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### **VISION**

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## UTTARKASHI AND MGNREGA

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### ABSTRACT

**Purpose:-** This study compares two blocks of Uttarkashi (Uttarakhand) the purpose is to find out comparative reality between the blocks because both the blocks have a slightly different size of population, geographical condition, economic opportunities and vegetation. **Objective:-** The study will evaluate last five year performance of MGNREGA (MG) in Uttarkashi of two blocks Bhatwari and Purola on four parameters like beneficiary details, delay in payments, work demanded and employment provided with the help of graphs. It will conclude with village reality, problems with MG scheme and suggestion how to improve. **Results:-** In Purola higher percentage of 51-80 age group are engaged in MG which depicts the lack of social security for senior citizens whereas data suggest that skilled male acquire more work than skilled female workers in both the blocks purola also have higher percentage of employment provided to its people than Bhatwari though much allocation of funds granted to Bhatwari due to higher population percentage.

**KEYWORDS:** Mgnrega, Wages Payments, Work Catogaries, Employment.

## INTRODUCTION

World largest employment scheme MGNREGA(MG) have increased sixteen percent of rural employment resurrecting income of villagers and reducing their debts burdens MG has also increased scarcity of labours in agriculture by thirty percent whereas gender, education and family size prove to be a significant factor. Though 63% amount of income has generated from agriculture 29% from non-Agric and 8% from MG it's is a matter to reconcile that during harvesting seasons MG employment should be avoided so that adequate amount of labour force can impede less Agric production (B.G. Harisha,N. Nagaraj\*b, M.G. Chandrakantha, P.S. Srikantha Murthya, 2011). The mass perception about MG scheme is that it lacks worthiness but MG has created significant amount of employment for smaller and marginal farmers number of participant believe that MG is a backbone for their income this is because water harvesting cambers, constructing small canals, wells have decrease water shortage to Agric fields which subsequently increased farmers income whereas road and horticulture proliferated connectivity and brought techniques in Agric business within the ambit of MG. (Krushna Ranaware, Upasak Das, Ashwini Kulkarni, Sudha Narayanan MARCH 28, 2015). Employment generation through asset creation is not the only motive for MG but also to vitalised Biodiversity(BD) in region study conducted by the Indian Institute of Science in four states had proven that with the help of MG programme a satisfactory environmental benefit has driven but the irony is United Nation Development Programme recommendation report entitled as Green Rural Development Programme suggested five categories to secure greenery in rural but do not mention about biodiversity. The past experience like Sunder lala Bahuguna and Chandi Prasad Bhatt taught us that not only the institution but local people involvement is fruitful, therefore, MG work should also execute within the ambit of BD to secure and revitalised the surrounding diversity (Mathew K Sebastian, P A Azeez, march 8, 2014 ). Aim of MG is also to ensure hundred day guarantee employment to rural people to increase their consumption expenditure few recommendations like Mahendra Dev and Nagesh Singh Committee have recommend different opinion about the wage distribution Mahendra Dev committee have suggested that minimum wage and MG wages should be increased accord to real inflation rate because raising only minimum wages or only MG wages will not legally viable whereas Nagesh committee has suggested that there should be some criteria for state government while deciding the wages rather than state dirigisme. (Aggarwal NOVEMBER 4, 2017). The problem of corruption is a serious issue endure by the MG payments system while distributing wages how to quantify and reduce leakages is imperative. To tame officials what is required is to identify the cause mainly official do corrupt practice to increase their income. Therefore if their loyalty can remunerate with increase in the size of income can reduce their corrupt practice by 64 percent this is because more incentive will be provided for loyalty and good work with honour (Paul Niehaus and Sandip Sukhtankar\* November 2013). People's participation in MG work relies whether the region is agriculture advance or backward, number of people participation is higher under MG in agric backward region whereas participation of people is fewer in advance agric region, non participants in MG of advance region move out from region for higher wages which implies that MG unable to curb out migration those regions with large family size, illiteracy, fewer landholding size have more reliance in MG work and wages this concludes that MGNREGA brace diaspora of financial feeble section (Usha Rani Ahuja, Dushayant Tyagi\*, Sonia Chauhan and Khyali Ram Chaudhary 2011). ````

**Population density:-**As per 2011, Uttarkashi population is 330,086. The initial provisional data

released by census India 2011, shows that density of Uttarkashi district for 2011 is 41 people per sq. km. In 2001, Uttarkashi district density was at 37 people per sq. km. Uttarkashi district administers 8,016 square kilometres of areas.

**Source:** <http://www.census2011.co.in/census/district/574-uttarkashi.html>.

**Literacy rate:-** Average literacy rate of Uttarkashi in 2011 were 75.81 compared to 65.71 of 2001. If things are looked out at gender wise, male and female literacy were 88.79 and 62.35 respectively. For 2001 census, same figures stood at 83.60 and 46.69 in Uttarkashi District. Total literate in Uttarkashi District were 215,126 of which male and female were 128,237 and 86,889 respectively. In 2001, Uttarkashi District had 161,161 in its district.

**Source:** <http://www.census2011.co.in/census/district/574-uttarkashi.html>.

**Accessibility in terms of transportation and communication:-** The villages of Uttarkashi district still do not have proper transport facility and during monsoon season majority of villages losses their connectivity due to dependency of villagers on government rationing infuse this situation to different level it also include emergencies while medical evacuation and connectivity to school and colleges. Majority of villages do not have government bus facility due to which they have to dependent of private taxis which charge accordingly and several times refuse to drop villagers at their promised destination.

**Source:** Assess by private interviews of some villagers.

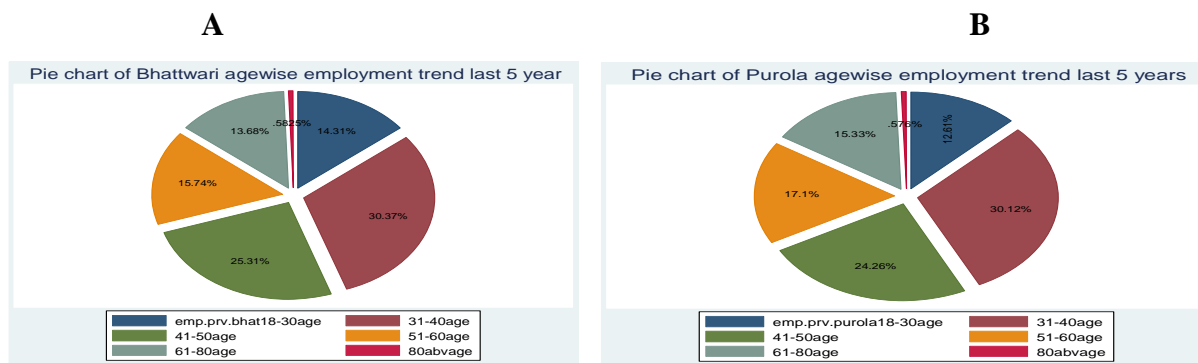
**Economy:-** Uttarkashi is blessed with the dividend of pilgrims and tourist Bhatwari, Chinyalisaur, Dunda, and Naugoan are the main blocks who endure heavy deluge of tourism and pilgrims during season it was observed that majority of population in Uttarkashi District are employed in private hotels or have their own Dhabbas and restaurants (people are also engaged in transport services or serving tourists). But two of its blocks Mori and Purola do not have that much of tourism though it have one shrine, both the blocks have major dependency on agric product like Tomatoes, Potatoes etc. In a very succinct way the economy of Uttarkashi can be ramify in two different sections first is agriculture products secondly pilgrims and tourism.

## METHODOLOGY AND DATA-BASE

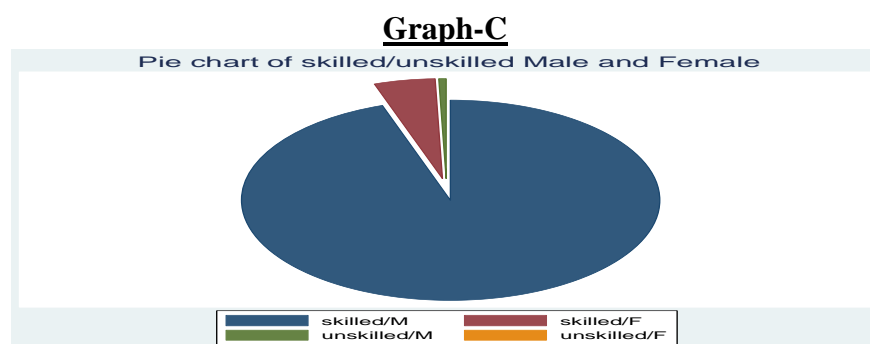
Descriptive and analytical method is use to analyse actual performance of MG by collecting Qualitative and Quantitative data of two different blocks, last five year data of four variables are compiled and prepared various Pie chart and Bar charts correlation between five variable are extracted with help of last five year data pattern. Secondary data of MGNREGA is assessed form MGNREGA Official website <http://www.nrega.nic.in/netnrega/home.aspx> some personal interviews and village visit were also conducted to find out ground reality.



## ► BENEFICIARY DETAILS

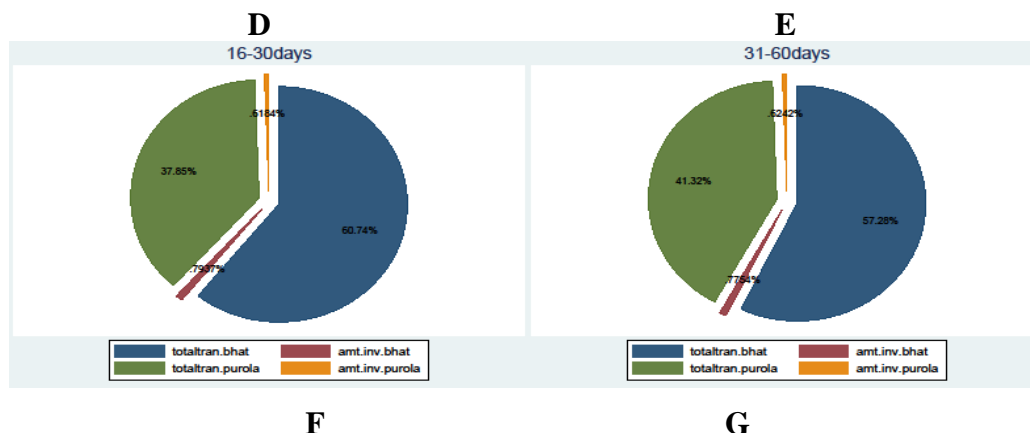


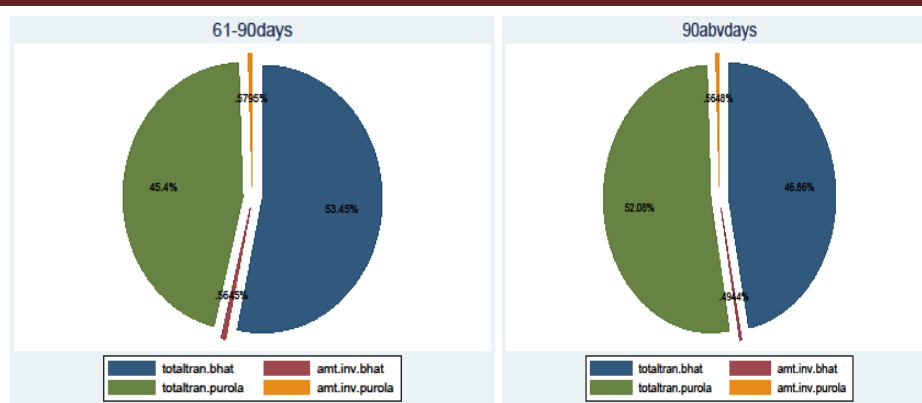
● Age wise employment trend, number of people employed from last five years with age group 18 to 80 (Blocks Bhattwari and Purola). The aforementioned two graphs A and B depict age wise employment provided in the two blocks of Uttarkashi district where as percentage of employment provided remain skewed in age group of 31-40 in both the blocks but varied from Bhattwari in case of age group 51-60 and 61-80. The blue portion depicts employment provided to young fellows with age group of 18-30 this may also interpret as high percentage of unemployment in the young generation and more reliance on government assurance.



The Graph C present last five years employment provided to skilled and unskilled males, females in entire Uttarkashi region. It was observed that skilled male population have acquired a much higher percentage of work than skilled females whereas unskilled male has acquired little significance and unskilled female remains around less significant.

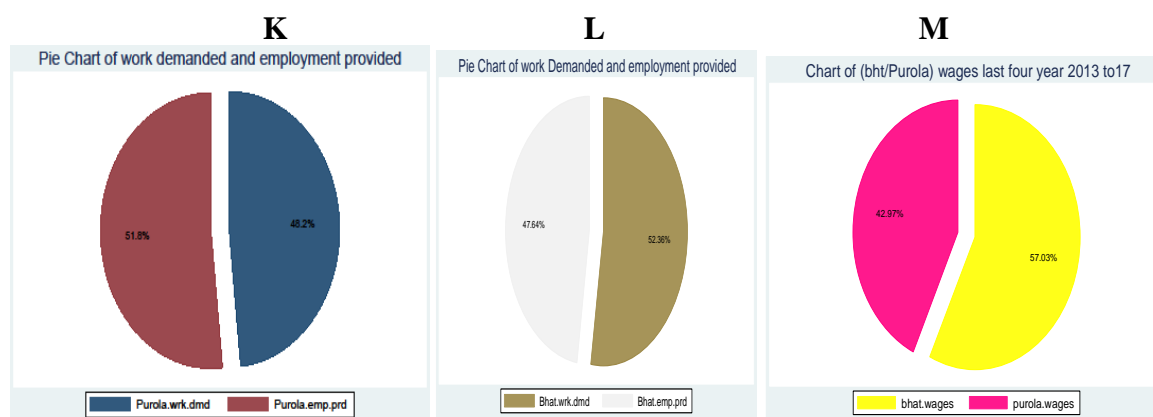
## ► DELAY IN PAYMENTS



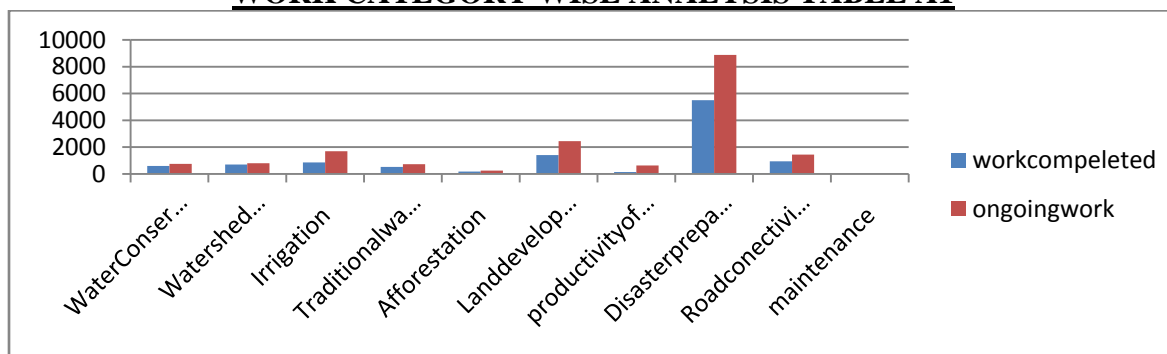


• Delayed in payments of last five years in both the blocks B/P with total number of transactions involved and amount involved in lakh. The aforementioned four pie graphs D,E,F,G depicts total amount of transition involved with respect to wages provided to villagers with different time durations. Through graph it is observed that Bhatwari have shown a positive trend by showing gradual reduction in transaction with the increasing time span and decreasing rate of payments whereas Purola have shown negative signs this is because with increasing time duration number of payments gradually resurrected with increasing in payments size, we can conclude that Bhatwari is better off than Purola in contexts of delay in payments.

#### ► Work Demanded and Employment Provided



• The Aforementioned first two graph K,L shows the results of employment demanded and employment provided for two blocks and concludes that Purola is able to provide more employments than Bhatwari in last five years. Whereas third graph M shows wages distribution amount in lakh which suggest that Bhatwari have more amount of wages dispersion than Purola with this it can be conclude that people of Purola enjoy dividend of low population and able to gain more employment than Bhatwari but the amount of wage distribution is more in Bhatwari due to more population than Purola.

**WORK CATEGORY WISE ANALYSIS TABLE A1**

The above graphical figure A1 represents last five year data of category wise work performed under MG scheme whereas Y axis denotes quantity of projects and axis denotes various forms of works and blue, brown bars shows results of work completed and ongoing works in entire Uttarkashi district. Therefore damages caused by disasters and preparedness for disasters have absorbed majority amount of funds allocation and subsequently land levelling ,irrigation and road construction. Graph also suggest that very negligible amount of funds have provided for the maintenance purpose this shows that allocation of funds are done for the asset creation rather reconstruction as for MG is blamed for.

**Table.1**

**Table 1 shows results of Correlation between MG Income (lakh), Delay in payments (lakh), Employment provided, Employment Provided to skilled Male and Female past five years of entire Uttarkashi district.**

	Income	Delay payments	Employment Provided	Skilled Male	Skilled Female
Income	1	.			
Delay payments	<b>- 0.236</b>	1			
Employment Provided	<b>0.7962</b>	<b>0.221</b>	1		
Skilled Male	<b>- 0.402</b>	<b>- 0.520</b>	<b>- 0.874</b>	1	
Skilled Female	.	.	.	.	.

