GV), and entomopathogenic fungi are also established and expanding (Rabindra, 2005; Singh et al., 2012). In 2008, three larger private companies reported the following total production values: 187 metric tonnes (MT) of *Trichoderma harzianum*, 23 MT of *Trichoderma viride*, 15 MT of *Sendomona lecanii*, 28 MT of *Beauveria bassiana*, 30 MT of *Verticillium lecanii*, and 25 MT of *Metarhizium anisopliae*. As of early 2013, there were approximately 400 registered biopesticide active ingredients and over 1250 actively registered biopesticide products. It has been estimated that there are at least 32 commercial companies active in biopesticide production, with an additional 32 IPM centres under the Ministry of Agriculture also producing selected biocontrol agents. The state departments of agriculture and horticulture in the states of Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Uttar Pradesh and Gujarat have established biocontrol laboratories for producing selected microbial biocontrol agents. (Parmar, B.S., 2010). A few state agricultural universities and Indian Council of Agricultural Research (ICAR) institutions also produce small quantities of microbial pesticides (Rabindra, 2005). In total, at least 410 biopesticide production units have been established in India, 130 in the private sector (Singhal, 2004).

Plants Used In Bioinsecticide Production In India

In India, products based on four plants are registered under the Insecticides Act, 1968. These include Pyrethrum (*Chrysanthemum* sp. ex. *cinerariaefolium*, *coccinium* etc.), Neem

(*Azadirachta indica* A.Juss), Nicotine (*Nicotiana* sp., for export only) and Citronella oil (*Cymbopogon nardus*). Among these, neem pesticides are of maximum current interest, being in maximum demand all over the world. The remaining three plants have to be cultivated in favorable environments to obtain raw material (Ansari et.al.,2012).

Macrobials And Microbials Pesticidal Organisms

Macrobials and Microbials Pesticidal organisms are applied by inundative or inoculative means. Macrobiols include parasitoids and predators which are mass released and the Microbials such as bacteria, fungi, nematodes, protozoa, viruses, etc. are applied directly or as formulated products.

Macrobiols

Key macrobiols in use are exemplified by parasites such as *Trichogramma* and predators such as Coccinellids.

Microbials

The other potential parasitoids include *Leptomastix dactylopii*, *Copidosoma koehleri*, *Teleromus remus*, etc. and the predators *Chrysoperla carnea*, *Scymnus coccivora*, *Pharoscyms horni*, *Curinus coeruleus*, *Coccinella septempunctata*, *Cheilomenes sexmaculata*, *Chilocorus nigrita*, *Brumoides suturalis*, *Cardiastethus exiguus*, etc. Several parasitoids and predators are commercially available (*Bracon brevicornis*, *Goniozus nephantidis*, *Trichogramma chilonis* and *T. japonicum*, *Chrysoperla camea*, *Cryptolaemus montrouzieri*). Thirteen products based on bacteria (*Bacillus thuringiensis* var. *israelsensis* and *kurstaki*, *Pseudomonas fluorescens*), fungi (*Ampelomyces quisqualis*, *Beuveria bassiana*, *Metarhizium anisopliae*, *Paecilomyces lilacinus*, *Trichoderma harzianum* and *T. viride*, *Verticillium chlamydosporium* and *V. lecanii*) and virus (NPV of *Helicoverpa armigera* and *Spodoptera litura*) are registered for use in India.

Sex pheromones

Sex pheromones are available commercially for cotton bollworms, sugarcane borers, brinjal fruit / shoot borer, diamond back moth, rice yellow stem borer, rhinoceros beetle and red palm weevil.

Table: List of biopesticides developed by ICAR (Source: ICAR bulletin)

S.No.	Name of Biopesticide	Characteristic Features
1.	Shatpada Aphid Kill	Microbial Constituent: <i>Beauveria bassiana</i> ICAR-NBAIR Bb-5a (NAIMCC-F-00396), Type: Oil formulation; 1 × 10 ⁸ cfu/mL, Shelf life: 12 months at 25-35°C Target pests and crops: Aphids in chilli and brinjal (<i>Aphis gossypii</i>); cabbage (<i>Brevicoryne brassicae</i>) and cowpea (<i>Aphis craccivora</i>) Method of application: Three foliar sprays at 5 mL/L of water at 15 days interval after pest incidence; Water required for each spray: 200 L/ha Benefits: 50-83% pest reduction and 20-33% increase in yield
2.	Shatpada Rugose Whitefly Kill	Microbial Constituent: <i>Isaria fumosorosea</i> ICAR-NBAIR Pfu5 (NAIMCC-F-02139), Type: Talc; 1 × 10 ⁸ cfu/g; Oil formulation; 1 × 10 ⁸ cfu/mL, Shelf life: 12 months at 25-35°C Target pests and crops: Rugose Spiralling Whitefly (<i>Aleurodicus rugioperculatus</i>) in coconut and oil palm y