► The correlation between income and delay in payment appears be negative implies that with further increase in income amount of delay payment will reduce correlation between income and employment provided appears to positive implies with increase in income, employment opportunities will also increase. Therefore negative correlation appeared in income, delay in payment and employment with respect of employment provided to skilled male's implies that with further increase in size of skilled male under MG will decrease income, delay in payment and employment.

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## GOVERNMENT SOCIAL SECURITY SCHEME

### Ground Reality and Loopholes

**Village reality:-**While interviewing few villagers complained about employment guaranteed for hundred days. It was observed that earlier Gram Pradhan create enough amount of employment for villagers but now the situation is totally different after amendment per unite payments of wages to labour account it became very difficult to generate employment this is because before starting any development work Pradhan have to collect more than ten individuals job cards including linked with bank accounts this impede almost every Pradhan to generate employment even more than 15 days.

**Leakages:-**Realms of leakages while fund allotments starting from the Panchayat Development Officer (PDO) and Block Development Officer (BDO) amount of commission is fixed for allotting funds to village if gram Pradhan have to start any development project it has to bribe top to bottom official accord to the size of allotted amount.

**MG Causes Bondages:-**It is astonishing that how government policy can repercuss bondage labour this indicates the sorrow state of MG. For avoiding leakages government have implemented “Job cards” to each family to monitor and enumerate a number of days worked in MG. But it was observed that under MG villagers had to mortgage their job cards, not even single Pradhan have entered job card details in musters roll despite this he usually collects all the job card from the villagers and pays them some lam-sum amount of money like (2000 rupees for each card) with no work. But those labours who work in guaranteed employment scheme remained half paid so that they cannot switch to other job and become bondage or dependent on pradhan grace for rest of this life.

**Private constructor:-**Many of the private constructors in MG are identified Gram Pradhan usually hoards a number of job cards from the villagers and pay them some amount of money than he invites private constructor and labour to work under MG to minimise the cost of the project. This act not only dumps the villager's employment but also reduce the quality of work while development of road, bridge, path and other physical assets labours are imported from different states and countries so to pay less compare to villagers.

**Impinging inward migration by MG:-**The involvement of private constructors also tends to impinge inward migration of labours coming from different states but also from a different country, Nepali and Bangladeshi are the examples. Though they do not have any identity neither work permits (Nepalies have to prepare “Gorkha Card” from Dehradun as a work permit).

**Asset Creation:-**One of the major problem with MGNREGA is lack of assets creation almost every development projects do not have a sense of assets creation, same numbers of walls are been re-contracted several times by Pradhan and each time he uses same proportionate of material so that he may get the opportunity to rebuild it.

**Source:** Private interviews and Site Visit four blocks and 16 villages of Uttarkashi.

### WHAT PRECLUDES MGNREGA PAYMENTS?

- 1. Blank Job Card:-**Job cards were introduced so reduce leakages in MG wages job card remains with the worker and act as an attendance register but gradually Pradhan started neglecting to enter attendance to job cards which results misleads payments despite doing a work.

2. **Wrong attendance in Muster:-**With blank job cards Pradhan willingly marks his/her attendance. Due to which workers cannot claim for the fair remuneration job card which used to ensure their presences remain reasonless. Village Pradhan deliberately marks attendance of his favourites like family members and claim for wages.
3. **Link to Bank Account:-**Earlier villagers can directly ask for the wages at end of the day but now labours keep on sprinting to BDO office asking to release their wages.
4. **Availability of banks:-**Uttarakhand also suffers from the lack of availability of banking infrastructure still many of the villages do not have accessibility to banks and present one suffers from cash crunch which a challenging task.
5. **FTO (Fund Transfer Order) and Muster:-**Most of the time corrupt chain of senior officials also precludes wages payments. FTO (Fund transfer order, headed by two official in Block who look after claims of MG wages) do not enter similar numbers of workers from muster to FTO register to augment their commission which further divided to various officials including Pradhan. The FTO deliberately transfer fund to those fake accounts form where they can earn a bounty.
6. **FTO to MIS:-**To curb leakages from MG government initiated Management Information System (MIS). The computerised system which enumerates name and number of days of the worker from FTO register to MIS. MIS is further divided into state MIS and centre MIS. MIS is the main system of all the record maintained by the government to monitor payment system and to curb the leakages. But this system also had to face some loopholes and that come from wrong entry done by the FTO and Muster followed by the blank job card.
7. **Linking Aadhar to Bank Account:-**Villagers already facing the challenge of bank accessibility and transportation any mutation done by the government is similar to adding new obstacle which impedes the payment of MG. Fewer linkages with banks and Aadhar's hinder payments which delay wages further.

**Source:** Personal Interviews and Village visits.

### **SUGGESTIONS TO IMPROVE**

1. **No Role of Ombudsman:-**No proper evaluation of work many projects under MG are not completed. When village Gram Pradhan demands funds through BDO the answer remains unsatisfactory syphoning off wages by Gram Pradhan along with the BDOs is usual.
2. **Helping Desk/ Awareness Campaign:-**Illiteracy is another problem little knowledge about MG scheme makes the situation more complex for villagers. Therefore government should initiate help desk through MG officials as done by the SBI to make villagers understand the importance of MG.
3. **Increase Banking Infrastructure:-**Villagers have to travel more than 20 to 25 kilometres to avail the banking facility and most of the time banks do not have the proper amount of cash. The government can initiate facility of ATMs because it is less expensive than bank infrastructure.



- 4. Redressal Cell:-**People who dare to complain against wrong by MG official his/her complain is not taken into consideration. Maintaining Redressal cell data will help policymakers to amend the leakages occurring in the MGNREGA scheme. It is not possible that workers do not have any grievance against MG scheme like it appears in MG redressal dairy.

Sources:[http://mnregaweb4.nic.in/netnrega/citizen\\_html/citipoattend\\_repdist.aspx?level=DPC&sec=An&dc=3501](http://mnregaweb4.nic.in/netnrega/citizen_html/citipoattend_repdist.aspx?level=DPC&sec=An&dc=3501).

- 5. Asset Creation:-**Many of the villages do not have basic infrastructures like hospitals, schools, Cold storage, Polly houses and animal husbandry MG should ensure that maximum amount of fund should be allotted towards the assets creation not towards same construction work MG should allow separate amount of budget for repair and maintenance and fresh fund should only be allotted to creation of new infrastructure. One of the major problem faced by every village of Uttarakhand is a problem of a power supply this is because of centralisation of power grids. There are numerous amount of power generation plants on river Ganga but centralisation of electricity grid create a shortage of supply because a major amount of energy is lost in the transformation from the production unit to distribution grids. The MG work should be confusing on making every village self-sufficient from the problem of a power cut MG workers should employ in the construction of check dams and other water conservation project through which villages can have self-sustainability.
- 6. MG and Agriculture:-**The majority of villagers are proletariat and dependent on government rationing or their agriculture production. Therefore villager's indulge in disguise employment there are numerous amounts of Agric and medical plants which only exist in Uttarakhand hills MG officials can hire people for production of medical plants or Agric production which will have lucrative results.

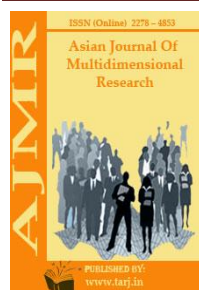
## **CONCLUSION**

Both the blocks have different employment opportunity and accessibility to resources but among both Purola have more dependency towards MG scheme this is due to higher percentage of employment under MG than Bhatwari this implies that Bhatwari have more employment opportunities than Purola. Purola also have a higher amount of unemployment in the young population due to higher percentage involvement under MG work (age group 18-30). Therefore much of the fund's allotments were used to curb disasters cracks with a subsequent amount of asset creation like Water-Conservation, Watershed management, Irrigation, Land-development, Road-connectivity. MGNREGA is able to increase a certain amount of income expenditure in rural hills of Uttarakhand but MG is still not used to its potential.

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## IMPACT OF DISABILITY ON EDUCATION, HEALTH AND EARNING: A STUDY

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### ABSTRACT

*People with disabilities do not have equal access to health care, education and earning opportunities. They do not receive the care, affection and services that they require, and get alienated from everyday life activities. People with disabilities is also an important development issue with an increasing body of literature showing that persons with disabilities experience worse socioeconomic outcomes and poverty than persons without disabilities. The concerns and issues related to disabled need both awareness and scientific understanding. Based on a sample of 240 respondents selected from Srinagar district of Kashmir valley, the study examines the impact of disability on education, health and earning. A random sampling technique was used to collect information from the respondents. Besides, community members and socially notable persons were approached to seek their observations. For the present study, an explorative research design was used. This paper provides useful insights into the impact of disability on the education, health and earnings of disabled population and their unequal access to health care, education and earning opportunities.*

**KEYWORDS:** Disability, Impact, Education, Health, Earning, Srinagar, Kashmir.

## INTRODUCTION

### 1. UNDERSTANDING DISABILITY

Disability is a part of the human condition. Almost everyone will be temporarily or permanently impaired at some point in life, and those who survive to old age will experience increasing difficulties in functioning. Most extended families have a disabled member, and many non-disabled people take responsibility for supporting and caring for their relatives and friends with disabilities.<sup>1</sup> Every epoch has faced the moral and political issue of how best to include and support people with disabilities. This issue will become more acute as the demographics of societies change and more people live to an old age.<sup>2</sup> Disability has changed since the 1970s, prompted largely by the self-organization of people with disabilities, and by the growing tendency to see disability as a human rights issue. Historically, people with disabilities have largely been provided for through solutions that segregate them, such as residential institutions and special schools. Policy has now shifted towards community and educational inclusion, and medically focused solutions have given way to more interactive approaches recognizing that people are disabled by environmental factors as well as by their bodies. National and international initiatives – such as the United Nations Standard Rules on the Equalization of Opportunities of Persons with Disabilities - have incorporated the human rights of people with disabilities, culminating in 2006 with the adoption of the United Nations Convention on the Rights of Persons with Disabilities (CRPD).<sup>3</sup>

Disability is complex, dynamic, multidimensional, and contested. Over recent decades, the disabled people's movement - together with numerous researchers from the social and health sciences - have identified the role of social and physical barriers in disability.<sup>4</sup> The transition from an individual, medical perspective to a structural, social perspective has been described as the shift from a “medical model” to a “social model” in which people are viewed as being disabled by society rather than by their bodies. The medical model and the social model are often presented as dichotomous, but disability should be viewed neither as purely medical nor as purely social: persons with disabilities can often experience problems arising from their health condition. A balanced approach is needed, giving appropriate weight to the different aspects of disability.<sup>5</sup>

A person's environment has a huge impact on the experience and extent of disability. Inaccessible environments create disability by creating barriers to participation and inclusion. Examples of the possible negative impact of the environment include:

1. A deaf individual without a sign language interpreter
2. A wheelchair user in a building without an accessible bathroom or elevator
3. A blind person using a computer without screen-reading software.

Health is also affected by environmental factors, such as safe water and sanitation, nutrition, poverty, working conditions, climate, or access to health care. As the World Health Organization (WHO) Commission on Social Determinants of Health has argued, inequality is a major cause of poor health, and hence of disability.<sup>6</sup>

### 2. THE DIVERSITY OF DISABILITY

Disability is a universal feature and is found in all societies irrespective of sex, race, religion, colour, creed, region and culture<sup>7</sup>. The disability experience resulting from the interaction of

health conditions, personal factors, and environmental factors varies greatly. Persons with disabilities are diverse and heterogeneous, while stereotypical views of disability emphasize wheelchair users and a few other “classic” groups such as blind people and deaf people. Disability encompasses the child born with a congenital condition such as cerebral palsy or the young soldier who loses his leg to a land-mine, or the middle-aged woman with severe arthritis, or the older person with dementia, among many others. Health conditions can be visible or invisible; temporary or long term; static, episodic, or degenerating; painful or inconsequential. Generalizations about “disability” or “people with disabilities” can mislead. Persons with disabilities have diverse personal factors with differences in gender, age, socioeconomic status, ethnicity, or cultural heritage. Each has his or her personal preferences and responses to disability. Also while disability correlates with disadvantage, not all people with disabilities are equally disadvantaged. Women with disabilities experience the combined disadvantages associated with gender as well as disability, and may be less likely to marry than non-disabled women.<sup>8</sup> People who experience mental health conditions or intellectual impairments appear to be more disadvantaged in many settings than those who experience physical or sensory impairments.<sup>9</sup>

### **3. RESEARCH DESIGN**

#### **3.1. Universe and sample of the study**

The universe of the present study is district Srinagar of Kashmir valley. Kashmir has been severely affected by disability during the past two decades. The population of Jammu & Kashmir according to census 2001 is 10,069,917. So according to the report the number of disabled people in Jammu & Kashmir is 302, 670: (229,718) in rural areas and (72,952) in urban areas. The number of disabled among males is higher than the females. So for as males are concerned it is 171,816 and females it is 130,854. The study shows that the number disability in Srinagar district is 34, 844, (20,117) males and (14,727) females. The random list of the disability was prepared from the district Srinagar in Kashmir valley and information was sought from them. Random sampling was followed since the size of the universe was extensive. For this study, 240 respondents were selected.

#### **3.2. Hypothesis of the study**

People with disabilities do not have equal access to health care, education and earning opportunities. Disability has a deep impact on the education, health and earnings of disabled population at the individual, family and society level.

#### **3.3. Objectives of the study**

1. To understand the nature and dimensions of disability in District Srinagar of Kashmir valley;
2. To assess the causes of disability in District Srinagar of Kashmir valley;
3. To assess the impact of disability on the education, health and earnings of disabled population.

### **4. IMPACT OF DISABILITY**

Disability has significant consequences on individual, family and society. Person of disability feels loneliness; boundless into four walls economically dependent and medically not treated, unable to work due to amputated. Socially, their contact becomes limited and psychologically the depression occurs in them. Such people feel cut off from society and they become victim of their own disability.



#### 4.1. Impact of disability on education

All children have the right to an inclusive education. However, there are many barriers to the realization of this right in the lived experience of children and families. Current efforts towards upholding the rights of all children are impeded by a lack of understanding of inclusive education and misappropriation of the term. Additional barriers include negative and discriminatory attitudes and practices, lack of support to facilitate inclusive education, and inadequate education and professional development for teachers and other professionals. Ensuring that students with disabilities have access to and make progress in the general education curriculum is a mandatory responsibility in education today. Historically, special education students have received a different curriculum than their same age peers, and received limited to no exposure to grade appropriate general education content. This has especially been true for students who have the most significant cognitive disabilities. The National Centre on Education Outcomes in 2007 reported that students with significant disabilities have been precluded from instruction in academic standards until recently and as a result educators may not have the necessary experience or training to teach the general education curriculum to this population of learners.<sup>10</sup>

Children with disabilities are one of the many groups of children still not enrolled in primary education in developing countries. However, their educational exclusion and right to education are now receiving more policy attention. Progress has also been made on access to secondary education. However over 69 million children are still out of primary school, the quality of learning in many countries remains low and many significant social, geographic and other inequities remain, including those associated with disability (UNESCO, 2007, 2011). Until recently, the impact of disability has been somewhat neglected in relation to education in the global south. But several factors are now contributing to a change in this situation. First, progress on general enrolment is enabling more attention to be given to children who are harder to reach, many of whom are disabled. Second, there is increasing awareness that universal primary education will only be achieved if the participation in schooling of such children is secured. Third, there is more recognition of the rights of people with disabilities, including the right of children with disabilities to education, due to advocacy at both national and international levels. Fourth, there have been associated changes in attitudes towards people with disabilities and their capabilities. Finally, an increasing emphasis on rights and inclusion in relation to disability in northern countries is having some influence on approaches to development, including in relation to education.

There is an emphasis here on both the right to education per se and to equity and inclusion in the main school system as part of that right. It is however interesting to note that most education sector plans in developing countries do not make explicit reference to these rights frameworks. Rather, the emphasis is on increasing the participation of children with disabilities (or those defined as having special educational needs, which is a more common terminology in such plans) as part of the strategy to achieve Education For All and the Millennium Development Goal 2 of universal primary education. Although EFA and the MDGs are also concerned with rights and equity, it does seem that use of a rights framework for disability and education is implicit rather than explicit, and that the strongest political and policy link currently in developing countries is to particular international educational targets. It is also interesting to note a similar lack of an explicit rights basis in northern countries though some civil rights links in the US and disability discrimination legislation in the UK (DDA, 1995, 2005) and elsewhere, are

now having a significant impact, in terms of access to public buildings, public transport and other public services, most importantly schools.<sup>11</sup>

**TABLE 1: IMPACT OF DISABILITY ON EDUCATION**

<b>Impact/Reasons for not achieving education</b>	<b>Number of respondents</b>	<b>Percentage</b>
Dependent upon family	96	40
Psychologically depression	30	12.5
Physically paralyzed	29	12.08
Alienated from society	11	4.58
Cannot move outside	12	5
Faces economic problem	18	7.5
Weak social relation	9	3.75
Social stigma/humiliation	11	4.58
Unable achieve education	3	1.25
Cannot say	21	8.75
<b>Total</b>	<b>240</b>	<b>100.00</b>

**Source:** Field study carried out in district Srinagar, 2013

Table 1 shows that 40 percent of the respondents consider that due to disability they become dependent upon family; 12.5 percent of respondents feel they become psychologically disturbed which results in depression; another 12.08 percent respondents consider due to disability they become physically paralysed ; 7.5 percent respondents faces economic problem; 5 percent respondents cannot move outside due to disability; 4.58 respondents consider that due to disability they become alienated from society; 3.75 of respondents consider that disability is responsible for weak social relationship in society, another 4.58 percent respondents faces social stigma/ humiliation; another 1.25 respondents consider that due to disability they are unable to achieve education ; 8.7 percent of respondents were unable to give their response on this statement.