		<p>Method of application: Two-three foliar sprays at 5mL/L of water (or 5 g/L of water for talc formulation) at 15 days interval after pest incidence; Water required for each spray: 900 L/ha</p> <p>Benefits: § 70-75% pest reduction</p>
3.	Shatpada Sucking pest Hit	<p>Microbial Constituent: Lecanicillium lecanii ICAR-NBAIR V1-8 (NAIMCC-F-01851), Type: Oil formulation; 1 × 10⁸ cfu/mL, Shelf life: 12 months at 25-35°C</p> <p>Target pests and crops: Aphids in chilli (<i>Aphis gossypii</i>) and cowpea (<i>Aphis craccivora</i>)</p> <p>Method of application: Three foliar sprays at 5 mL/L of water at 15 days interval after pest incidence; Water required for each spray: 900 L/ha</p> <p>Benefits: § 75-78% pest reduction and 24-27% increase in yield</p>
4.	Shatpada Grubicide	<p>Microbial Constituent: Metarhizium anisopliae ICAR-NBAIR Ma 4 (NAIMCC-F-01296), Type: Talc formulation; 1 × 10⁸ cfu/g, Shelf life: 12 months at 25-35°C</p> <p>Target pest and crop: White grubs (<i>Holotrichia</i> spp.) in sugarcane</p> <p>Method of application: Soil application at 2.5 kg mixed with 250 kg farmyard manure per hectare. The application has to be done twice in a year during June/July and July/August at 30 days interval</p> <p>Benefits: § 75-96% pest reduction and 33-62% increase in yield</p>
5.	Shatpada Larvicide	<p>Microbial Constituent: Metarhizium anisopliae ICAR-NBAIR Ma 35(NAIMCC-F-04130), Type: Talc; 1 × 10⁸ cfu/g; Oil formulation; 1 × 10⁸ cfu/mL, Shelf life: 12 months at 25-35°C</p> <p>Target pest and crop: Fall armyworm (<i>Spodoptera frugiperda</i>) in maize</p> <p>Method of application: Three foliar sprays at 5 mL/L of water (or 5 g/L of water for talc based formulation) at 20, 30 and 40 days after sowing; Water required for each spray: 200 L/ha</p> <p>Benefits: § 33-76% reduction in plant damage and 38-53% increase in yield</p>
6.	Shatpada Armour	<p>Microbial constituent: <i>Bacillus thuringiensis</i> var. <i>Kurstaki</i> ICAR-NBAIR BT25, Type: Liquid; 1 × 10⁸ cfu/mL, Shelf life: 12 months at 25-35°C</p> <p>Target pest and crop: Fall armyworm (<i>Spodoptera frugiperda</i>) in maize</p> <p>Method of application: Two to three foliar sprays at 10 mL/L of water at 25, 35 and 45 days after sowing; Water required for each spray: 200 L/ha</p> <p>Benefits: 85-90% reduction in pest and 33-40% increase in yield</p>
7.	Shatpada Terminator	<p>Microbial constituent: <i>Bacillus thuringiensis</i> var. <i>Kurstaki</i>, ICAR-NBAIR BTG4, Type: Liquid; 1 × 10⁸ cfu/ml, Shelf life: 12 months at 25-35°C</p>

		<p>Target pests and crops: Legume pod borer (<i>Helicoverpa armigera</i>, <i>Maruca</i> sp.), diamondback moth (<i>Plutella xylostella</i>), spottedstem borer (<i>Chilo partellus</i>), rice leaf folder (<i>Cnaphalocrocismedinalis</i>), brinjal shoot borer (<i>Leucinodes orbonalis</i>) and red hairy caterpillar (<i>Amsacta albistriga</i>)</p> <p>Method of application: Two to three foliar sprays at 20 mL/L of water at pre flowering and post flowering stages; Water required for each spray: 200 L/ha</p> <p>Benefits: 83-85% reduction in pest and 19-35% increase in yield</p>
8.	Shatpada Rounder All	<p>Microbial constituent: <i>Pseudomonas fluorescens</i> NBAIR-PFDWD, Type: Talc based; 1×10^8 cfu/g, Shelf life: 12 months at 25-35°C</p> <p>Target pests and crops: Thrips spp. in capsicum and Fusarium wilt of red gram</p> <p>Method of application: Foliar application at 20 g/L of water at 20, 30, 40 and 50 days after transplanting for the management of thrips in capsicum; Water required: 200 L/ha; Soil application in the root zone during 25, 40 and 55 days after sowing at 2.5 kg/ha for management of red gram wilt; Mix 2.5 kg of formulation in 250 kg farmyard manure and apply</p> <p>Benefits: 70-90% thrips reduction; 50-60% Fusarium wilt reduction and 48-53% increase in yield</p>
9.	Shatpada Master Blaster	<p>Microbial constituent: <i>Bacillus albus</i> NBAIR-BATP, Type: Talc based; 1×10^8 cfu/g, Shelf life: 12 months at 25-35°C</p> <p>Target pests and crops: Fall armyworm (<i>Spodoptera frugiperda</i>) of maize, tomato pin worm (<i>Tuta absoluta</i>) and Fusarium wilt of cucumber (<i>Fusarium oxysporum</i> f. sp. <i>cucumerinum</i>)</p> <p>Method of application: Foliar application at 20 g/L of water at 20, 30, 40 and 50 days after sowing for management of fall armyworm of maize and tomato pin worm; Water required: 200 L/ha; Soil application in the root zone during 25, 40 and 55 days after sowing at 2.5 kg/ha for management of cucumber wilt; Mix 2.5 kg of formulation in 250 kg farmyard manure and apply</p> <p>Benefits: 70-80% Fall armyworm reduction, 80-90% tomato pin worm reduction and 45-50% Fusarium wilt reduction 26-29% increase in maize yield; 30-40% increase in tomato yield and 22-24% increase in cucumber yield</p>
10.	ICAR-FUSICONT	<p>Microbial Constituent: <i>Trichoderma reesei</i> CSR-T-3 (NAIMCC-SF-0030), Type: Wettable powder; 1×10^7 cfu/g, Shelf life: 12 months at 25-35°C</p> <p>Target pests and crops: Fusarium wilt of banana (<i>Fusarium oxysporum</i> f. sp. <i>Cubense</i> Tropical race 4 and race 1)</p> <p>Method of application: 3% of WP (w/v) in water as soil drenching at 1 L per plant 4 times (3rd, 5th, 9th and 12th month</p>