#### **4.2. Impact of disability on health**

While disability affects people of all races, ethnicities, genders, languages, sexual orientations, and gender identities, this does not mean that impairment occurs uniformly among racial and ethnic groups.<sup>12</sup> Health can be defined as “a state of physical, mental, and social well-being and not merely the absence of disease or infirmity”. Good health is a prerequisite for participation in a wide range of activities including education and employment. Article 25 of the United Nations Convention on the Rights of Persons with Disabilities (CRPD) reinforces the right of persons with disabilities to attain the highest standard of health care, without discrimination. A wide range of factors determine health status, including individual factors, living and working conditions, general socioeconomic, cultural and environmental conditions, and access to health care services. This report shows that many people with disabilities experience worse

socioeconomic outcomes than people without disabilities: they experience higher rates of poverty, lower employment rates, and have less education. They also have unequal access to health care services and therefore have unmet health care needs compared with the general population.<sup>13</sup>

Health inequalities are described as preventable and unjust differences in the health status between groups, populations or individuals. They exist because of unequal distributions of social, environmental and economic conditions within societies. These conditions determine the risk of people getting ill, their ability to prevent sickness, and opportunities access to the right treatments. People with a learning disability are a vulnerable group who experience health inequalities. They have diverse needs; often they will experience multiple health problems and have difficulties communicating. This can lead to challenges in terms of identifying health issues. Research shows that people with a learning disability are more likely to experience poorer health outcomes and have shorter life expectancies than the general population. Even though people with a learning disability have a right to access healthcare services in the same way as everyone else, they are less likely to get some of the evidence-based treatments and checks they need, and more likely to face barriers when accessing services.<sup>14</sup> There is a strong correlation between poverty and disability. Poverty may cause disability through malnutrition, poor health care and dangerous living conditions<sup>15</sup>.

**TABLE 2: IMPACT OF DISABILITY ON HEALTH**

<b>Impact</b>	<b>Number of Respondents</b>	<b>Percentage</b>
Health reduces continuously	26	10.83
Potential losses	6	2.5
Psychologically disturbed	38	15.83
Physically become paralyze	40	16.6
Unable to earn	18	7.5
All of the above	112	46.6
<b>Total</b>	<b>240</b>	<b>100.00</b>

**Source:** Field study carried out in district Srinagar, 2013

The above table 2 reveals that 10.38 respondents considers that disability is reduces health continuously while as 2.5 respondents consider that disability is responsible for potential losses, another 15.83 considers that disability disturbed them psychologically, 16.6 percent respondents consider that due to disability they become physically paralyze, another 7.5 percent of respondents consider that due to disability they are unable to earn, 46.6 respondents consider that all the above consequences effect them. Disability need not to be considered as an obstacle to success, the present study was a modest attempt to understand the condition and suffering of disabled persons related to the issues of education, health and earning. The disability experience resulting from the interaction of health conditions, educational factors, and earning factors varies.

### 4.3. Impact of disability on earning

Disability is a relative term (restriction of the ability to perform a normal human activity), and its measurement is beset with problems, including the lack of reliability and validity of the instruments, most of which are poorly standardized and produce non-comparable estimates. Poverty and disability seem to be inextricably linked. It is often noted that disabled people are poorer, as a group, than the general population, and that people living in poverty are more likely than others to be disabled. Well-being is associated with the ability to work and fulfill various roles in society. <sup>3</sup> But the links between poverty and disability do not appear to have been systematically examined, even in developed countries. In developed countries, a large part of the literature concerned with income-related aspects of disability has tended to focus on the quantitative impact of disability on educational achievement, earnings and income, and on the adequacy and equity of income maintenance schemes and other programs.<sup>16</sup>

Ill health or disability may be expected to reduce an individual's productivity in work and thus earnings, though this will vary depending on the requirements of an occupation and the severity of the disability. This reduced capacity for work may also change an individual's preferences away from consumption towards leisure. Additional difficulties in getting to and undertaking work may raise the disutility from work and thus increase the reservation wage. In addition, non-work income a person can obtain may increase with the onset of disability, which will similarly increase the reservation wage and reduce the probability of employment. However, it is possible that the observed inferior labour market outcome of the disabled is due, in part, to employers discriminating on the basis of disability. This may be the result of prejudice (Becker, 1971) or due to imperfect information, where an employer uses the presence of a disability as an indicator of the productivity level of the group (Phelps, 1972). This issue, separating the influence of observable characteristics from discrimination, has received considerable empirical examination. However, the existence and expectation of discrimination may also affect the decisions of the disabled with regard to participation and investment in education resulting in the disabled having inferior characteristics in the labour market.

An alternative method to separate the effect of health from the effect of discrimination has been to distinguish between groups of the disabled who are likely to face different degrees of prejudice. Johnson and Lambrinos (1985) identify the disabled population as those that are handicapped (defined as visible impairment subject to prejudice rather than by the severity of the disability) and find, whilst including an index of health problems and controlling for selectivity bias, that wage discrimination accounts for between thirty and forty percent of the offer wage differential. Baldwin and Johnson note that the presence of wage discrimination will force some individuals to exit the labour market, and may, therefore, explain some of the observed difference in employment rates. However, Baldwin and Johnson (1994) find the disincentive effects of wage discrimination account for only two of the twenty nine percentage point difference in employment rates between disabled men subject to prejudice and non-disabled men. Similarly, in a related study for females, Baldwin and Johnson (1995) find that wage discrimination accounts for less than one percentage point of the twenty six percentage point gap in employment. Using the same methodology UK studies such as Kidd et al. (2000) also find this effect to be small in magnitude.<sup>17</sup>

Disability is also inherently difficult to observe; and requires subjective assessment by both the affected individual and verification by members of the individual's social setting. The subjectivity of these judgments makes disability a behavioural phenomenon; and disability and

related topics like disability insurance become political issues. There is thus a large risk of bias in disability statistics - a recent study of disability insurance notes the large variation in the number of disability benefit recipients as a share of the labour force in several countries and posits that much, if not most, of this variation is linked to the incentives inherent in the various disability insurance programs.<sup>18</sup>

Across the world, people with disabilities are entrepreneurs and self employed workers, farmers and factory workers, doctors and teachers, shop assistants and bus drivers, artists, and computer technicians. Almost all jobs can be performed by someone with a disability, and given the right environment, most people with disabilities can be productive. But as documented by several studies, both in developed and developing countries, working age persons with disabilities experience significantly lower employment rates and much higher unemployment rates than persons without disabilities.<sup>19</sup> Lower rates of labour market participation are one of the important pathways through which disability may lead to poverty. In Article 27 the United Nations Convention on the Rights of Persons with Disabilities (CRPD) recognizes the right of persons with disabilities to work, on an equal basis with others; this includes the opportunity to gain a living by work freely chosen or accepted in a labour market and work environment that is open, inclusive and accessible to persons with disabilities. Furthermore, the CRPD prohibits all forms of employment discrimination, promotes access to vocational training, promotes opportunities for self-employment, and calls for reasonable accommodation in the workplace, among other provisions.<sup>20</sup>

A number of factors impact labour market outcomes for persons with disabilities including; productivity differentials; labour market imperfections related to discrimination and prejudice, and disincentives created by disability benefit systems. To address labour market imperfections and encourage the employment of people with disabilities, many countries have laws prohibiting discrimination on the basis of disability. Enforcing antidiscrimination laws is expected to improve access to the formal economy and have wider social benefits. Many countries also have specific measures, for example quotas, aiming to increase employment opportunities for people with disabilities. Vocational rehabilitation and employment services-job training, counselling, job search assistance, and placement - can develop or restore the capabilities of people with disabilities to compete in the labour market and facilitate their inclusion in the labour market.<sup>21</sup>

**TABLE 3: IMPACT OF DISABILITY ON EARNING**

<b>Impact</b>	<b>Number of respondents</b>	<b>Percentage</b>
Unable to earning	33	13.75
Effects earning capacity	24	10
Dependent on the family	118	49.16
Families income goes in debt	33	13.75
No impact	16	6.6
All of them	12	5
Cannot say	4	1.66
<b>Total</b>	<b>240</b>	<b>100.00</b>

**Source:** Field study carried out in district Srinagar, 2013



The information from the above table 3 indicates the consequences of disability on earnings. The most respondents (49.16 percent) 118 respondents became dependent on the family; (13.75 percent) 33 respondents as that they cannot move outside for earning; another (13.75 percent) 33 respondents, responses as families income goes in debt; (10 percent) 24 respondents as earning capacity suddenly reduced; (6.6 percent) 16 respondents had no impact upon them due to disability; (5 percent) 12 respondents faces all of the above consequences; and (1.6 percent) 4 respondents results were unable to give their response on this statement.

The finding of the study reveals that due to disability most of the respondents consider themselves dependent upon family; they also consider that the families were not in a position to rehabilitate them because of their low economic condition. However, despite all of these odds, the family of the disabled persons show great interest in giving them better treatment, better food, clothing, medicine and all other basic facilities of life. Due to physically paralyze they consider themselves alienated from the society results in weak social relations. It has also been observed the disabled people face economic problems results in depression. The study further reveals that the disabled people face economic leads to personality destruction and depression. It was also found that most of them have no separate special educational institutions which results in their educational backwardness and economic dependence. Although these disabled people has been provided some reservation in governmental jobs, but these facilities were only given to educated disables horizontally. The findings of the study also divulge that due to disability they are having fewer avenues to earn economy which affects their earning capacity.

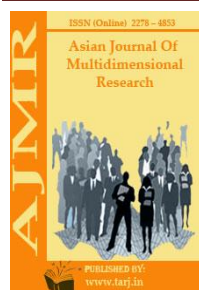
## 5. CONCLUSIONS

The human civilization, at various stages of its development, has always endeavoured to grapple with the myriad challenges of disability. Disability, surely, is a disadvantage for the individuals who endure it. But, it is also bigger disadvantage as well as a challenge for the larger society in any part of the world, which has so far not been able to offer an ideal platform in many parts of the globe to the persons with disabilities. It is because of various imperfections prevailing in the society, handicaps in individuals become disability on their way to progress and prevent them to lead life any other normal human being. People with disabilities have poorer health outcomes, lower education achievements, less economic participation and higher rates of poverty than people without disabilities. This is partly because people with disabilities experience barriers in accessing services that many of us have long taken for granted, including health, education, employment, and transport as well as information. A society cannot call itself modern and equitable, unless it makes sincere efforts to achieve equality of opportunity for all its less privileged citizens including the persons with disabilities.

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## **A STUDY OF THE OCCUPATIONAL STRESS AND COPING STRATEGIES OF SECONDARY SCHOOL TEACHERS WORKING IN HYDERABAD DISTRICT**

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### **ABSTRACT**

*The present study was conducted to find out the occupational stress and coping strategies adapted by the secondary school teachers to overcome work stress. A sample of 100 secondary school teachers working in Hyderabad district were chosen randomly. For finding out the stress levels of the teachers the occupational stress scale developed by Dr. Meenakshi Sharma and Dr. Satvinderpal Kaur(2014) was chosen and for knowing the level of coping strategies adapted by them a researcher developed 4 point rating scale was used. Appropriate statistical techniques were adopted to analyze the data. The results of the study indicated that the major source of work stress was work load and to overcome it the teacher resorted to social and community support strategies. The higher the number of coping strategies the lower is the occupational stress. The very purpose is distress education for children but lack of clarity is causing stress among teachers and ultimately the students. The results also confirmed that to release the stress the secondary school teachers were resorting to social and community support strategies. Speaking about the problem to the family members and friends was found to be very effective in handling the stress as they are the only ones who offer immense social, moral and emotional support.*

**KEYWORDS:** Occupational Stress, Coping Strategies, Secondary School Teachers.

## INTRODUCTION

Life in this world is too challenging. In order to survive an individual has to face these challenges and play variety of roles being professionally, socially, economically and emotionally sound enough. Education empowers the lives of the individuals with the various skills, abilities and competencies for enhancing their quality of life. The responsibility here lies with the teacher. The primary task in teaching is to modify the students both physically and psychologically. But earlier teaching emphasized only on the end product i.e. on the achievements of the students than on their all-round development.

The needs of the students, staff and the parents today vary from those of the same group even a few years ago. With the changing needs, the teachers also have to change accordingly. The teacher of today is supposed to possess a multi-faceted personality. The teachers are overburdened with lot of paper work and documenting the projects and records of the students. The teacher not only has to plan the lessons but also organize activities, maintain the necessary records, make purchases, administering the time table, using variety of teaching aids by adapting new techniques, motivating the students and monitoring their progress. Besides teaching the teachers are often involved in other activities like census duties, election duties, and invigilation duties etc. thus not giving them the scope to totally dedicate their efforts towards their actual duty of teaching. This has caused them to distance themselves from the goals to be achieved in the classroom. Unable to fill in the gap creates stress among teachers. The very purpose is distress education for children but lack of clarity is causing stress among teachers and ultimately the students. But due to the changes which occurred in the educational sector as a result of the increasing needs and the competition, the work place has become a highly stressed environment. Unable to equip the students with the needed skills creates dissatisfaction and stress among themselves which ultimately affect their effectiveness while teaching. A lot number of studies indicated that the teaching profession is highly stressed profession (Kyriacou, 1987).

Pressure due to frequent reforms, inadequate support from the administrative staff, poor working conditions, distance from home to school or place of work, excessive work load, no participation in decision making, lot of paper work and lack of resources have been identified as the factors causing stress among staff (Hammord and Onikamaq, 1997)

Occupational stress occurs when there is discrepancy between the demands at the work place and that of individuals (Tsutsumi et al., 2009).

## REVIEW OF LITERATURE:

The results of the study conducted by Vipinder Nagra and Harpreet Kaur (2014) on Occupational Stress and Coping Strategies among Secondary School Teachers found that the Secondary school teachers were experiencing moderate levels of occupational stress. The Secondary school teachers moderately use coping strategies to relieve their stress and both male and female secondary school teachers are using same level of coping strategies to get rid of stress irrespective of their subject stream. The results also concluded that the higher the use of coping strategies, lesser is the occupational stress being experienced by secondary school teachers.

Study conducted by Ashok Kumar (2014) on the Stress and coping patterns among physical education teachers of secondary schools found moderate levels of occupational stress. The high stress was found on the components like responsibility for persons, powerlessness and strenuous working conditions. Low levels of stress was found on role overload, role conflict and poor peer

relations among the teachers. The five coping strategies adopted are spiritual related coping, unproductive coping mechanism, unhealthy coping habits, social support coping and physical activity related coping. They seek social support by speaking to their near ones and physical related coping by doing regular exercises to overcome stress.

A study was conducted by Ali Qadimi (2014) study concluded that the type of school i.e. government and private had no influence on the coping strategies. A significant difference was also in the occupational stress and psychological health of government and private high schools. The male and female high school teachers did not differ in terms of their coping strategies but differed significantly in the level of occupational stress. The male teachers faced less occupational stress and were in better psychological health than female teachers.

D Lokanadha Reddy & R Vijay Anuradha (2013) conducted a study on Occupational Stress of Higher Secondary Teachers working in Vellore district and found that the long working hours and expectations to do more work, large class size with students of diverse needs and taking responsibilities for the activities of others are the major stressors causing high level of stress among the higher secondary teachers. The occupational stress coping strategies were to improve self-esteem, build self-confidence, work on building emotional intelligence competencies, develop a good sense of humor, practice yoga and meditation, exercise regularly, foster a supportive friend circle, cultivate hobbies, develop effective communication skills, and seeking professional help, if necessary.

Alexander-Stamatios Antoniou, Aikaterini Ploumpi, Marina Ntalla (2012) study on Occupational Stress and Professional Burnout in teachers indicated that the primary school teachers experienced higher levels of stress compared to the secondary school teachers. The women teachers reported high levels of occupational stress and low levels of personal accomplishment than the male teachers. The results further confirmed that the level of stress teachers experience depends on the coping strategies they adapt. The teachers with low levels of stress were found to use more active coping strategies while teachers with higher levels of stress were found to use more passive coping strategies. A positive correlation was found between avoidance coping strategy and teacher's occupational stress.

Jan Richards (2012) conducted survey on Teachers Stress and Coping Strategies and concluded that the teachers nationwide were highly stressed and the teachers who coped successfully with the stress of teaching rely on strong relationship with supportive family and friends. They choose positive attitudes, as well as humor, to sustain themselves and they carve out time for solitude, reflection and other beneficial activities like exercise or hobbies. Resorting to physical exercises was the best strategy adopted to overcome stress at work.

Study was conducted by Sakineh Gholamzadeh, Farkhondeh Sharif and Fereshteh Dehghan (2011) on the Sources of occupational stress and coping strategies among nurses found the problems related to physical environment, work load, lack of support as stressors. A large proportion of nurses used Emotion focused strategy while problem focused strategy was used less. Further the study concluded that coping skills, positive reappraisal and self-controlling were extremely important.

## **OBJECTIVES OF THE STUDY:**

- 1) To study the level of occupational stress of secondary school teachers.
- 2) To study the level of coping strategies adopted by secondary school teachers.



- 3) To study the relationship between the level of occupational stress and the level of coping strategies adapted.

### **HYPOTHESES:**

- 1) There will be no significant difference in the level of Occupational Stress of secondary school teachers.
- 2) There will be no significant difference in the level of Coping Strategies adapted by the secondary school teachers.
- 3) There will be no significant relationship between the level of occupational stress and the level of coping strategies adapted.

### **METHODOLOGY:**

The study adopted survey research method. The secondary school teachers working in Hyderabad district constitute the population. A sample of 100 secondary school teachers were chosen using simple random sampling technique. The Teachers Occupational Stress Scale (TOSS) developed by Dr. Meenakshi Sharma and Dr. Satvinderpal Kaur(2014) was employed for data collection. It consisted of 30 discriminating items belonging to nine dimensions of teacher's occupation. Each item of the scale was answered on a 5 point scale and has five options i.e. Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SDA). The maximum or total score of the occupational stress scale is 150 and minimum scores is 30. For finding out the various coping strategies adapted by the secondary school teachers the researcher basing on the review of related studies has developed a four point Likert type scale. The scale consisted of 40 items. The items or statements are those strategies which the secondary school teachers adapt to overcome stress under five dimensions i.e. (i) Problem focused coping strategies, (ii) Emotion focused coping strategies, (iii) Physical coping strategies, (iv) Direct action coping strategies and (v) Social and Community support coping strategies. Depending upon the frequency of usage of coping strategies, the researcher has given four points ranging from Always, Often, Sometimes and Never to each item. There are no negative items in the tool. Items were given a score of 4, 3, 2 and 1 for Always, Often, Sometimes and Never respectively. The maximum or total score of the scale is 184 and minimum score of the scale is 40. Appropriate statistical techniques of Measures of central tendency, t test and correlation coefficient were employed for analyzing the data.

### **ANALYSIS AND INTERPRETATION:**

Hypothesis 1: There will be no significant difference in the level of Occupational Stress of secondary school teachers.

The occupational stress scores of the total sample of 100 secondary school teachers were distributed into three levels to assess them with High, Moderate and Low level of occupational stress.

**TABLE 1 CLASSIFICATION OF OCCUPATIONAL STRESS**

S.No	Score on OS Scale	No. of teachers	Level of OS
1	Below 80	11	Low OS
2	Between 80-100	64	Moderate OS

3	Above 100	25	High OS
Total sample		100	

The results from the above table 1 clearly indicate that the secondary school teachers are facing moderate levels of stress as majority of teachers OS scores fall between the ranges 80-100. These results are in lines with that of the studies conducted by G. Lokanadha Reddy and R. VijayaAnoradha (2013); S.S.Jeyaraj (2013) VipenderNagra&Harpreet Kaur (2014) and Sarita Arora (2013).

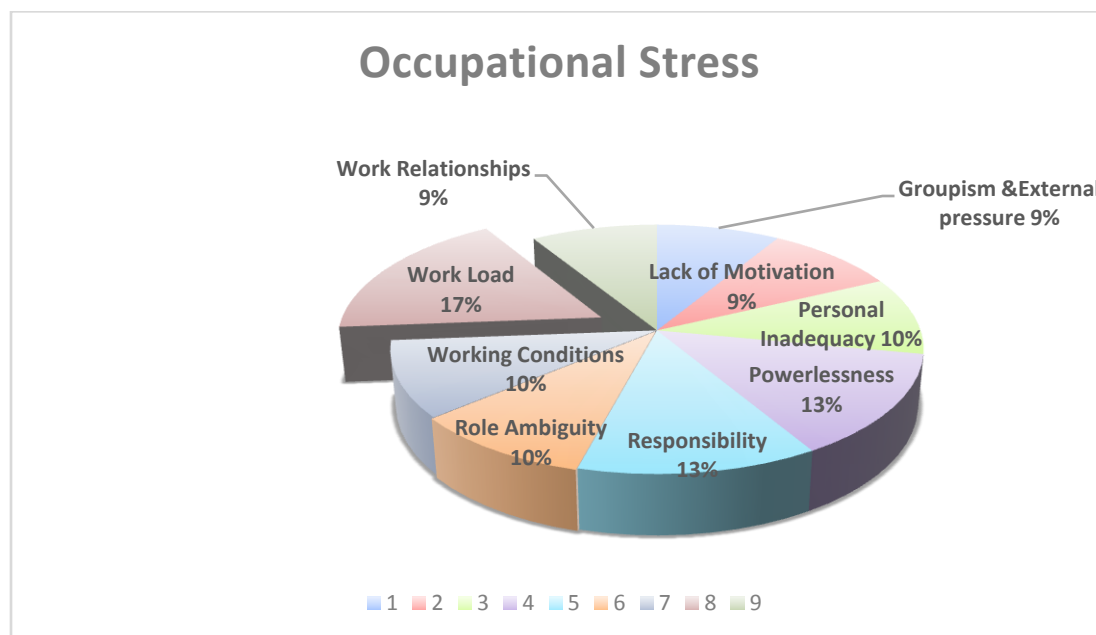


Fig 1: The dimension wise percentage of respondents is represented in the pie chart.

The highest percentage of 17% for workload dimension indicate that the work load of the teachers is causing a lot of occupational stress. In addition to teaching, the teachers are overburdened with extra administrative work and most of the time being kept busy supervising co-curricular activities. Due to heavy work load they are often forced to bring their official assignments home. As a result they feel physical and mental stress after working hours and are unable to perform the work which they want to perform. The results are supported by the studies conducted by Smilansky (1984), Lokanadha Reddy & Vijay Anuradha (2013), Ansarul Hassan (2014) which also concluded that it is the heavy work load of teachers which is a major source of stress.

Hypothesis 2: There will be no significant difference in the level of Coping Strategies adapted by the secondary school teachers.

The coping strategies scores of the entire sample i.e. 100 secondary school teachers are also classified as mostly used (with scores 130 and above), moderately used (between 120 and 130) and least used (120 and below).

**TABLE 2 CLASSIFICATION OF COPING STRATEGIES**

S No	Coping Strategies	No of teachers
1	Mostly used coping strategies	27
2	Moderately used coping strategies	53
3	Least used coping strategies	20
	Total	100

The results from the above table clearly indicate that 53 secondary school teachers are moderately using coping strategies. Since they are moderately using coping strategies they are able to considerably reduce occupational stress. The strategies adapted are represented in the form of pie chart as shown below

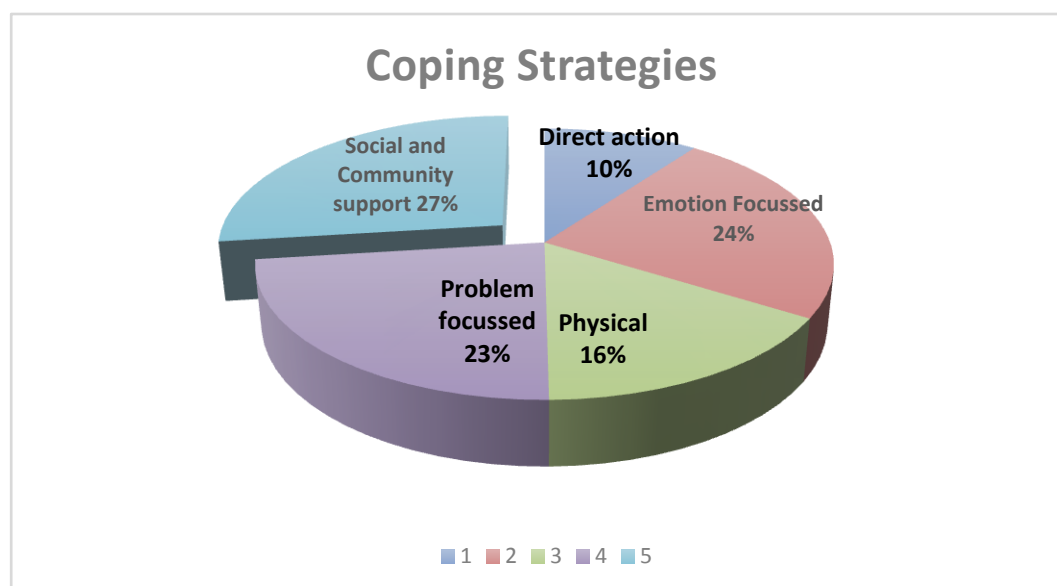


Fig. 2 Dimension wise coping strategies adapted by secondary school teachers

The above chart clearly show that 27% of the teachers adopt Social and Community support strategies i.e. receiving support from family and friends at times of need to overcome stress. The results are supported by the findings of Leemamol Mathew (2011) who found Social support, task strategies and home and work relationships as the major coping strategies adapted by the teachers. The results are further supported by Jan Richards (2012) which also concluded that the teachers who coped successfully with the stress at work relied on strong relationships with supportive family and friends.

Hypothesis 3: There will be no significant relationship between occupational stress and coping strategies adopted by the secondary school teachers.

To find out the relationship between occupational stress and coping strategies Pearson correlation was calculated the results of which are given in the table below

**TABLE 3 CORRELATIONS OF OCCUPATIONAL STRESS AND COPING STRATEGIES**

Occupational Stress	Coping Strategies	
	Pearson Correlation	-0.216
	Sig. (2-tailed)	0.012
	N	100

The results of the above table 3 clearly show that the Pearson correlation was found -.216 indicating that there is moderate and negative correlation between the two variables i.e. occupational stress and coping strategies. To relieve the occupational stress the teachers are moderately using the coping strategies as a result they are able to maintain balance in life. If the secondary school teachers are mostly using coping strategies they are able to significantly reduce their occupational stress and if the coping strategies are least used then they are found to face high occupational stress. Hence the more the use of coping strategies the lesser will be the occupational stress and vice versa. The results of the present study are supported by the study conducted by VipinderNagra and Harpreet Kaur (2014), Reeta Chopra and RadhakantaGartia (2009), Singh Y.G. (2011) and Anita Rani (2011) which also found a negative relation between occupational stress and coping strategies and that the more the use of coping strategies lesser will be the occupational stress. Study conducted by JayashreeNayak (2008) and Kyriacou and Chien (2004) also concluded in their study that the best way to overcome stress is to adopt effective coping strategies.

### CONCLUSIONS:

The secondary school teachers were found to be moderately stressed. The major source of occupational stress was found to be excessive work load. The new policies implemented have created lot of confusion on part of teachers as result they were involved in lot of paper work without proper clarity on the concept. In addition to regular teaching they are involved in assigning project work to students. The results also confirmed that to release the stress the secondary school teachers were resorting to social and community support strategies. Speaking about the problem to the family members and friends was found to be very effective in handling the stress as they are the only ones who offer immense social, moral and emotional support. The physical coping strategies were also found to be very effective. The results further concluded a negative correlation between the occupational stress and coping strategies. The higher the level of coping strategies the lower is the occupational stress and vice versa.

### DELIMITATIONS:

- 1) The study is delimited to only Secondary school teachers.
- 2) The study is delimited to Hyderabad district.

**Educational Implications:** The major source of the Occupational stress was found to be the work load of the teachers. The work load of the teachers should be reduced with more of teaching learning than the paper work. Practical work and not paper work on part of the teacher and students makes the teaching learning process effective and reduces the teacher burden. No other duties such as election, census, survey etc should be allotted to teachers besides teaching. Clarity on the implementation of educational policies should be given for the effective implementation of the same. Stress management techniques should form part of the teacher

education curriculum. Teachers should be adequately trained to use appropriate coping strategies effectively to avoid stress depending upon the encountered problem.

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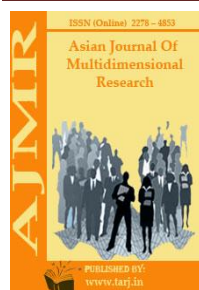
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## POLICE PUBLIC RELATIONS: NEED FOR CHANGE

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### ABSTRACT

*The police force is far from efficient, it is defective in training and organization, it is inadequately supervised, it is generally regarded as corrupt and oppressive, and it has utterly failed to secure the confidence and cordial cooperation of the people'*

*– A.H.L.Fraser, Chairman of the Second Police Commission*

*The constitution of India provides us ample environment to live with dignity and liberty. It also ensures socio-economic and political justice to the people. But our police administration is not able to work in accordance with the constitutional values. Everyone knows that police administration does not honour the democratic values in providing requisite protection to the common masses. In turn, they have resentment against the police. The police personnel prefer to serve the vested interests of the politicians and do not provide justice to the common people. The image of police is not good because of unnecessary intervention of politicians, bribe, incompetency, rude behaviour, indifferent attitude and non cooperation. This may be due to limited staff, lack of infrastructure, lack of e-governance, unhygienic working conditions, castism, violation of rules, biased working etc. All these factors adversely affect the relations between police and public. It can be bridged by and through taking some concrete steps like sound policy for police, political commitment, good training, handsome salaries and allowances, homes and schools for their children, leave provision, infrastructural development, frequent police-public interactions, awards and punishment attitudinal change, regular monitoring and*



*follow up actions, political and administrative commitments, e-governance, autonomy and accountability.*

**KEYWORDS:** *Police, Corruption, Government, Accountability, Information, Crime, Violence, Law, Board, Malpractice, Transparency, Command, Rigidity*

## INTRODUCTION

The Indian police system, when the British rulers first conceived it, was particularly designed and structured to enforce law and public order primarily for sustaining the foreign rule. As part of the strait-jacket administration that was put in place soon after the patriotic uprising of 1857 by some sections of Indian soldiers against the British command, it had functioned as a loyal adjunct of the government for over 140 years. The statutory basis for the Indian police is the Police Act of 1861 which put the police squarely under the control of the government. The position has remained the same after Independence. The old Police Act continues to be law without being replaced by any fresh legislation to fit our democracy after Independence<sup>1</sup>.

## CONSTITUTIONAL PROVISIONS

'Public Order' and 'Police' have been mentioned in the 1 and 2 respectively in the State List in the Seventh Schedule of the Constitution. Each State has, therefore, exclusive power to legislate in regard to its police system and also has full administrative control over the police in the State. The Central Government can exercise similar power in regard to 'Public Order' and 'Police' in the Union Territories only. Under entry 80 of the Union List, the Centre has powers to extend the jurisdiction of the members of the police force of one State to another State, but it can be done only with the consent of the latter State. Under entry 2A of the Union List, the Central Government has power to deploy any armed force of the Union or any other force subject to the control of the Union or any unit thereof in any State in aid of civil power. Powers under this entry are invoked only in a serious emergency when the civil authorities in a State request the assistance of the armed forces of the Union for maintaining public order<sup>2</sup>.

The country's image has been battered by screaming news headlines of human rights abuses, tragic episodes of rapes, spiralling crime rates and endemic violence. Close on the heels of the Delhi gang rape episode, the case of a young woman in Punjab who was recently beaten up by policemen for trying to lodge a case of sexual harassment caused outrage once again. In many parts of the country, distrust of the police is so high that people either prefer to live with crime/harassment or enter the perceived safety of parallel protection rackets; the police system being often described as inept, malevolent and a political tool.

## PERFORMANCE OF POLICE SYSTEM:

The performance of police system has not been good because of certain factors, which are discussed in brief.

### Obsolete laws

The very fact that the present system of policing is governed by Centuries' old Police Act of 1861 that is still in force, which indicates the necessity of police reforms in India. It has been observed that even after terrorist attack, multi-crore scams and internal security threats like Naxalism, political class is less willing to loosen its grip on police and is not letting them do their

job thereby further accentuating the problem of Red Tapism in India. They are in total subordination to ruling party and most of the times themselves are involved in the crime.

### **POOR SELECTION AND TRAINING PROCESSES**

The police selection procedures and training related to the basic responsibilities, laws and investigative processes are poorly designed and unprofessionally implemented. What one is left with is a structure that is not aligned with the responsibilities it has to shoulder. Besides, morale is low due to overextended work hours, very poor remuneration and poor living standards. Most states have their police training colleges or academies that impart training to directly recruited Sub-Inspectors and Deputy Superintendents of Police and training schools for the training of constabulary. The State Governments have not been able to spare adequate resources to bring about the desired improvements in the state of police training.

### **Politicisation**

There is a strong case for the police to be given more independence from the state's political machinery. The Supreme Court has aptly observed that "*many of the deficiencies in the functioning of police had arisen largely due to an overdose of unhealthy and petty political interference*" before concluding that it was important and in interest of the nation to "*insulate the police from political interference*".