		after planting); Water required; 1500 L/ha Benefits: 85-90% reduction in disease incidence
11.	Eco-Pesticide	Microbial constituent: Pseudomonas fluorescens (NAIMCC-SB-0053), Type: Talc formulation; 1×10^8 cfu/g, Shelf life: 12 months at 25-35°C Target pests and crops: Spot blotch of wheat, sheath blight of rice and wilt of tomato and chickpea Method of Application: Seed treatment (10 g/kg seed) Benefits: 45-55% reduction in spot blotch disease of wheat, sheath blight in rice and wilt of tomato 15-25% reduction in usage of chemical pesticides
12.	Bio-Pulse	Microbial constituents: Trichoderma harzianum (NAIMCC-SF-0036) and Bacillus amyloliquefaciens (NAIMCC-SB-0052), Type: Talc formulation; 1×10^7 cfu/g each, Shelf life: 12 months at 25-35°C Target pests and crops: Wilt of chickpea, lentil, pea, pigeon pea; damping off/seedling mortality in papaya; Target fungi: Rhizoctonia, Sclerotium, Sclerotinia, Fusarium, Pythium, Ralstonia, Macrophomina, Bipolaris and Phoma Method of Application: Seed treatment (10 g/kg seeds) Benefits: Reduce the wilt incidence by 40-75% in chickpea, 30-55% in lentil, 45-60% in pea, 25-40% in pigeonpea and 60-75% reduction in damping off/seedling mortality in papaya § Yield increase in chickpea, pea and lentil by 10-15%
13.	Maru sena 1	Microbial Constituent: Trichoderma harzianum ICAR-CAZRI AZNF-5(MCC 1723), Type: Carrier based formulation; 1×10^8 cfu/g, Shelf life: 4 months at 55°C Target pathogen and crops: Fusarium oxysporum f. sp. cumini in cumin Method of application: Seed treatment (4 g/kg seed) and soil application (1 kg/ ha with 50 kg FYM) before sowing Benefits: § 34-52% reduction in plant mortality § and 14.5-25.8% yield increase
14.	Maru sena 3	Microbial Constituent: Bacillus firmus ICARCAZRI AZ-1 (MCC 0122), Type: Carrier based formulation; 1×10^8 cfu/g, Shelf life: 6 months at 25-35°C Target pathogen and crops: Macrophomina phaseolina in legumes and oil seed crops Method of application: Seed treatment (30 g/ kg seed with jaggery solution) before sowing Benefits: § 37-54% reduction in plant mortality and 23.2-31.6% yield increase

15.	Mishrit Maru sena	<p>Microbial Constituent: <i>Trichoderma harzianum</i> ICAR-CAZRI AZNF-5 (MCC 1723) and <i>Bacillus firmus</i> ICAR-CAZRI AZ-1 (MCC 0122), Type: Carrier based formulation; 1×10^8 cfu/g of each, Shelf life: 4 months at 55°C</p> <p>Target pathogen and crops: <i>Macrophomina phaseolina</i> in legumes and oil seed crops</p> <p>Method of application: Seed treatment (10 g/kg seed with jaggery) and soil application (1 kg/ha with 40 kg FYM) before sowing</p> <p>Benefits 37-56.4% reduction in plant mortality 20-23% yield promotion</p>
16.	NRRI-BBLF	<p>Microbial Constituent: <i>Beauveria bassiana</i> TF6 (MTCC 12233), Type: Talc formulation; 1×10^9 cfu/g</p> <p>Shelf life: 8 months at 25-35°C</p> <p>Target pests and crops: Rice leaf folder (<i>Cnaphalocrocis medinalis</i>)</p> <p>Method of application: Foliar spray at 2 g/L; Water required: 500 L/ha</p> <p>Benefits: 74% leaf folder mortality</p>
17.	NRRI-MALF	<p>Microbial Constituent: <i>Metarhizium anisopliae</i> TF19 (MTCC 11644), Type: Talc formulation; 1×10^9 cfu/g, Shelf life: 8 months at 25-35°C</p> <p>Target pests and crops: Rice leaf folder (<i>Cnaphalocrocis medinalis</i>)</p> <p>Method of application: Foliar spray at 2 g/L; Water required: 500 L/ha</p> <p>Benefits: 77% leaf folder mortality</p>
18.	Triguard Th-L	<p>Microbial Constituent: <i>Trichoderma harzianum</i> Th4d (NAIMCC-F-02188), Type: Liquid suspension concentrate; 1×10^9 cfu/mL, Shelf life: 18 months at 25-35°C</p> <p>Target pests and crops: Phytophthora seedling blight, <i>Macrophomina</i> root rot and <i>Fusarium</i> wilt of safflower and gray mold of castor, <i>Alternaria</i> aster leaf blight and powdery mildew of sunflower</p> <p>Method of application: Seed treatment at 1 mL suspension concentrate/kg of seeds, Foliar spray at 1-2 mL/L of water; Water required for spray: 500 L/ha</p> <p>Benefits: Symbiotic colonizer, Effective against a wide range of diseases, Helps to achieve high yield</p>
19.	Triguard Th-P	<p>Microbial Constituent: <i>Trichoderma harzianum</i> Th4 (NAIMCC-F-02188), Type: Wettable powder; 1×10^9 cfu/g, Shelf life: 18 months at 25-35°C</p> <p>Target pests and crops: Phytophthora seedling blight, <i>Macrophomina</i> root rot and <i>Fusarium</i> wilt of safflower and <i>Fusarium</i> wilt of castor and <i>Aspergillus</i> root rot in groundnut</p>