### **Corruption and Criminalisation**

Corruption amongst police ranks is the stuff of legend. According to a report, the police in Delhi are the most corrupt. Stories abound about bribery, pre-FIR (First Information Report) doctoring of facts and extortion by the police to file a report. Between 2010 and 2011, complaints against state police officers in the country rose by 5.7%, from 58,438 to 61,765. What's more, in 2011, only 47 of the 61765 complaints ended in conviction.

### **Capabilities and Infrastructure**

An investigative team that has been specifically designed to look into crimes by police officers and one that is modeled after the Internal Affairs divisions of police forces in other countries could be an effective remedial measure. Officers in these units cannot be subject to the authority of the state ministers or the very police officers they are investigating thereby removing conflict of interest and allowing them to function without fear of retaliation.

India is the target of an ever-growing list of terrorist groups, insurgent forces and criminal networks. Even petty criminals are now in possession of hi-tech gadgets that allow them better access and reduce their chances of being caught. In such an environment, the need for skill and competency up-gradation of the police force is a sine qua non.

### **Tortures in Police Custody**

The Amnesty International report asserts that Torturing suspects has become part of the police's daily routine throughout India, where hundreds if not thousands of people have died from beatings in recent years, and women are regularly raped in jail cells. The human rights group's secretary general, Ian Martin, further alleged "a pattern of persistent abuse in the administration of justice in India," which governments and ruling parties have failed to curb.

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## Reports Shelved

Over the past four decades there have been a multitude of Committees, Panel, Reports and Recommendations, with clearly laid out roadmaps and supported by detailed descriptions on the kind of design and overhaul that is needed. Unfortunately, most of these reports end up in a black hole or gather dust in a filing cabinet. In fact, the Chief Justice of India remarked in July 2009 “*Not a single state government is willing to cooperate. What can we do?*”

## Absence of Sensitization to Vulnerable Sections

There is not only a need to bolster law-enforcement agencies in order to increase the police-to-citizen ratio, but to also do it in a strategic manner. It is imperative that many more female police officers be recruited to fill the rank and file as well as occupy leadership positions. At present, government rules require only 10% of police personnel to be women; several states report ratios that are well below even the prescribed norm. Senior female officers are rare, causing a significant gender imbalance in key leadership positions. This must be remedied immediately.

## Crisis of Leadership and Command

India needs to create institution that can focus on leadership building within the police force. Napoleon’s credo ‘*there are no bad soldiers, only bad officers*’ holds true in India. Promising individuals in the police must be nurtured and cultivated in an attempt to better the institution overall. It needs to be emphasized that the duties of the police as prescribed in section 23 of the Indian Police Act, 1861, have become totally outdated. Much water has flown down the Ganges since then”, notes the Malimath Committee Report, before it goes on to highlight how newer dimensions that have been added to the nature of crime compel “the Police Departments to divert a large chunk of their resources to these areas, leaving much less for the routine crime work”.

## Inadequate Manpower

A detailed report titled Data on Police Organisations in India by the Bureau of Police Research & Development contains damning statistics. As of 1 January, 2011 there were 130 police personnel for every 100,000 citizens. In states like Uttar Pradesh and Bihar, which have traditionally had greater law and order issues, the ratio dips to about 65-75 police personnel per 100,000 citizens. Compare this with global norms - 220 as laid down by the United Nations, 220-280 as followed by Sweden, Norway, Canada, Australia and USA. Ironically, while the average Indian reels under the impact of such an abysmal police personnel to population ratio, a clutch of about 15,000 VVIPs are protected by over 47,000 police personnel, many of whom are better trained than the average policemen.

Apart from this, there are some factors responsible for having gap between police and public as difference between theory and practice in the implementation of rule of law; Political patronage; Intervention of local politics in day to day police work; Lack of work culture in police department; Lack of ethical values; Casteism in police department; Intoxication of powers; Misuse of powers; Unethical practices; Long hour of duties; Misbehavior with people; Improper control over police; Lack of coordination; Inadequate salaries and other benefits; Lack of human values; Rigidity of laws; Unawareness of people about some common laws; Illiteracy of people; Dominance of influenced persons in police ;Unaccountability of police staff; Unconstitutional working; Excessive workload ;Lack of staff; Lack of infrastructure facilities; Absence of new technologies; Dishonor of supreme court decisions; Lack of e-governance; Paucity of funds; Indifferent to stop crime; Absence of public trust; Lack of anticipated vision; Lack of concrete

policy for police; Lack of governmental commitment; Accountable towards rulers not for public and Traditional attitude.

### **Situation at ground level**

- Every Circle or Sub Inspector is chosen after consideration of local MLA's choice.
- Caste & "flexibility" of the concerned police also determines posting.
- At the State level, promotion is offered to those who can "serve" to ruling party.

### **Police-Public Ratio**

Global average ratio of police-population is 270 per one lakh. In India it is 120 per one lakh. With so less police, ill-trained, ill-equipped and most of them trying to save politicians, people of India are really vulnerable.

### **Reforms Required**

- Beef up security apparatus;
- strengthen the intelligence gathering ability;
- bring about coherence and coordination between different police and security agencies;
- modernizing the police force;
- enabling our cities with infrastructure to deter terrorist attacks; and
- most importantly making police people friendly

### **Why Slow Reforms?**

- Police as a subject comes under State List.
- Most of the states are still following the 1861 police act with some minor changes.

### **Some Commissions & Committees on Police Reforms**

Many commissions and committees have been constituted on police reforms till now. Prominent among them are as follows:

#### **Gore Committee on Police Training**

Some Suggestions:

- impart necessary knowledge and skills;
- create the right attitude;
- generate effective decision making ability; and
- Stimulate critical and innovative thinking.

#### **The National Police Commission**

The National Police Commission observed and suggested:

- Current police training is unsatisfactory in terms of quality & quantity. Should be improved.
- The objectives of the training of police officers should be the inculcation of knowledge and professional skills and the development of attitudes appropriate to their work & the people

they come into contact with. Police training should, in addition, be given the necessary bias for science and technology.

- The nature of police work calls for persons of exceptional ability, intelligence and alertness and a high level of physical courage and stamina. They should also be honest and impartial and men of character<sup>3</sup>.

### **The Ribeiro Committee on Police Reforms**

The Ribeiro Committee on Police Reforms gave the following important suggestions.

- A Security Commission should be set-up in each State consisting of the Minister in charge of Police as the Chairman, the Leader of the Opposition, the Chief Secretary of the State, a sitting or retired judge nominated by the Chief Justice of the State's High Court and three other non-political citizens of proven merit and integrity as members. The name of the Commission should be "*The Police Performance and Accountability Commission.*" (PPAC).
- Besides the Commission, a *District Police Complaints Authority* will be set up in each Police District as a *non statutory body* to examine complaints from the public of police excesses, arbitrary arrests and detention, false implications in criminal cases, custodial violence, etc and to make appropriate recommendations to the Police Performance and Accountability Commission, as well as to the Government and to the State or National Human Rights Commission.
- In every State, a Police Establishment Board should be constituted with the DGP and his four senior-most officers, borne on the IPS cadre of the State but who are immediately junior to the DGP, as members to monitor all transfers, promotions, rewards and punishments as well as other service related issues<sup>4</sup>.

### **Soli Sorabjee Committee or Police Act Drafting Committee:**

Committee drafted a new model police bill to replace the colonial 1861 Police Act & gave a model police act in 2006.

### **Supreme Court (SC) Case Related to Police Reforms:**

Prakash Singh Vs. Union of India SC *under Article 142* of the Constitution (Power of the Supreme Court to do complete justice) empowered it to issue directives regarding a radical revamp of the Police Act, 1861. Directives were two split:<sup>5</sup>

- I. To grant immunity to the police from Executive & politicians
- II. To separate from the Act of all its colonial vestiges and transform its focus from "rule" to "governance". SC gave 7 binding directives which were meant to be implemented immediately via legislation or executive order. But states are unwilling to do so.

Directions made by the Honorable Supreme Court constitute a *State Security Commission* (SSC) to:

- Ensure that the state government does not exercise unwarranted influence or pressure on the police
- Lay down broad policy guideline and
- Evaluate the performance of the state police

- Ensure that the DGP is appointed through merit based transparent process and secure a minimum tenure of two years
- Ensure that other police officers on operational duties (including Superintendents of Police in-charge of a district and Station House Officers incharge of a police station) are also provided a minimum tenure of two years
- Separate the investigation and law and order functions of the police
- Set up a Police Establishment Board (PEB) to decide transfers, postings, promotions and other service related matters of police officers of and below the rank of Deputy Superintendent of Police and make recommendations on postings and transfers above the rank of Deputy Superintendent of Police.
- Set up a Police Complaints Authority (PCA) at state level to inquire into public complaints against police officers of and above the rank of Deputy Superintendent of Police in cases of serious misconduct, including custodial death, grievous hurt, or rape in police custody and at district levels to inquire into public complaints against the police personnel below the rank of Deputy Superintendent of Police in cases of serious misconduct
- Set up a National Security Commission (NSC) at the union level to prepare a panel for selection and placement of Chiefs of the Central Police Organizations (CPO) with a minimum tenure of two years.

### **The Monitoring Committee**

Three members Monitoring Committee was appointed in May 2008 to look into the implementation of the Court's directives by the Governments.

Members: Headed by *Justice K.T. Thomas*- a retired judge of the Supreme Court, *Mr. Kamal Kumar* (a retired IPS officer) and *Mr. Dharmendra Sharma* (Joint Secretary of Police Modernisation.)

As it was not possible to visit every state they only visited 4 states to make report namely:- Maharashtra (West Zone), Uttar Pradesh (North Zone), Karnataka (South Zone) and West Bengal (East Zone) as they were populous & defaulters according to committee. Five reports were submitted to SC based on these which clearly indicated lack of compliance following which court issued notices to the four states<sup>6</sup>.

### **New Police Legislation**

- In 2005, the Ministry of Home Affairs constituted the Police Act Drafting Committee (PADC) to draft a Model Police Bill for India.
- The PADC submitted its draft Model Police Bill, 2006 to the Home Ministry (after the SC judgment). It complements the directions of SC & helps to implement the same effectively.
- It was hoped that states would enact their own police legislation according to Model Police Bill & SC Directives; but it never happened<sup>7</sup>.

### **Public Input into Legislative Reform**

- Only 11 states have enacted fresh Police Acts to replace the old legislation. Six states have completed the drafting of new police legislations or tabled bills in the assembly. Two states are currently in the process of drafting.



- Communities are the main beneficiaries & main victims of police reforms. But, Interestingly, none of the bills of the states took account of transparency and public accountability nor involved public in making legislation except Kerala. Kerala appointed 10 members Select Committee & visited each district to take public feedback for the bill.
- Following steps should be taken for public participation:
  - a. Inviting public and civil society participation in drafting committees;
  - b. Inviting public submissions on the type of police service communities would want;
  - c. Inviting input from police at all levels about the type of service they want to be part of; and
  - d. Ensuring that draft that go before the state assemblies and Parliament is in the public domain and made available for comment under proactive disclosure provisions in section 4(1)(c) of the Right to Information Act.

### Reasons for Non-Compliance on Part of States

- States are saying that this will lead to “*juristocracy*” i.e. increased influence of Judiciary in the matter of legislation.
- Constitutional scheme of “*separation of power*” was destroyed as all powers were integrated & assumed by SC.
- State of Maharashtra & UP are saying that in Prakash Singh case, the SC had issued “recommendations” and not “directions” & had taken help of following pleas :

Under *Articles 154 & 163*, the Executive power of the State is vested in the Governor who shall act in accordance with the aid and advice of the council of ministers or the cabinet.

Under *Article 163 (3)*, they said that the Court has no power to question how such advice has been tendered. Emphasis was laid on “shall” (which in law means mandatory in contrast with “may”, which means voluntary)<sup>8</sup>.

### SUGGESTIONS

The attitude and working of police can be changed through the following ways:

#### Local Policing – More Responsive and Accountable Enforcement

There are several policing functions that concern the day-to-day life of common citizen and are very local by nature e.g. patrolling, traffic regulations, prosecution for offences like public nuisance or eve teasing. The enforcement of law for these cases could be entrusted to a local force accountable to panchayat or citizen committees. This local force will have a small area under its jurisdiction, resulting in better interaction and involvement with citizen.

#### Making Transfers and Promotions Transparent

Payments of bribes for postings and promotions are a well-known phenomenon in Police department. As a result the Policemen who have paid their way through try to recover the amount as soon as possible and corruption becomes a tool for getting better return on “investment”. Transfers are also commonly used as a retribution tool against officers as a pressure tactic. However, if a system could be designed where postings are automatically generated by software after a given time interval for each employee, a big chunk of corruption can be eliminated. Similarly, objective criterion for promotions could be articulated and

publicized so that individual judgment plays a limited part in promotions. This will reduce the need for bribes in order to get promotion.

### **Use of Information Technology**

Non-registration of complaints is the most common grievance of citizens interacting with Police department. Since the registration of complaint or FIR is the first step in justice delivery, citizen is forced to pay bribe. Use of technology for reporting and handling of cases can play an important role in arresting corruption. Filing of cases could be done through Internet and if required detailed information can be given later on. Case status could be made available online to bring in more transparency and make the Police force more accountable. FIR could be registered/ receipt issued through check posts or mobile vans<sup>9</sup>. Recently the Supreme Court directed the police across the country to upload all FIRs on officials' websites within 24 hours of registering them to protect the interests of the accused and their families. The order has been effective from November 15, 2016. A Bench comprising Justices Dipak Mishra and C Nagappan clarifies that FIRs in cases pertaining to terror, insurgency and sexual offences need not be uploaded. States with poor internet connectivity such as those the northeast, Jammu and Kashmir and Utrakhnad could take a maximum 72 hours.<sup>10</sup>

### **Performance Monitoring**

Establishing a system for monitoring the performance of Police can substantially increase the accountability of the force. Objective performance and efficiency indicators can be chosen and tracked to monitor the performance of the Police force. This will lead to having clear improvement goals for the force on objective and measurable parameters.

### **Minimizing Political Interference**

As advocated by National Police Commission a Chief of Police of a State should be given a fixed tenure of office so as to encourage functional independence. It has been commonplace in India for transfers and postings of officers to be used as a kind of reward and punishment, as a result of which, many chiefs of police have had allegiances to political parties. Also the selection of Police Chief could be entrusted to an expert committee (may be headed by UPSC chairperson). The committee may be given a pre-specified number of candidates, decided on the basis of seniority, to choose from<sup>11</sup>.

### **Good Governance in Police Department**

Governance is admittedly a weak link in our quest for prosperity and equity. We have an impressive governance infrastructure and significant successes to our credit. But we need to refashion the instruments to suit the emerging challenges. The quest for good governance - governance which is efficient, citizen centric and is rooted in a sound value system, is based on three inter-related fundamental ideas<sup>12</sup>.

The first is rule of law. Rule of law requires that laws and their implementation should be transparent, predictable and credible, and that those who make and implement laws should be accountable for their decisions. While the government of the day is accountable to the legislature, at the operating levels of administrations this accountability is often lacking. A steady pulse in the recommendations of the Commission is thus the emphasis on accountability at each level of administration and minimization of unfettered discretion in decision making. From accountability of decision making flows credibility, predictability and transparency.

### **Introducing Greater Accountability**

In today's scenario, there is very little accountability of Police to the citizen with regard to satisfactory delivery of services e.g. if a Police officer refuses to register a complaint. Unlike in other services like electricity or telecom, where if a citizen is not satisfied with the complaint redressed by the department, it has the option of going to the independent regulator, there exist no such mechanism in case of Police. It is very essential that accountability of officials at different levels be defined and a degree of immediate proximity to the people and third party intervention introduced. Public hearings could be an effective tool for this purpose, as shown in experiments with other services. A system could be introduced where; a few complaints against police are picked up every month (or some pre-decided time interval) for public hearing. The public hearings could be conducted by a panel of retired judges and prominent citizens.

### **Decentralization of power**

The 2nd ARC has noted the need for real decentralization of power with effective institutional checks for greater control by citizens on how they are governed. Judicial and police reforms need to ensure speedy, efficient and accessible justice and swift, sure and severe punishment for abuse of office. Self-regulatory mechanisms to uphold standards in professional groups are another area that requires urgent attention in the changing context. Finally, measures of accountability including the recently enacted Right to Information, well-designed citizen's charters with penalties for non-performance, independent and effective anti-corruption agencies, citizen involvement in the fight against graft and leakages will surely expose corruption much more easily and enforce compliance with acceptable norms of public conduct<sup>13</sup>.

### **Commission for Police**

A State Police Performance and Accountability Commission should be constituted. The tenure of the Chief of the Law and Order Police as well as the Chief of the Crime Investigation Agency should be at least three years. But this tenure should not become a hindrance for removal in case the Chief is found to be incompetent or corrupt or indulges in obstruction of justice or is guilty of a criminal offence. The State Government should have powers to remove the Police Chief but such order of removal should be passed only after it has been cleared by the State Police Performance and Accountability Commission. All officers and staff should have a minimum tenure of three years<sup>14</sup>.

### **Welfare Measures for the Police**

Rational working hours should be strictly followed for all police personnel. Welfare measures for police personnel in the form of improved working conditions, better education facilities for their children, social security measures during service, as well as post retirement should be taken up on priority. Major housing construction programmes for police personnel should be taken up in a time bound manner in all states.

### **Research**

The working of the Bureau of Police Research and Development needs to be strengthened by adequate financial and professional support, so that it could function effectively as an organization for inter alia analysis of data from all parts of the country and establish standards regarding different aspects of the quality of police service.

**Training of Police**

Deputation to training institutions must be made more attractive in terms of facilities and allowances so that the best talent is drawn as instructors. Training should focus on bringing in attitudinal change in police so that they become more responsive and sensitive to citizens' needs. Modern methods of training such as case study method should be used. All training programmes should include a module on gender and human rights. Training programmes should sensitise the police towards the weaker sections.

**Gender Issues in Police**

The representation of women in police at all levels should be increased through affirmative action so that they constitute about 33% of the police. Police at all levels as well as other functionaries of the criminal justice system need to be sensitised on gender issues through well structured training programmes. Citizens groups and NGOs should be encouraged to increase awareness about gender issues in society and help bring to light violence against women and also assist the police in the investigation of crimes against women.

**Crimes against Vulnerable Sections**

The administration and police should be sensitized towards the special problems of the Scheduled Castes and Scheduled Tribes. Appropriate training programmes could help in the sensitizing process. The administration and police should play a more pro-active role in detection and investigation of crimes against the weaker sections. Enforcement agencies should be instructed in unambiguous terms that enforcement of the rights of the weaker sections should not be downplayed for fear of further disturbances or retribution and adequate preparation should be made to face any such eventuality. The administration should also focus on rehabilitation of the victims and provide all required support including counseling by experts. Government must take concrete steps to increase awareness in the administration and among the police in particular, regarding crimes against children and take steps not only to tackle such crimes, but also to deal with the ensuing trauma<sup>15</sup>.

**Zero-tolerance Policing**

All public agencies should adopt a zero tolerance strategy towards crime, in order to create a climate of compliance with laws leading to maintenance of public order. Zero-tolerance policing refers to the strict enforcement of laws that police officers might otherwise not have enforced, exercising their discretionary authority. The concept has been linked, rather inappropriately and unfortunately, with the Broken Windows approach. While the idea of strict police enforcement is often popular with frustrated and frightened citizens, as well as with some police officers, widespread and indiscriminate police enforcement can have unintended negative consequences for both the local criminal justice system's operations and for police-community relations. Many police officials and scholars are harshly critical of the concept<sup>16</sup>.

**Citizen Friendly Registration of Crimes**

Registration of FIRs should be made totally citizen friendly. Technology should be used to improve the accessibility of police stations to the public. Establishing call centers and public kiosks are possible options in this regard. Police stations should be equipped with CCTV cameras in order to prevent malpractice, ensure transparency and make the police more citizen-friendly. This could be implemented in all police stations within a time frame of five years. The

performance of police stations should be assessed on the basis of the cases successfully detected and prosecuted and not on the number of cases registered. This is necessary to eliminate the widely prevalent malpractice of 'burking' of cases.

### **Role of Civil Society**

Citizens should be involved in evaluating the quality of service at police stations and other police offices. Government should incentivize citizens' initiatives. Formal mechanisms should be set up at the cutting edge level to involve citizens/ citizen's groups in various aspects of public order management.

### **Role of Media**

The Administration must make facts available to the media at the earliest about any major development, particularly activities affecting public order. In order to have better appreciation of each other's view points there should be increased interaction between the Administration and the media. This could be inter alia in the form of joint workshops and trainings. The Administration should designate points of contact at appropriate levels (a spokesperson) for the media which could be accessed during whenever required. A cell may be constituted at the district level which may analyse media reports about matters of public importance.

### **Community Policing**

Community policing is referred to by several names, most commonly as community-oriented policing, problem-oriented policing, community problem solving, neighborhood policing, and problem-based policing. Community policing is based on collaboration between police and citizens in a nonthreatening and cooperative spirit. It requires that police listen to citizens, take seriously how citizens perceive problems and issues, and seek to solve problems which have been identified. Effective community policing can result in enhanced quality of life in neighborhoods, reduction of fear of crime, greater respect for law and order, increased crime control and crime prevention, and greater citizen satisfaction with police services<sup>17</sup>.

### **CONCLUSION**

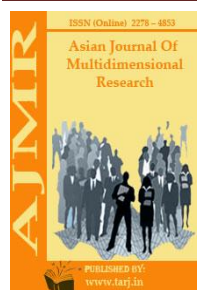
There are more than 20,000 police stations and posts across the length and breadth of the country and their working impose on the life of the common man irrespective of whether he has a complaint or not. It is a matter of grave concern that we have not able to transform the police into an instrument of service upholding the rule of law and inspiring confidence among people. Concerted efforts are required to bring the derailed working system of our police back on the track. This would be possible if the whole community is fully involved and the attitude of the police personnel is got changed through regular training, frequent police-public interactions, effective monitoring, evaluation and follow up actions.

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## CREDIT GROWTH OF BANKING SECTOR – A CAUTION IN BASLE-III REGIME

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### ABSTRACT

*The Financial Sector reforms initiated during 1991 are based on twin principles of operational flexibility and functional autonomy so as to enhance efficiency, productivity and profitability of the financial institutions and in turn accelerating the growth of real sector of the economy. The committee on Banking Regulations and Supervisory Practices (Basel Committee) had released the guidelines on capital measure and capital standards in July 1988 (called Capital Accord I) which were accepted by Central Banks of various countries including Reserve Bank of India. In India, it was implemented with effect from April 01, 1992. Further the committee released the revised version in June 2004 (called Capital Accord II) for adoption. The fundamental objective behind this revision is to further strengthen the soundness and stability of international banking system. The third installment of the Basel Accords (Basel III) was developed in December 2010, in response to the deficiencies in financial regulation revealed by the financial crisis of 2007–08. Basel III reforms strengthen the bank-level i.e. micro-prudential regulation, with the intention to raise the resilience of individual banking institutions in the periods of stress. Besides, the reforms have a macro-prudential focus also, addressing system wide risks, which can build up across the banking sector, as well as the pro-cyclical amplification of these risks over time. The macro prudential aspects of Basel III are largely enshrined in the capital buffers. The capital conservation buffer and the countercyclical buffer both are intended to protect the banking sector from periods of excess credit growth. It can be observed that where there is high credit*

*growth, Credit to GDP gap is positive and where the credit growth is low or declined, the credit to GDP gap is negative. The framework assigns the credit-to-GDP gap a prominent role as a guide for policymakers*

**KEYWORDS:** *Banking Regulations, Basel III, Credit to GDP gap, Financial Sector*

## **INTRODUCTION:**

The banking sector is the financial backbone of a country's economy. Any crisis in the banking sector affects every other sector of the economy adversely. In this era of globalization, a stable and profitable banking sector is not only important for the stability of the economy of one country, but also for the stability of the international market (Sarmah, 2017). Presently, Indian economy is considered as the fastest growing economies in the world. Financial Service Sector is, one of the most distinguished sectors, contributing to its high growth of Indian economy.

The role of financial sector in shaping fortunes for Indian economy has been even more critical. Indian banking system evolved as an instrument of economic growth only after the ushering in of planning era in India during the fifties. The first step towards this was the nationalization of the Imperial Bank of India in 1955. Further, in 19<sup>th</sup> July 1969 the imposition of social control on banks were followed by the first installment of nationalization. In a similar move, the second installment of nationalization of banks was made in 15<sup>th</sup> April, 1980 bringing into the public sector an overwhelmingly large share of banking business. Indeed, nationalization was a historic step in recognition of the potential of the banking system to promote broader economic objectives viz., growth, regional balances and diffusion of economic power

Its importance after economic reforms of 1991 has grown only manifolds to the extent that today it presently contributes to over 6 percent of India's GDP growth. It is the dynamic growth of financial services sector during post reform age that has helped it in assuming such an important place in Indian economy. Unlike in past when financial services sector mainly constituted of banking sector, today financial sector has broaden its reach to include sectors like insurance services, non-banking financial services, co-operatives, pension funds, mutual funds, capital market etc(SIMCON,2016).

Financial sector's contribution comes across even more strong in terms of revenue generation through tax and dividend collection by the Government surpasses billions of rupees every year. It also successfully maintaining healthy credit line to industrial sector as well as to overall economy is another important contribution of financial sector. Banks and non-banks in India have been discharging credit in billions to big, medium/small industries, entrepreneurs etc every financial year.

With improved availability of credit, the Indian economy during past two decades has managed to march towards higher economic growth. Reforms within banking sector during post liberalization era have especially proven to be prudent for credit disbursement in the country. The advent of private sector banks in particular opened a new chapter for Indian economy. Banks are also channelizing the small savings through its retail network for productive purpose (SIMCON,2016).

The committee on Banking Regulations and Supervisory Practices (Basel Committee) had released the guidelines on capital measure and capital standards in July 1988 (called Capital

Accord I) which were accepted by Central Banks of various countries including Reserve Bank of India. In India, it was implemented with effect from April 01, 1992. A supervisory framework was devised based on the common standards of risk assessments to require the banks to maintain a certain minimum fixed capital ratio, which is known as Basel Capital Adequacy ratio. The capital components include long term debt funds also by categorizing qualitative equality capital as Tier I and other as Tier II.

Capital (Tier I +Tier II)

Capital Adequacy ratio (CAR) = -----

Risk Weighted Assets (RWA)

Further the committee released the revised version in June 2004 (called Capital Accord II) for adoption. The fundamental objective behind this revision is to further strengthen the soundness and stability of international banking system. Basel II uses a "three pillars" concept – (i) minimum capital requirements (addressing risk), (ii) supervisory review and (iii) market discipline. The Basel I accord dealt with only one risk, credit risk, was dealt with in a simple manner while market risk was an afterthought; operational risk was not dealt with at all. Under Basel II Accord, the capital requirement is to be calculated for Credit, Market and Operation Risk (Basel Committee on Banking Supervision, 2010). The regulatory capital remains same i.e., Tier I Capital (Core Capital) and Tier II Capital (Supplementary Capital).

*The third installment of the Basel Accords (Basel III) was developed in response to the deficiencies in financial regulation revealed by the financial crisis of 2007–08. Basel III is intended to strengthen bank capital requirements by increasing bank liquidity and decreasing bank leverage.*

Basel III reforms strengthen the bank-level i.e. micro-prudential regulation, with the intention to raise the resilience of individual banking institutions in periods of stress. Besides, the reforms have a macro-prudential focus also, addressing system wide risks, which can build up across the banking sector, as well as the pro-cyclical amplification of these risks over time. The macro prudential aspects of Basel III are largely enshrined in the capital buffers. Both the buffers i.e. the capital conservation buffer and the countercyclical buffer are intended to protect the banking sector from periods of excess credit growth.

The Capital Adequacy Ratio to be maintained as per Basel III accord and as per RBI by Indian Banks are as under:-

Sl.	Regulatory Capital	As per Basel III accord (as percent to RWA)	As per RBI, Basel III capital requirement (as percent to RWA)
(i)	Minimum Common Equity Tier 1 Ratio	4.5	5.5
(ii)	Additional Tier 1 Capital	1.5	1.5
(iii)	Minimum Tier 1 Capital Ratio [(i) +(ii)]	6.0	7.0
(iv)	Tier 2 Capital	2.0	2.0
(v)	Minimum Total Capital Ratio (MTC) [(iii)+(iv)]	8.0	9.0
(vi)	Capital Conservation Buffer (CCB) (comprised of Common Equity)	2.5	2.5

(vii)	Minimum Total Capital Ratio plus Capital Conservation Buffer [(v)+(vi)]	10.5	11.5
	Countercyclical Capital Buffer (CCyB) (Optional)	0 to 2.5	

The Basel Committee is introducing a regime which will adjust the capital buffer range, established through the capital conservation mechanism, when there are signs that credit has grown to excessive levels. The purpose of the countercyclical buffer is to achieve the broader macro-prudential goal of protecting the banking sector in periods of excess aggregate credit growth.

Basel III introduced a Capital Conservation Buffer (CCB) and countercyclical capital buffer (CCyB) aimed at strengthening banks' guard against the build-up of systemic vulnerabilities. The countercyclical capital buffer aims to ensure that banking sector capital requirements take account of the macro-financial environment in which banks operate. Its primary objective is to use a buffer of capital to achieve the broader macro-prudential goal of protecting the banking sector from periods of excess aggregate credit growth that have often been associated with the build-up of system-wide risk. The framework assigns the credit-to-GDP gap a prominent role as a guide for policymakers. The credit-to-GDP gap ("credit gap") is defined as the difference between the credit-to-GDP ratio and its long-term trend. Credit to GDP gap ratio measures the risk associated with the credit given to household and businesses in a country. A high credit to GDP gap means trouble for the banking system (Thomas F. Casimano, 2011).

The aim of the Countercyclical Capital Buffer (CCyB) regime is twofold.

Firstly, it requires banks to build up a buffer of capital in good times which may be used to maintain flow of credit to the real sector in difficult times.

Secondly, it achieves the broader macro-prudential goal of restricting the banking sector from indiscriminate lending in the periods of excess credit growth that have often been associated with the building up of system-wide risk.

In actual practice healthy economies maintain the credit to GDP gap between 2 and 10. Anything beyond that would mean impending disaster for banking sector. Further, Credit-Deposits Ratio (CDR) indicates the deployment in credit from its own mobilized resources. The banks optimize its CDR for improvement its interest earning from credit to increase its profit. The banks deploy the funds after maintaining the required Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) as per RBI guidelines. Higher CDR may have a liquidity crisis of the banking system.

## REVIEW OF LITERATURE:

Sabunwala (2012) has used secondary data for the purpose of analyzing the various reformatory measures introduced under Basel III and their impact on the banks of developing economies. Ratio analysis and correlation coefficient used for analysis of the data. The study comes to the conclusion that most of the emerging markets have not been able to meet the capital requirements proposed under Basel III Accord. But economies like China and India have exceeded the requirements. The major priority of the banks of these countries should be on improving their risk management system rather than strengthening their capital bases.

Jayadev (2013) discusses the views of the senior executives of Indian banks on the course of action to be followed to meet the challenges of implementing the Basel III norms. A panel discussion among four senior executives representing Kotak Mahindra Bank, Syndicate Bank, Citibank and IDBI Bank was undertaken to discuss about the issues and remedies of implementing the Basel III norms in Indian banks. The study suggests that the banks should have a proper internal control system in order to deal with the issue of NPAs. Along with RBI supervision, the internal audit system of the banks needs to be strengthened.

Bhatia and Mehta (2015) made a study in order to discuss the salient features of Basel III and the implications that its implementation might have on the Indian banks. The study finds that for proper implementation of the Basel III norms, the Indian Banks need to change their approach to risk management. Effective implementation of these norms will make the Indian banks stronger and more stable. Adoption of advanced approaches of risk management will help the Indian banks to manage their capital more efficiently.

Saboo et al. (2016) in their descriptive study tries to examine the opportunities and challenges faced by the Indian Public Sector Banks in implementing the Basel III norms. The study has revealed that the capital infusion into banks has been a big challenge as the Government has not been able to arrange sufficient funds for that purpose. Increasing NPAs has also decreased the net worth of the Indian banks. The Indian Public Sector banks need to improve their risk management structure.

Shakdwipee and Mehta (2017) in their study try to make a descriptive analysis regarding the impact of the various requirements under Basel III on the Indian banks. The study arrives at the fact that implementation of Basel III will make banking in India safer but more expensive. There are likely to be microeconomic costs in the short run. But the macroeconomic benefits in the long run are likely to outweigh the costs.

### **OBJECTIVE:**

*The objective of this study is to assess the credit-to-GDP gap works as an indicator for Indian banking system to control the credit growth and to prevent any crisis.*

### **DATA:**

We have taken data on Aggregate Deposits and Bank Credit of all Scheduled Commercial Banks, Gross Domestic Products both for Constant Price and Current Price for the period 1980-81 to 2016-17 from website of Reserve Bank of India. For the analysis of our objective, we have taken the data of the growth of aggregate deposits, growth credit and growth of GDP, Credit-Deposits ratio, Credit to GDP Gap for the period 1980-81 to 2016-17. The data have been analyzed by taking the following sub-groups a) pre-reform period 1980-81 to 1990-91, b) Reform period 1991-92 to 2000-01 and also the post reform period with decadal growth d) 2001-02 to 2010-11 and e) 2011-12 to 2016-17.

### **METHODOLOGY:**

Compounded Annual Growth Rate (CAGR) has been calculated for the period 1980-81 to 1990-91, 1991-92 to 2000-01, 2001-02 to 2010-11 and 2011-12 to 2016-17 at aggregate level for Aggregate Deposits, Bank Credit and Gross Domestic Products. Credit-Deposit Ratio (CDR) is the measure of Bank Credit to Aggregate Deposits and Credit to GDP Ratio is the measure of Bank Credit to Gross Domestic Products. The Credit-to-GDP gap is what it remains if from the



actual "Credit-to-GDP ratio" series we subtract the (non-linear) trend as calculated by moving average methods. We have taken 2-point moving average of the Credit-to-GDP ratio series and further 2 points moving average for centered the data.