		<p>Method of application: Seed treatment at 10 g/kg of seeds</p> <p>Benefits: Symbiotic colonizer, Effective against a wide range of diseases, Helps to achieve high yield</p>
20.	Triguard Ta-P	<p>Microbial Constituent: Trichoderma asperellum Ta DOR 7316 (MTCC 5623), Type: Wettable powder; 1×10^9 cfu/g yy Shelf life: 18 months at 25-35°C</p> <p>Target pests and crops: Phytophthora seedling blight, Macrophomina root rot and Fusarium wilt of safflower and Fusarium wilt of castor</p> <p>Method of application: Seed treatment at 10 g/kg of seeds</p> <p>Benefits: 60% reduction in soil borne disease incidences, 3-5% increase in yield</p>
21.	Bioguard Bt-L	<p>Microbial Constituent: Bacillus thuringiensis var. Kurstaki DOR Bt-127 (MTCC 5976/NAIMCC-B-01463), Type: Liquid suspension concentrate; 1×10^{11} cfu/mL, Shelf life: 24 months at 25-35°C</p> <p>Target pests and crops: Spodoptera litura in soybean</p> <p>Method of application: Two foliar sprays at 3 mL/L of water at 10 days interval; Water required for each spray: 1500 L/ha</p> <p>Benefits: 69-95% reduction in larval population, 26-49% increase in yield</p>
22.	Mycoguard Bb-L	<p>Microbial Constituent: Beauveria bassiana (ITCC 4513)</p> <p>Type: Liquid suspension concentrate; 1×10^{12} cfu/mL, Shelf life: 24 months at 25-35°C</p> <p>Target pests and crops: Helicoverpa armigera in pigeon pea</p> <p>Method of application: Two to three foliar sprays at 0.3 mL/L of water at 10 days interval; Water required for each spray: 700 to 1000 L/ha</p> <p>Benefits: 24-45% reduction in pod damage, 21-33% increase in yield</p>
23.	ARKA Krishi Vriddhi	<p>Microbial Constituent: Trichoderma harzianum ICAR-IIHR Th-2 (NAIMCCSF-0033/ITCC 6888), Type: Wettable powder; 2×10^6 cfu/g, Shelf life: 10 months at 25-35°C</p> <p>Target pests and crops:</p> <ul style="list-style-type: none"> • Root knot nematode (Meloidogyne incognita) • Fungal pathogens–Fusarium oxysporum f. sp. vasinfectum, Fusarium oxysporum f. sp. lycopersici, Sclerotium rolfsii and Fusarium solani • Crops: Brinjal, tomato, carrot and okra y <p>Method of application: Seed treatment at 20 g/kg seed; nursery bed treatment at 50 g/m² for transplantable crops; soil application at 5 kg/ha after enrichment in 5 tons FYM before sowing or transplanting</p> <p>Benefits: 66-68% suppression in egg hatching of Meloidogyne incognita, 62-67% inhibition in growth of target fungi, 14.2–</p>

		18.4% increase in yield in brinjal, tomato, carrot and okra
24.	ARKA Krishi Veera	<p>Microbial Constituent: Trichoderma viride ICAR-IIHR Tv-5 (NAIMCC-SF-0032/ITCC 6889), Type: Wettable powder; 2 × 106 cfu/g, Shelf life: 10 months at 25-35°C</p> <p>Target pests and crops: Root knot nematode (Meloidogyne incognita)</p> <p>Fungal pathogens–Fusarium oxysporum f. sp. vasinfectum, Fusarium oxysporum f. sp. lycopersici, Sclerotium rolfsii and Fusarium solani</p> <p>Crops: Brinjal, tomato, carrot and okra y Method of application: Seed treatment at 20 g/kg seed; Nursery bed treatment at 50 g/m2 for transplantable crops; Soil application at 5 kg/ha after enrichment in 5 tons FYM before transplanting or sowing</p> <p>Benefits: 56-58% suppression in egg hatching of Meloidogyne incognita, 63-72% inhibition in growth of target fungi, 12.8–16.2% increase in yield in brinjal, tomato, carrot and okra</p>
25.	ARKA Krishi Samarakshak	<p>Microbial Constituent: Pseudomonas fluorescens ICAR-IIHR Pf-2 (NAIMCCSB-0038/ITCC B0034), Type: Wettable powder; 2 × 108 cfu/g, Shelf life: 10 months at 25-35°C</p> <p>Target pests and crops: Root knot nematode (Meloidogyne incognita), Bacterial pathogens– Ralstonia solanacearum and Erwinia carotovora, Fungal pathogens– Fusarium oxysporum f. sp. vasinfectum and Fusarium solani</p> <p>Crops: Brinjal, tomato, carrot and okra y Method of application: Seed treatment at 20 g/kg seed; Nursery bed treatment at 50 g/m2 for transplantable crops; Soil application at 5 kg/ha after enrichment in 5 tons FYM before transplanting or sowing</p> <p>Benefits: 71-74% suppression in egg hatching of Meloidogyne incognita 60-72% reduction in growth of target fungi 13.2–19.4% increase in yield of brinjal, tomato, carrot and okra</p>
26.	ARKA Krishi Rakshak	<p>Microbial Constituent: Pochonia chlamydosporia (=Verticillium chlamydosporium) IIHR- Vc-3 (NAIMCC-SF-0035/ITCC 6898), Type: Carrier based formulation; 2 × 106 cfu/g, Shelf life: 10 months at 25-35°C</p> <p>Target pests and crops: Root knot nematode (Meloidogyne incognita) Crops: Brinjal, tomato, carrot and okra</p> <p>Method of application: Seed treatment at 20 g/kg seed; Nursery bed treatment at 50 g/m2 for transplantable crops; Soil application at 5 kg/ha after enrichment in 5 tons FYM before transplanting or sowing</p> <p>Benefits: 61-64% suppression in egg hatching of Meloidogyne incognita 62-76% parasitization of nematode eggs 14.6-22.5% increase in yield of brinjal, tomato, carrot and okra</p>

27.	ARKA Krishi Kawach	<p>Microbial Constituent: Purpureocillium lilacinum (=Paecilomyces lilacinus) IIHR- PI-2 (NAIMCC-SF-0034/ITCC 6887), Type: Wettable powder; 2×10^6 cfu/g, Shelf life: 10 months at 25-35°C</p> <p>Target pests and crops: Root knot nematode (Meloidogyne incognita)</p> <p>Crops: Brinjal, tomato, carrot and okra</p> <p>Method of application: Seed treatment at 20 g/kg seed; Nursery bed treatment at 50 g/m² for transplantable crops; Soil application at 5 kg/ha after enrichment in 5 tons FYM before transplanting or sowing</p> <p>Benefits: 51-61% suppression in egg hatching of Meloidogyne incognita 60-76% parasitization of nematode eggs 14.3–17.8 % increase in yield of brinjal, tomato, carrot and okra</p>
28.	ARKA Krishi All Rounder and ARKA Plant Growth Booster	<p>Microbial Constituent: Pseudomonas fluorescens IIHR Pf-2 (NAIMCC-SB-0038/ ITCC B0034) and Trichoderma harzianum IIHR Th-2 (NAIMCC-SF-0033/ITCC 6888), Type: Liquid; 2×10^8 cfu/mL; Carrier based; 2×10^8 cfu/g, Shelf life: 10-12 months at 25-35°C</p> <p>Target pests and crops: Nematodes: Root knot nematode (Meloidogyne incognita) Bacterial pathogens–Ralstonia solanacearum and Erwinia carotovora Fungal pathogens –Fusarium oxysporum f. sp. Vasinfectum and Fusarium solani</p> <p>Crops: Tomato, capsicum, okra, brinjal, cabbage, cauliflower, chillies, carrot, onion, tuberose, gerbera, crossandra, gladioli, carnation, banana, papaya, pomegranate, acid lime, citrus and grapes; crops grown under protected conditions such as carnation, gerbera, capsicum, tomato, okra, muskmelon and watermelon</p> <p>Method of application: Seed treatment at 20 g or 20 mL/kg seed; substrate treatment with 10 mL or 10g/kg of cocopeat; soil application at 5 kg or 5 L/ha after enrichment in 5 tons. FYM before transplanting or sowing</p> <p>Benefits: Plant growth promotion and yield enhancement Production of healthy and vigorous seedlings of horticultural crops Management of plant parasitic nematodes and soil borne pathogens</p>

29.	Manjari Vineguard	Microbial constituent: Trichoderma asperelloides 5R (NAIMCC-SF-0026), Type: Liquid formulation; 5 × 10 ¹¹ cfu/mL, Shelf life: 3 months at 25-35°C Target pests and crops: Powdery mildew of grapes Method of application: Soil drenching at 2 mL/L of water; Water required for soil drenching: 1000 L/ha Benefits: Significant reduction in powdery mildew incidence, Significant reduction in number of fungicide application
30.	Manjari Rakshak	Microbial constituent: Trichoderma afroharzianum (NAIMCC-F-01938), Type: Liquid; 5 × 10 ⁸ cfu/mL, Shelf life: 3 months at 25-35°C Target pests and crops: Powdery mildew of grapes Method of application: Foliar spray at 2.0 ml/L of water; Water required for spray: 1000 L/ha Benefits: Significant reduction in powdery mildew incidence, Significant reduction in number of fungicide application
31.	Pusa 5SD	Microbial Constituent: Trichoderma harzianum IARI P-4 (MTCC 5371), Type: Wettable powder; 10 ⁸ cfu/g, Shelf life: 25 months at 25+8°C Target pests and crops: Fusarium oxysporum f. sp. ciceris, Sclerotium rolfsii and Sclerotinia sclerotiorum in chickpea; Rhizoctonia solani and R. bataticola in chickpea and mungbean; Fusarium oxysporum f. sp. lycopersici in tomato; Pythium ultimum and R. solani in French bean; and major soil and seed borne fungal pathogens in various crops Method of application: Seed treatment at 4g/kg of seed Benefits: Effective against a wide range of soil and seed borne diseases, Enhanced growth of the plants, Increased seed germination, Increased grain yield under field conditions

Challenges For Biopesticide Applications In India

(i) Many biopesticides have high levels of selectivity. Although, it is of great benefit in terms of not harming other natural enemies and wildlife, but it implies low profit potential. The features that make most of them so attractive from the standpoint of environmental and human safety also act to limit the number of markets in which they are effective.

(ii) Unlike conventional chemical pesticides which have a large cost-cutting market, the drive to adopt biopesticides by farmers will need higher initial investment.

(iii) For fruit and vegetable crops, consumers' acceptance is as important as yield when it comes to making a profit. Due to long period of use, farmers have achieved scale economies in pesticide use as a result of 'learning by doing' but with the limited practical experience with biopesticides, they are averse taking risk leading to low level of adoption. Risk aversion is the highest if farmers' expectations are more focused on instant results.