## **RESULTS & DISCUSSION:**

### **Pre-reform Period (1980-81 to 1990-91)**

Aggregate Deposits of All Scheduled Commercial Banks increased from Rs.379.88 billion as at March-end 1981 to Rs.1925.41 billion as at March-end 1991 and Bank Credit increased from Rs.253.71 billion to Rs.1163.01 billion during the same period. Aggregate Deposits grew over 5 times and Bank Credit grew over 4.5 times during this period. The branch expansion was noticeable during this period. It increased from 31859 as at March-end 1980 to 60597 as at March-end 1991. Compounded Annual Growth Rate (CAGR) of Aggregate Deposits and Bank Credit during this period were 17.96 percent and 16.15 percent respectively. For Aggregate Deposits, the growth varied between 14.91 percent (1987-88) and 20.28 percent (1986-87). For Bank credit, it varied between 11.42 percent (1987-88) and 20.11 percent (1988-89). Credit-Deposit Ratio varied between 59.75 percent (March-end 1988) and 69.11 percent (March-end 1993). Median value of CDR during this period was 65.65 percent.

CAGR of Gross Domestic Products during this pre-reform period was 5.29 percent. Credit to GDP Ratio has witnessed an increasing trend during this period varied between 18.53 percent (1981-82) and 22.22 percent (1989-90). Median value of Credit to GDP Ratio was 21.24 percent. Credit to GDP Gap varied between -0.33 percent (1981-82) and 0.35 percent (1982-83).

### **Reform Period (1991-92 to 2000-01)**

With the introduction of Financial Sector Reforms in 1991, several changes have taken place in the operations and structure of the banking systems through deregulation of interest rates, introduction of assets classification, income recognition, provisioning and Capital Adequacy Norms as per Banking International Settlements.

Aggregate Deposits of All Scheduled Commercial Banks increased from Rs.2307.58 billion as at March-end 1992 to Rs.9626.18 billion as at March-end 2001 and Bank Credit increased from Rs.1255.92 billion to Rs.5114.34 billion during the same period. Both were grown over 4 times during this period.

The growth (CARG) of aggregate deposits and bank credit during 1991-92 to 2000-01 recorded at 17.18 percent and 16.66 percent respectively. For Aggregate Deposits, the growth varied between 13.91 percent (1999-2000) and 22.76 percent (1994-95). For Bank credit, it varied between 8.18 percent (1993-94) and 21.01 percent (1992-93). Credit-Deposit Ratio varied between 51.66 percent (March-end 1999) and 58.55 percent (March-end 1996). Median value of CDR during this period was 54.29 percent.



**Table 1: CAGR of select parameters, Median values of Credit-Deposit Ratio (CDR) and Credit to GDP Ratio and Minimum and Maximum values of Credit to GDP Gap of different periods**

Period	No. of branches (as at Period-end)	CAGR			Median Value		Credit to GDP Gap	
		Aggregate Deposits (percent)	Bank Credit (percent)	Gross Domestic Products (percent)	CDR (percent)	Credit to GDP Ratio (percent)	Minimum (percent)	Maximum (percent)
<b>Pre-Reform Period</b> (1980-81 to 1990-91)	60597	17.96	16.15	5.29	65.65	21.24	-0.33	0.35
<b>Reform Period</b> (1991-92 to 2000-01)	65521	17.18	16.66	6.36	54.29	22.12	-0.88	0.29
<b>Post Reform Period</b>								
Sub-Period I (2001-02 to 2010-11)	89110	19.60	24.43	8.24	71.84	46.65	-1.02	0.78
Sub-Period II (2011-12 to 2016-17)	137770	12.32	11.16	6.77	77.76	57.26	-0.54	0.56

Source –Reserve Bank of India website.

The growth of Aggregate Deposits during reform period decreased slightly over the growth during pre-reform period, whereas in credit front the trend is reversed. CDR during this period was lower than pre-reform period.

The growth (CAGR) of Gross Domestic Products during this reform period was 6.36percent, shown an improvement over pre-reform period. Credit to GDP Ratio has witnessed an increasing trend during this period varied between 20.10percent (1993-94) and 27.10percent (2000-01). Median value of Credit to GDP Ratio was 22.12percent. Credit to GDP Gap varied between -0.88percent (1993-94) and 0.66percent (1992-93).

### **Post-Reform Period**

The post-reform period has been divided into two sub-periods I i.e,from 2001-02 to 2010-11, first decade of twenty-first century and Sub-Period II, i.e. from 2011-12 to 2016-17.

#### **Sub-Period I(2001-02 to 2010-11)**

Bank Credit of All Scheduled Commercial banks increased from Rs.5987.23 billion as at March-end 2002 to Rs.39420.83 billion as at March-end 2011, an increase over 6 times during this period, whereas the aggregate deposits increased over 4 times during the same period. The bank credit growth (CARG) during 2001-02 to 2010-11 recorded at 24.43percent, which was highest among other study periods. The growth of aggregate deposits (CARG) was 19.60percent during the first sub-period of post-reform period was also highest among other periods. The annual

credit growth varied between 15.31percent (2001-02) and 36.95percent (2005-06). The annual Aggregate Deposits growth varied between 13.01 percent (2004-05) and 24.05 percent (2005-06). Credit-Deposit Ratio recorded an increasing trend during this period, varied between 53.45 percent (March-end 2002) and 75.69 percent (March-end 2011). Median value of CDR during this period was 71.84percent.

Gross Domestic Products during this post-reform period recorded at 8.24 percent (CARG), which was highest among all other periods under study. Credit to GDP Ratio recorded an increasing trend during this period varied between 27.20 percent (2001-02) and 54.38 percent (2010-11). Median value of Credit to GDP Ratio was 46.65 percent. Credit to GDP Gap varied between -1.02 percent (2003-04) and 0.78 percent (2002-03).

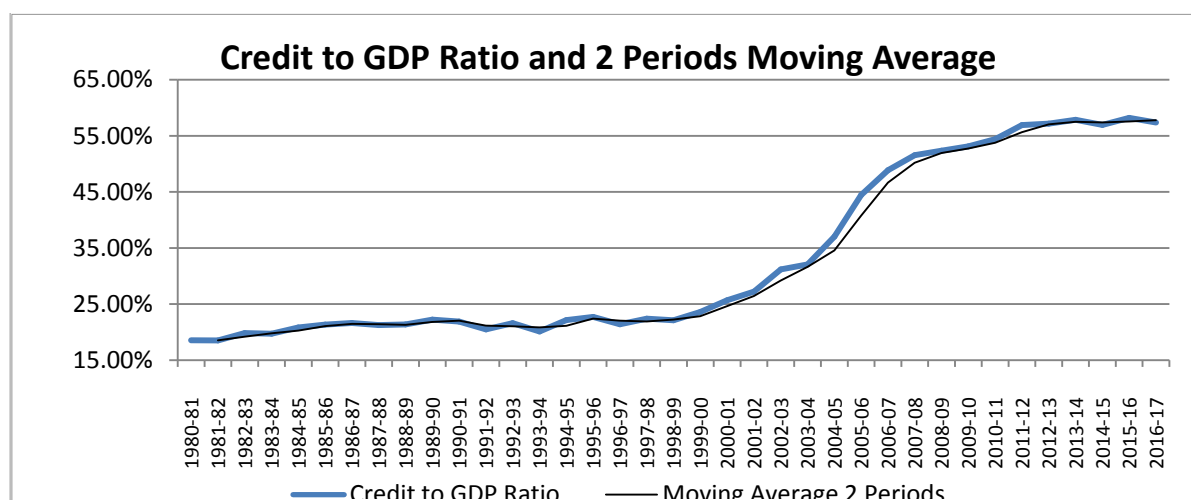
### **Sub-Period II(2011-12 to 2016-17)**

During this period, both credit and aggregate deposits witnessed a lower growth (CARG). Credit recorded a growth of 11.16 percent whereas aggregate deposits recorded a growth of 12.32 percent. During this period, the branch expansion was more than 48000. Among the bankgroups, Nationalized Banks opened 23434 branches, followed by Private Sector Banks opened 12549 branches by (mainly due to opening of new private banks in the system) and SBI groups opened 7106 branches and Regional Rural Banks opened 5399 branches during this period. The annual credit growth varied between 8.16 percent (2016-17) and 16.99 percent (2011-12). The annual aggregate Deposits growth varied between 9.30 percent (2015-16) and 15.34 percent (2016-17). Credit-Deposit Ratio declined from 78.05 percent (March-end 2012) to 72.89 percent (2016-17). Median value of CDR during this period was 77.76 percent.

Gross Domestic Products during this period was 6.77 percent (CARG). Credit to GDP Ratio was around 57 percent during this period with median value of Credit to GDP Ratio was 57.26 percent. Credit to GDP Gap varied between -0.54 percent (2015-16) and 0.56 percent (2011-12).

### **CREDIT TO GDP GAP AND CREDIT GROWTH:**

The "Credit-to-GDP" gap is, "the difference of the Credit-to-GDP ratio from its trend". The study calculate the Credit-to-GDP ratio and then decompose the obtained time series. The Credit-to-GDP *gap* is what it remains if from the actual "Credit-to-GDP ratio" series we subtract the (non-linear) trend. The non-linear trend has been calculated by moving average methods. Credit to GDP Ratio and Moving Average of 2 Periods are presented in Chart 1.



## Chart 1 – Credit to GDP Ratio and Moving Average of 2 Periods

We have taken another 2 period moving average for centering the data corresponding to the period. That series gives us a non-linear trend. To calculate Credit-GDP Gap, we have subtracted the trend value from the original Credit to GDP Ratio.

The data of annual Credit Growth and Credit to GDP Gap is presented in Table 2 and Chart 2 presents the Credit Growth and Credit to GDP gap for the period 1980-81 to 2015-16.

**Table 2: Annual Credit Growth and Credit to GDP Gap**

Year	Credit Growth (percent)	Credit-GDP Gap (percent)	Year	Credit Growth (percent)	Credit-GDP Gap (percent)
1980-81	17.80	-0.06	1998-99	13.81	-0.45
1981-82	16.99	-0.33	1999-00	18.20	-0.14
1982-83	19.58	0.35	2000-01	17.31	0.14
1983-84	16.34	-0.30	2001-02	15.31	-0.61
1984-85	18.55	0.14	2002-03	23.65	0.78
1985-86	14.53	0.06	2003-04	15.30	-1.02
1986-87	12.91	0.16	2004-05	30.88	-0.61
1987-88	11.42	-0.13	2005-06	36.95	0.75
1988-89	20.11	-0.18	2006-07	28.14	0.43
1989-90	19.75	0.30	2007-08	22.30	0.48
1990-91	14.64	0.26	2008-09	17.51	0.00
1991-92	7.99	-0.63	2009-10	16.91	-0.12
1992-93	21.01	0.66	2010-11	21.49	-0.31
1993-94	8.18	-0.88	2011-12	16.99	0.56
1994-95	28.67	0.37	2012-13	14.06	-0.10
1995-96	20.07	0.47	2013-14	13.95	0.40
1996-97	9.60	-0.58	2014-15	9.05	-0.54
1997-98	16.41	0.32	2015-16	10.91	0.52

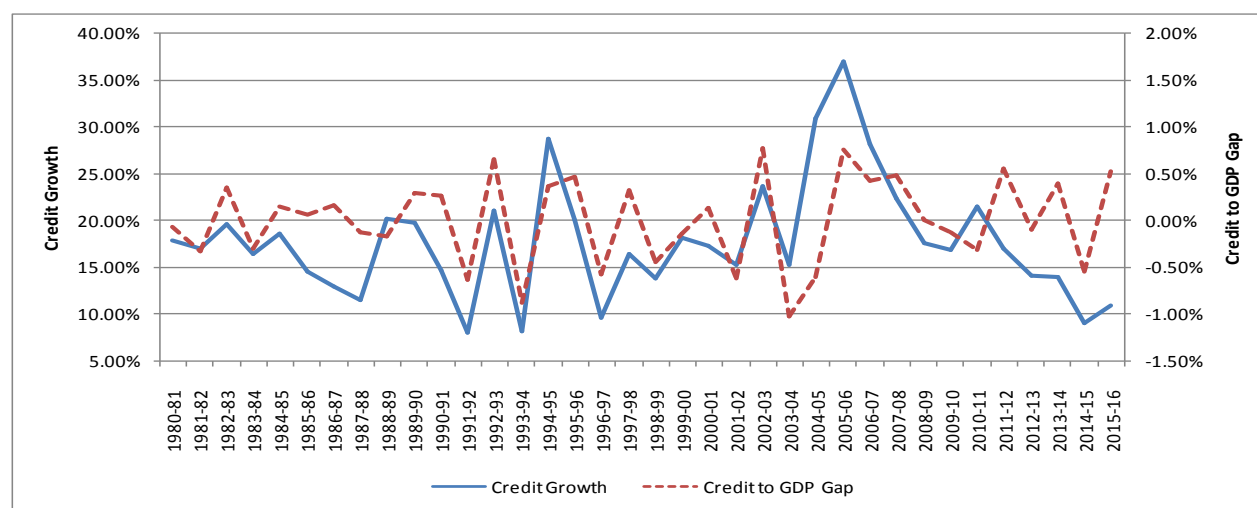


Chart 2 – Credit Growth and Credit to GDP Gap

It can be observed that where there is high credit growth, Credit to GDP gap is positive and where the credit growth declined, the credit to GDP gap is negative.

*A higher positive gap means that the private sector borrows at a level that is perhaps not justified by the current output-producing abilities of the economy. Banks may tend to experience abnormally high rates of loan defaults etc, which can lead to a banking crisis. A negative gap supposedly implies that there is a safe amount of additional borrowing that could be done currently (for consumption or investment purposes), and we are leaving it unexploited.*

## CONCLUSION& RECOMENDATION:

The banks have to improve the capital buffer above the regulatory minimum outside of period of stress. One way banks should look to rebuild them is through reducing discretionary distributions of earnings or to raise new capital from the private sector as an alternative to conserve internally generated capital. The share of earnings retained by banks for the purpose of rebuilding their capital buffers should increase the nearer to their minimum capital requirement. Retaining a greater proportion of earnings during a downturn will help ensure that capital remains available to support the ongoing business operations of banks through the period of stress.

These build up capital buffer should not used for future predictions of recovery and also for generous distributions to shareholders, other capital providers. These stakeholders, rather than depositors, must bear the risk that recovery will not be forthcoming.

A capital conservation buffer of 2.5 percent, comprised of Common Equity Tier 1, is established above the regulatory minimum capital requirement. For Countercyclical Capital buffer, the relevant national authority judges a period of excess credit growth to be leading to the buildup of system-wide risk, together with any other macro-prudential tools at their disposal, putting in place a countercyclical buffer requirement. This will vary between zero and 2.5percent of risk weighted assets, depending on their judgment as to the extent of the buildup of system-wide risk.

The banks have to build up the capital buffer for future growth as well as improvement of their health.

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### ANNEXURE

Annual Growth on Deposits, credit, Credit-Deposit Ratio(CDR), Annual GDP Growth, Credit to GDP Ratio and Credit-GDP Gap Period – 1980-81 to 2016-17

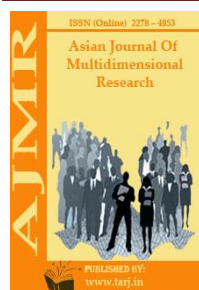
Year	Deposits Growth	Credit Growth	CDR (%)	GDP Growth	Credit to GDP Ratio	Credit-GDP Gap
1980-81	19.61%	17.80%	66.79%	7.17%	18.54%	-0.06%
1981-82	15.12%	16.99%	67.87%	5.63%	18.53%	-0.33%
1982-83	17.44%	19.58%	69.11%	2.92%	19.83%	0.35%
1983-84	17.99%	16.34%	68.15%	7.85%	19.72%	-0.30%
1984-85	19.22%	18.55%	67.76%	3.96%	20.82%	0.14%
1985-86	18.22%	14.53%	65.65%	4.16%	21.34%	0.06%
1986-87	20.28%	12.91%	61.63%	4.31%	21.61%	0.16%
1987-88	14.91%	11.42%	59.75%	3.53%	21.24%	-0.13%
1988-89	18.73%	20.11%	60.45%	10.16%	21.38%	-0.18%
1989-90	19.13%	19.75%	60.77%	6.13%	22.22%	0.30%
1990-91	15.32%	14.64%	60.40%	5.29%	21.87%	0.26%
1991-92	19.85%	7.99%	54.43%	1.43%	20.47%	-0.63%
1992-93	16.39%	21.01%	56.59%	5.36%	21.60%	0.66%
1993-94	17.34%	8.18%	52.17%	5.68%	20.10%	-0.88%
1994-95	22.76%	28.67%	54.69%	6.39%	22.14%	0.37%
1995-96	12.14%	20.07%	58.55%	7.29%	22.71%	0.47%
1996-97	16.55%	9.60%	55.06%	7.97%	21.39%	-0.58%
1997-98	18.37%	16.41%	54.15%	4.30%	22.39%	0.32%
1998-99	19.31%	13.81%	51.66%	6.68%	22.10%	-0.45%
1999-00	13.91%	18.20%	53.60%	7.59%	23.60%	-0.14%
2000-01	18.35%	17.31%	53.13%	4.30%	25.67%	0.14%
2001-02	14.62%	15.31%	53.45%	5.52%	27.20%	-0.61%
2002-03	16.09%	23.65%	56.93%	3.99%	31.19%	0.78%
2003-04	17.45%	15.30%	55.89%	8.06%	32.06%	-1.02%
2004-05	13.01%	30.88%	64.72%	6.97%	37.03%	-0.61%
2005-06	24.05%	36.95%	71.46%	9.48%	44.45%	0.75%
2006-07	23.84%	28.14%	73.94%	9.57%	48.85%	0.43%
2007-08	22.40%	22.30%	73.88%	9.32%	51.55%	0.48%
2008-09	19.93%	17.51%	72.39%	6.72%	52.33%	0.00%
2009-10	17.18%	16.91%	72.22%	8.59%	53.12%	-0.12%
2010-11	15.92%	21.49%	75.69%	8.91%	54.38%	-0.31%
2011-12	13.46%	16.99%	78.05%	6.69%	56.89%	0.56%
2012-13	14.24%	14.06%	77.93%	5.42%	57.16%	-0.10%
2013-14	14.15%	13.95%	77.79%	6.05%	57.84%	0.40%

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2014-15	10.74%	9.05%	76.60%	7.23%	56.93%	-0.54%
2015-16	9.30%	10.91%	77.72%	7.94%	58.19%	0.52%
2016-17	15.34%	8.16%	72.89%	6.62%	57.36%	

Source – Website of Reserve Bank of India.