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Extend the Role of Tolerance : The Demand of 21st century to Human Being

*Dr. Awanish Chand Pandey**

*My this paper, titled 'extend the role of tolerance : the demand of 21st century to human being,' is prompted by three scholars and their works, first is Francis Fukuyama and his book "The End of history and The Last Man", second Samuel P Huntington and his book "The Clash of Civilizations" and "The remaking of world order", and third Ramin Jahanbegloo and his book "The Clash of Intolerances" Francis Fukuyama argued that a remarkable consensus concerning the legitimacy of liberal democracy as a system of government had emerged throughout the world over the past few year, as it conquered rival ideologies like hereditary monarchy, fascism and most recently communism. More than that, however argued that liberal democracy may constitute the "end point of mankind's ideologically evolutions" and the " Final form of Human Government", and as such constituted the end of history.ⁱ The most serious efforts at writing universal histories were undertaken in the German idealist traditions . The idea was proposed by the great Immanuel Kant in a 1784 essay, *An Idea for Universal History from a cosmopolitan point of view*. Kant suggested that history would have an end point, that is to say, a final purpose that was implied in man's potentialities and which made the whole of history intelligible. This end point was the realization of human freedom, for "A society in which freedom under external laws is associated in the highest degree with irresistible power, i.e., a perfectly just civic constitution, is the highest problem nature assigns to the human race. The achievement of such a just civic constitution and its universalization throughout the world would then be the criterion by which one could understand progress in history."ⁱⁱ Hegel, like Kant, defined his project as the writing of a universal history which would provide "The Exhibition of Spirit (i.e., Collective Human Concessusness) in the process of working out the knowledge of that which it is potentially." Hegel writes that history proceeds through a continual process of conflict where in systems of thought as well as political systems collide and fall apart from their own internal contradictions. They are then replaced by less contradictory and therefore higher ones, which give rise to new and different contradiction the so-called dialectic."ⁱⁱⁱ*

It is difficult for those of us who believe in liberal democracy to follow Nietzsche very far down the road that he takes. He was an open opponent of democracy and of the rationality on which it rested. He hoped for the birth of new morality that would favor the strong over the weak, which would heighten social inequality and even promote a certain kind of cruelty. The liberal democratic state did not constitute a synthesis of the morality of the masters and the morality of slaves, as Hegel has said. For Nietzsche, it represented an unconditional victory of the slave.^{iv} The master's freedom and satisfaction were nowhere preserved, for no one really ruled in a democratic society. When Hegel declared that history had ended after the battle of Jena in 1806, he was obviously not making the clame that the liberal sate was the victorious throughout the world , its victory was not even certain in his little corner of Germany at the time. What he was saying was that principles of liberty and equality underlying the modern liberal state had been discovered and implemented in the most advanced countries , and that there were no alternative principles or forms of social and

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political organizations that were superior to liberalism . Liberal societies were, in other words, free from the “contradictions” that characterized earlier form of social organization and would therefore bring the historical dialectic to a close.

But Marx differed from Hegel. Marx believed that the liberal state fail to resolve one fundamental contradiction, that of class conflict, the struggle between Bourgeoisie and Proletariat. Marx turned Hegel’s historism against him, arguing that liberal state did not represent the universalisation of freedom, but only the victory of freedom for a certain class (The Bourgeoisie). Hegel believed that alienation – the division of man against himself and his subsequent loss of control over his destiny – had been adequately resolving at the end of history through the philosophical recognition of the freedom possible in the liberal state. Marx on other hand, observed that in liberal societies man remains alienated from himself because capital, a human creation, has turned into man’s lord and master and controls him.^v The bureaucracy of the liberal state which Hegel called the universal class because it represented the interest of people as a whole, for Marx represented only particular interest within civil society, those of the capitalist who dominated it. The Marxist end of history would come only with victory of the true universal class the proletariat, and the subsequent achievement of a global communist Utopia that would end class struggle once and for all.

The end of history would mean the end of wars and bloody revolutions. Agreeing on ends, men would have no large causes for which to fight. They would satisfy their needs through economic activity, but they would no longer have to risk their lives in battle. They would, in other words become animal again, as they were before the bloody battle that began history. A dog is content to sleep in the sun all day provided he is fed, because he is not dissatisfied with what he is. He does not worry that other dogs are doing better than him, or that his carrier as a dog has stagnated, or that dogs are being oppressed in a distant part of the world. If man reaches a society in which he has succeeded in abolishing in justice, his life will come to resemble that of the dog.^{vi} Human life, then, involves a curious paradox: it seems to require to justice, for the struggle against the injustice in what calls forth what is highest in man.

But in the post cold war world, for the first time in history, global politics has become multipolar and multicivilizational . During the cold war, global politics was bipolar and world was divided into three parts , a group of mostly wealthy and democratic societies , led by the United States of America was engaged in a pervasive , ideological , political , economic and at times , military competition with a group of somewhat poorer communist societies associated with and led by the Soviet Union much of this conflict occurred in the third world, outside these two camps , composed of countries which often were poor , lagged political stability, were recently independent, and claimed to be non-aligned.

When Fransis Fukuyama declared the era of the end of history, at the same time, Samuel P Huntington developed a theory: the clash of civilizations and the remaking of the world order. The clash of a civilizations is the hypothesis which declares that the people of cultural and religious identities will be the primary source of the conflicts in post cold war and in 21st century world. Huntington divides the world into 8 measure civilization :

1. Sinic: the common culture of china and Chinese communities in Southeast Asia. Includes Vietnam and korea.
2. Japanese: Japanese culture as distinctively different from rest of Asia.
3. Hindu : Identified as a core Hindu civilization

4. Islamic: Originating on the Arabian Peninsula, spread across North Africa, Iberian peninsula and central Asia, Arab, Turkic Persian and Malay are among the distinct subdivision in the Islam.
5. Orthodox: Centered in Russia. separate from western Christendom
6. Western: Centered in Europe and North America.
7. Latin American: central and south American countries with a past of corporatist, authoritarian culture. Majority of countries are of a catholic majority.
8. Africa: while the continent lacks a sense of a pan- African identity , Huntington claims that African are also increasingly developing a sense of African identity .

Huntington offers explanations: for why civilizations will clash

1. Differences among civilizations are too basic. Civilizations are differentiated from each other by history, language, culture, tradition, and, most important, religion. These fundamental differences are the product of centuries and the foundations of different civilizations, meaning they will not be gone soon.
2. Due to economic modernization and social change, people are separated from longstanding local identities. Instead, religion has replaced this gap, which provides a basis for identity and commitment that transcends national boundaries and unites civilizations.
3. Cultural characteristics and differences are less mutable and hence less easily compromised and resolved than political and economic ones.

Huntington suggests that in the future the central axis of world politics tends to be the conflict between Western and non Western civilizations, in Kishore Mahbubani's phrase, the conflict between "the West and the Rest."

Huntington writes in the clash of civilizations and the remaking of world order that every war must end. Such is the conventional wisdom. Is it true of fault line wars? Yes and no. Fault line violence may stop entirely for a period of time, but it rarely ends permanently. Fault line wars are marked by frequent truces, cease-fires, armistices, but not by comprehensive peace treaties that resolve central political issues. They have this off-again-on again quality because they are rooted in deep fault line conflicts involving sustained antagonistic relations between groups of different civilizations. The conflicts in turn stem from the geographical proximity, different religions and cultures, separate social structures, and historical memories of the two societies. In the course of centuries these may evolve and the underlying conflict may evaporate. Or the conflict may disappear quickly and brutally if one group exterminates the other. If neither of these happens, however, the conflict continues and so do recurring periods of violence. Fault line wars are intermittent; fault line conflicts are interminable.^{vii}

Conflicts between countries or groups with a common culture can at times be resolved through mediation by a disinterested third party who shares that culture, has recognized legitimacy within that culture, and hence can be trusted by both parties to find a solution rooted in the values of culture. The Pope could successfully mediate the Argentine-Chilean boundary dispute. In conflicts between groups of different civilizations, however, there are no disinterested parties. Finding an individual, institution, or state whom both parties think trustworthy is extremely difficult. Any potential mediator belongs to one of the conflicting civilizations or to a third civilization with still another culture and other interests which inspire trust in neither party to the conflict. The Pope will not be called in by Chechens and Russians or by Tamils and Sinhalese. International organizations also usually fail because

they lack the ability to impose significant costs on or to offer significant benefits to the parties.^{viii}

All civilization go through similar processes of emergence, rise, and decline. The West differs from other civilizations not in the way it has developed but in the distinctive character of its values and institutions. These include most notably its Christianity, pluralism, individualism, and rule of law, which made it possible for the West to invent modernity, expand throughout the world, and become the envy of other societies. The belief that non-Western peoples should adopt Western values, institutions, and culture is immoral because of what would be necessary to bring it about. The almost-universal reach of European power in the late nineteenth century and the global dominance of the United States in the late twentieth century spread much of Western civilization across the world. European globalism, however, is no more. American hegemony is receding if only because it is no longer needed to protect the United States against a Cold War-style Soviet military threat. Culture, as we have argued, follows power. If non-Western societies are once again to be shaped by Western culture, it will happen only as a result of the expansion, deployment, and impact of Western power. Imperialism is the necessary logical consequence of universalism. In addition, as a maturing civilization, the West no longer has the economic or demographic dynamism required to impose its will on other societies and any effort to do so is also contrary to the Western values of self-determination and democracy. As Asian and Muslim civilizations begin more and more to assert the universal relevance of their cultures, Westerners will come to appreciate more and more the connection between universalism and imperialism. But Huntington says that Western universalism is dangerous to the world because it could lead to a major intercivilizational war between core states and it is dangerous to the West because it could lead to defeat of the West. With the collapse of the Soviet Union, Westerners see their civilization in a position of unparalleled dominance, while at the same time weaker Asian, Muslim, and other societies are beginning to gain strength.^{ix}

Huntington believes that the increasing power of non-Western civilizations in international society will make the West begin to develop a better understanding of the cultural fundamentals underlying other civilizations. Therefore, Western civilization will cease to be regarded as "universal" but different civilizations will learn to coexist and join to shape the future world.

Japan, China and the Four Asian Tigers have modernized in many respects while maintaining traditional or authoritarian societies which distinguish them from the west. Some of these countries have clashed with the West and some have not. In USA, New Christian Right Movement raised voice against secularization and appealed the Christian back to Christianity based on literal meaning of Bible. They polarized the mass and campaigned for their fundamental Christian values and opposed feminist movement, gay/lesbian movement, demanded religious prayers in secular institution etc. after 9/11 attack boosted up this movement and ultimately the victory of Donald Trump in USA presidential election may called its victory.

Muslim societies, unlike Asian societies, have asserted cultural identity through the reaffirmation and resurgence of religion. Huntington argues that the resurgence of Islam "embodies the acceptance of modernity, rejection of Western culture, and the recommitment to Islam as the guide to life in the modern world" (110). Religion is the primary factor that distinguishes Muslim politics and society from other countries. Huntington also argues that the failure of state economies, the large young population, and the authoritarian style of governance have all contributed to the resurgence of Islam in society.

India was not far away in the race of cultural and civilizational consciousness. World Hindu Democratic Forum and RSS has claimed time to time Hindustan for Hindus.

In all above discussion what Huntington has not discussed is that he does not differentiated civilization from barbarism. Whatever is barbarism is not barbarism according to Huntington but it is civilization. He accepts every civilization as it is. In the form of antithesis, Ramin Johnbeglu established a new concept and named it “The Clash of Intolerances”. But if we study below mentioned occurrence we can oppose this concept

- 11 September 2001 Four planes hijacked and crashed into World Trade Center, The Pentagon and into a field in Shanksville by 19 hijackers. 2,977 killed and over 6,000 injured
- 13 December 2001 – Suicide attack on Indian parliament in New Delhi by Pakistan-based Islamist terrorist organizations, Jaish-E-Mohammad and Lashkar-e-Toiba. Aimed at eliminating the top leadership of India and causing anarchy in the country. 7 dead, 12 injured.
- 11 March 2004 – Multiple bombings on trains near Madrid, Spain. 191 killed, 1460 injured (alleged link to Al-Qaeda).
- 1 September 2004 – Beslan school hostage crisis, approximately 344 civilians including 186 children killed
- 5 July 2005 – Attack at the Hindu Ram temple at Ayodhya, India; one of the most holy sites of Hinduism. 6 dead.
- 7 July 2005 – Multiple bombings in London Underground. 53 killed by four suicide bombers. Nearly 700 injured.
- 7 March 2006 – 2006 Varanasi bombings, India. A series of attacks in the Sankatmochan Hanuman temple and Cantonment Railway Station in the Hindu holy city of Varanasi. 28 killed and over 100 injured.
- 11 July 2006 – 11 July 2006 Mumbai train bombings, Mumbai, India; a series of seven bomb blasts that took place over a period of 11 minutes on the Suburban Railway in Mumbai. 209 killed and over 700 injured.
- 16 December 2014 Peshawar school massacre: At least 132 children among over 141 killed by Taliban militants who stormed an army-run school in Peshawar city. Seven militants were also killed during the SSG rescue operation.
- 7 January 2015 – *Charlie Hebdo* shooting - Two masked gunmen armed with Kalashnikov rifles and shotguns stormed the headquarters of the French satirical magazine *Charlie Hebdo* in Paris. They shot and killed 12 people, and wounded 11 others.
- 1999 Burning alive of Australian Christian missionary and his children: Graham Staines
- 2002 Gujarat riot
- 2007 Samjhauta Express bombings
- Ajmer Dargah attack
- Mecca Masjid bombing

These are not clash of intolerances but it is clash of intolerance to tolerant people. The clash between two intolerant communities or nations must be called clash of intolerances but clash of intolerant to tolerant can't be called clash of intolerances. By the concept of Clash of intolerances, the act of terrorism cannot be defended and justified.

Democracy came on the basis of freedom/liberty, equality, fraternity and justice etc. democracy was for the people, of the people and by the people in idealistic form but in reality and actuality it is for the majority, of the majority and by the majority. The one very

important factor which given assistance to the development of democracy was ‘toleration’. Locke advocates toleration in his letters on toleration that tolerance can not be limited to Christianity. If tolerance has to be tolerance then it’s ambit would have to extend to whole human being. And he said that religion must be excluded from politics to preserved tolerance and human being both. If it is not done, the tolerance only amongst Christians would stand as intolerance towards whole worlds except Christianity. Locke said “ Religious persecution is un-christian. True Christianity rests on ‘that faith which works, not by force, but by love.’ The costs of trying to impose religious uniformity may well be worse than the costs of tolerating diversity, and religious divisiveness will end, if toleration is granted.”^x In 21st century the main danger before human being is day by day increasing intolerances and by the mean of intolerances and by the inclusion of religion in politics intolerances increasing in a speedy way. Therefore the process of Democratization which was based on liberty, equality, fraternity, justice and tolerance has been changing due to the exercise of establishing democracy on the basis of religion which is in mazority.

Hinduaization of Indian democracy sinhalization of democracy on Buddhist line in Srilanka Christianization of USA democracy, worldwide islamization of many democratic countries and zionisation of Israel etc. are continuing and intolerances are increasing day by day. Therefore 21st century demands to increase tolerances amongst human being to save world and world peace.

ⁱ Fukuyama Francis, *The end of history and last man*, Published in Penguin Books, Page ix, 1992.

ⁱⁱ Kant Immanuel, *On history*, Books merrill, Indianapolis, Page 11-13, 1963.

ⁱⁱⁱ Hegel Georg W.F., *The Philosophy of history*, trans. J.B. Ballie, Harper and Row, New York, Page 19, 1956.

^{iv} Nietzsche Friedrich byond good and Evil preludes to a philosophy of the future, Trans. W. Kaufmann Vintage Books New York, aphorism 260, 1966.

^v Fukuyama Francis, *The end of history and last man*, Published in Penguin Books, Page 65, 1992.

^{vi} Fukuyama Francis, *The end of history and last man*, Published in Penguin Books, Page 311, 1992.

^{vii} Huntington Samuel P., *The clash of civilizations and the remaking of world order*, Published in Penguin Books, Page 291, 1997.

^{viii} Huntington Samuel P., *The clash of civilizations and the remaking of world order*, Published in Penguin Books, Page 292, 1997.

^{ix} Huntington Samuel P., *The clash of civilizations and the remaking of world order*, Published in Penguin Books, Page 311, 1997.

^x Locke John, *A latter concerring toleration*, London prometheus Books, 1990, and also in *the clash of intolerances*, Ramin Jahanbegloo, Published by Har-Anand publication Pvt. Ltd., Delhi, Page 59.