## ROLE OF TECHNOLOGY IN BANKING

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### ABSTRACT

*A bank is a financial intermediary and money creator that create money by lending money to a borrower, thereby creating a corresponding deposit on the bank's balance sheet. The study aims to find the role of technology in banking and also the advantages of using such technologies in banking. The study also reveals reveals the impact of the technologies in the banking sector. The study also carries the details related to the usage of technology among different age groups. The study proves that even in spite of technological advancements people still prefer direct banking due to various reasons. Yet people are not aware of the utmost utilization of technology since they have a threat towards safety. The study emphasizes on the percentage of awareness on maximum utilization of technology. Banks should take effective measures in creating awareness towards the effective usage of technology. The study locates the effect of two imperative issues, technology and relationship, on banking decisions. Data were collected using structured questionnaire from branch managers of 30 sample banks, where no individual bank was selected twice.*

**KEYWORDS:** *Role of Technology, Impact Of Technology, Advantages*

## INTRODUCTION

Banks are financial institutions that helps people in various financial activities. The major functions of Banks are accepting deposits from the public and providing loans to the same. Banks play a major role in encouraging the public to start business by providing various types of loans and schemes. The study majorly focuses on the technology used by banking sectors and the impact created by the same.

## THE OBJECTIVE OF THE STUDY

- The role of technology in banking
- Advantaged of using technology in banking
- Impact of technology in banking

## LITERATURE REVIEW

1. **An Exploratory Study on Usage of Technology in Banking Sector by Anitha.** The study shows how people can make use of technology in banking. Without information technology and communication, we cannot think about the success of a banking sector. It has enlarged the role of banking sector in the economy. The financial transactions and payment can be processed in easy and quick way. 200 respondents were taken as sample for this study. Data collected were analysed and drawn meaningful inferences with the help of various tools such as simple percentage analysis, factor analysis and chi square. The study provides various suggestions for the banks to improve the effective utilization of technology
2. **Technological and advancement in banking sector in India by Sunita Agrawal** This paper studies about financial innovation in banking in India. It also highlights the benefits and challenges of innovative banking trends. Banks boost technology investment spending strongly to address revenue, cost and competitiveness concerns. The purpose of present study is to analyse such effects of innovation in banking on growth and development of India. The study concludes that Banks may have to go for mobile banking services for a cluster of villages. Alternatively, technological institutions have to come out with low-cost, self-service solutions ATMs. The government and the RBI should actively support such research efforts.
3. **An evaluation of role of technology and relation in banking by S.S.M. Sadrul Huda.** This study reports impact of relationship and technology on bank's performance and managerial decision. The report shows that Private and Foreign Commercial Banks are pioneers banking facilities with technological development maintaining better relationship with the customers, while local public banks (NCB) are lagging behind. The study locates the effect of two imperative issues, technology and relationship, on banking decisions. Data were collected using structured questionnaire from branch managers of 30 sample banks, where no individual bank was selected twice. All of these branches are located in Dhaka City. By keeping in mind that data collection on these issues will be difficult, sample size was selected at the most convenient basis. Ideas on past researches were generated from secondary data analysis by analysing topics collected from periodicals, professional magazines, published articles and electronic sources.

**Analysis and Interpretation****TABLE 1-DEMOGRAPHIC VALUES**

Particulars	Frequency	Percentage
<b>AGE</b>		
18-25	68	68
26-35	22	22
36-45	7	7
45 and above	3	3
<b>Total</b>	100	100
<b>GENDER</b>		
Male	62	62
Female	38	38
<b>Total</b>	100	100

**Interpretation: -**

From the above table out of 100 respondents 62% are male and 38% are female. The table also reveals that 68% of respondents belong to the 18-25 age category.

**Hypothesis I**

**Null Hypothesis: There is no significant difference between the age of the respondent and the problem solved through instant information**

**TABLE-2ANNOVA TABLE FOR THE AGE OF THE RESPONDENT**

Age						
	N	Mean	Std. Deviation	Std. Error	F	Sig
Highly satisfied	25	1.84	1.028	.206	2.413	.054
Satisfied	46	1.30	.511	.075		
Neutral	23	1.35	.714	.149		
Dissatisfied	5	1.40	.894	.400		
Highly dissatisfied	1	1.00	.	.		
Total	100	1.45	.757	.076		

**Inference:**

Since P value is more than 0.05, the null hypothesis is accepted at 5% level of significance hence concluded that there is no significance difference age and the problems solved through instant information.

**Null Hypothesis-**There is no significance between the age of the respondent and the banks insisting on error free transaction.

**TABLE 3-ANNOVA TABLE FOR THE SIGNIFICANT DIFFERENCE BETWEEN THE AGE OF THE RESPONDENT AND THE BANKS INSISTING ON ERROR FREE TRANSACTION.**

	N	Mean	Std. Deviation	Std. Error	F	Sig
Highly satisfied	12	1.25	.622	.179	3.155	.018
Satisfied	55	1.67	.862	.116		
Neutral	19	1.05	.229	.053		
Dissatisfied	11	1.36	.674	.203		
Highly dissatisfied	2	1.00	.000	.000		
Total	99	1.45	.760	.076		

**Inference:**

Since P value is more than 0.05, the null hypothesis is accepted at 5% level of significance hence concluded that there is no significance difference age and the banks insisting on error free transaction.

**Null Hypothesis:** There is no significant difference between the age and electronic bill payments

**TABLE 4-ANNOVA TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN AGE AND ELECTRONIC BILL PAYMENTS**

Age						
	N	Mean	Std. Deviation	Std. Error	F	Sig
Highly satisfied	30	1.53	.819	.150	.354	.841
Satisfied	36	1.47	.878	.146		
Neutral	28	1.39	.567	.107		
Dissatisfied	5	1.20	.447	.200		
Highly dissatisfied	1	1.00	.	.		
Total	100	1.45	.757	.076		

**Inference:**

Since P value is more than 0.05, the null hypothesis is accepted at 5% level of significance hence concluded that there is no significance difference age and electronic bill payments

**Null Hypothesis:** There is no significance difference between age and security provided for ATM.

**TABLE 5-ANNOVA TABLE FOR THE SIGNIFICANT DIFFERENCE BETWEEN AGE AND SECURITY PROVIDED FOR ATM**

Age						
	N	Mean	Std. Deviation	Std. Error	F	Sig
Highly satisfied	20	1.60	.754	.169	.237	.917
Satisfied	48	1.44	.769	.111		
Neutral	23	1.13	.344	.072		
Dissatisfied	7	1.86	1.215	.459		
Highly dissatisfied	2	2.50	.707	.500		
Total	100	1.45	.757	.076		

**Inference:**

Since P value is more than 0.05, the null hypothesis is accepted at 5% level of significance hence concluded that there is no significance difference between age and security provided for ATM.

**Null Hypothesis:** There is no significance difference age and online filing.

**TABLE 6- ANNOVA TABLE FOR THE SIGNIFICANCE DIFFERENCE BETWEEN AGE AND ONLINE FILING**

Age						
	N	Mean	Std. Deviation	Std. Error	F	Sig
Highly satisfied	20	1.60	.754	.169	2.898	.026
Satisfied	48	1.44	.769	.111		
Neutral	23	1.13	.344	.072		
Dissatisfied	7	1.86	1.215	.459		
Highly dissatisfied	2	2.50	.707	.500		
Total	100	1.45	.757	.076		

**Inference:**

Since P value is more than 0.05, the null hypothesis is accepted at 5% level of significance hence concluded that there is no significance difference age and online filing.

**Null Hypothesis:** There is no significant difference provided by the age and the protection provided by the banks for banking transaction.

**TABLE-7 ANNOVA TABLE FOR THE SIGNIFICANT DIFFERENCE BETWEEN AGE AND THE PROTECTION PROVIDED BY BANKS FOR BANKING TRANSACTION**

Age						
	N	Mean	Std. Deviation	Std. Error	F	Sig
Highly satisfied	30	1.50	.777	.142	1.438	.227
Satisfied	42	1.38	.697	.108		
Neutral	19	1.32	.582	.134		
Dissatisfied	8	2.00	1.195	.423		
Highly Dissatisfied	1	1.00	.	.		
Total	100	1.45	.757	.076		

**Inference:**

Since P value is more than 0.05, the null hypothesis is accepted at 5% level of significance hence concluded that there is no significance difference age and the protection provided by the banks for banking transaction.

**Null Hypothesis:** There is no significant difference between the age and privacy or confidentiality provided by the bank.

**TABLE 8 ANNOVA TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN AGE AND PRIVACY OR CONFIDENTIALITY PROVIDED BY THE BANK.**

Age						
	N	Mean	Std. Deviation	Std. Error	F	Sig
Highly satisfied	22	1.55	.800	.171	3.666	.008
Satisfied	40	1.40	.778	.123		
Neutral	31	1.32	.541	.097		
Dissatisfied	6	1.67	.816	.333		
Highly dissatisfied	1	4.00	.	.		
Total	100	1.45	.757	.076		



**Inference:**

Since P value is more than 0.05, the null hypothesis is accepted at 5% level of significance hence concluded that there is no significance difference age and the privacy/confidentiality of the bank.

**Null Hypothesis:** There is no significant difference between the age and the care taken by the bank in collecting the personal information.

**TABLE 9 ANNOVA TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE AGE AND THE CARE TAKEN BY THE BANK IN COLLECTING THE PERSONAL INFORMATION**

Age						
	N	Mean	Std. Deviation	Std. Error	F	Sig
Highly satisfied	26	1.50	.762	.149	3.940	.005
Satisfied	38	1.39	.755	.122		
Neutral	24	1.21	.509	.104		
Dissatisfied	9	1.89	.782	.261		
Highly dissatisfied	2	3.00	1.414	1.000		
Total	99	1.45	.760	.076		

**Inference:**

Since P value is more than 0.05, the null hypothesis is accepted at 5% level of significance hence concluded that there is no significance difference age and the care taken by the banks in collection of personal information.

**Hypothesis II**

**Null Hypothesis:** There is no significant difference between the gender and promptness in card delivery.

**TABLE 10-CHI SQUARE TABLE FOR THE ASSOCIATION BETWEEN GENDER AND PROMPTNESS OF CARD DELIVERY**

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.758 <sup>a</sup>	9	.460
Likelihood Ratio	10.111	9	.342
Linear-by-Linear Association	3.090	1	.079
N of Valid Cases	100		

**Inference: -**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and promptness of card delivery is associated significantly with each other.

**Null Hypothesis: There is no significant difference between the gender and no of transaction done in the ATM**

**TABLE -11 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND NO OF TRANSACTION DONE IN ATM**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.417 <sup>a</sup>	12	.009
Likelihood Ratio	20.928	12	.051
Linear-by-Linear Association	.876	1	.349
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and number of transactions done in ATM is associated significantly with each other.

**Null Hypothesis: There is no significant difference between the gender and the quality of notes provided by the ATM**

**TABLE 12-CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND THE QUALITY OF THE NOTES PROVIDED BY THE ATM**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.539 <sup>a</sup>	4	.338
Likelihood Ratio	5.940	4	.204
Linear-by-Linear Association	.014	1	.907
N of Valid Cases	99		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and the quality of notes provided by the ATM are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the gender and the convenient location of the ATM**

**TABLE-13 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND THE CONVENIENT LOCATION OF THE ATM**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.312 <sup>a</sup>	4	.507
Likelihood Ratio	3.668	4	.453
Linear-by-Linear Association	.177	1	.674
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and the convenient location of ATM are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the gender and the account information and balance enquiry**

**Table 14-Chi square table for significant difference between the gender and the account information and balance enquiry**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.322 <sup>a</sup>	12	.760
Likelihood Ratio	10.150	12	.603
Linear-by-Linear Association	.014	1	.905
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and the account information and balance enquiry services provided by the internet banking are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the gender and e-payments**

**TABLE-15 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND E-PAYMENTS**

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.408 <sup>a</sup>	3	.492
Likelihood Ratio	2.662	3	.447
Linear-by-Linear Association	1.683	1	.195
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and e-payments are associated significantly with each other.

**Hypothesis:** There is no significant difference between the gender and account to account transfer provided by internet banking are associated significantly with each other.

**TABLE-16 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND ACCOUNT TO ACCOUNT TRANSFER PROVIDED BY INTERNET BANKING ARE ASSOCIATED SIGNIFICANTLY WITH EACH OTHER.**

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.126 <sup>a</sup>	9	.624
Likelihood Ratio	7.993	9	.535
Linear-by-Linear Association	.314	1	.575
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and account to account transfer provided by internet banking are associated significantly with each other.

**Null Hypothesis:** There is no significant difference between the gender and due instalment enquiry

**TABLE-17 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND DUE INSTALMENT ENQUIRY**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.534 <sup>a</sup>	4	.339
Likelihood Ratio	5.880	4	.208

Linear-by-Linear Association	3.539	1	.060
N of Valid Cases	99		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and due instalment enquiry are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the gender and faster login facility**

**TABLE-18 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND FASTER LOGIN FACILITY**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.361 <sup>a</sup>	12	.584
Likelihood Ratio	9.554	12	.655
Linear-by-Linear Association	.042	1	.837
N of Valid Cases	99		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and faster login facility are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the gender performances of plastic cards**

**TABLE-19 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND PERFORMANCE OF PLASTIC CARDS**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.777 <sup>a</sup>	3	.855
Likelihood Ratio	.794	3	.851
Linear-by-Linear Association	.020	1	.886
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and the performance of plastic cards are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the gender and transfer of funds**

**TABLE-20 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND TRANSFER OF FUNDS**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.465 <sup>a</sup>	9	.943
Likelihood Ratio	3.901	9	.918
Linear-by-Linear Association	.004	1	.952
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that gender and the transfer of funds are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the age and promptness of card delivery**

**TABLE-21 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE AGE AND PROMPTNESS OF CARD DELIVERY**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.541 <sup>a</sup>	4	.074
Likelihood Ratio	9.522	4	.049
Linear-by-Linear Association	.358	1	.550
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and promptness of card delivery are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the age and no of transaction**



**TABLE-22 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE AGE AND NO OF TRANSACTION**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.047 <sup>a</sup>	12	.087
Likelihood Ratio	18.135	12	.112
Linear-by-Linear Association	.015	1	.903
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and number of transaction are associated significantly with each other.

**Null Hypothesis:** There is no significant difference between the age and quality of notes

**TABLE-23 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE AGE AND QUALITY OF NOTES**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.229 <sup>a</sup>	4	.694
Likelihood Ratio	2.297	4	.681
Linear-by-Linear Association	.019	1	.889
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and the quality of notes are associated significantly with each other.

**Null Hypothesis:** There is no significant difference between the age and convenient location of ATM

**TABLE-24 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE AGE AND CONVENIENT LOCATION OF ATM**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.711 <sup>a</sup>	3	.194
Likelihood Ratio	5.120	3	.163
Linear-by-Linear Association	3.148	1	.076
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and convenient location are associated significantly with each other.

**Null Hypothesis: There is no significant difference between the age and accounts information and balance enquiry**

**TABLE-25 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE AGE AND ACCOUNTS INFORMATION AND BALANCE ENQUIRY**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.945 <sup>a</sup>	3	.176
Likelihood Ratio	4.865	3	.182
Linear-by-Linear Association	3.609	1	.057
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded the age and account information and balance enquiry associated significantly with each other.

**Null Hypothesis: There is no significant difference between the age and e-payments**

**TABLE-26 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE AGE AND E-PAYMENTS**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.280 <sup>a</sup>	4	.684
Likelihood Ratio	2.271	4	.686
Linear-by-Linear Association	.150	1	.698
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and e-payments associated significantly with each other.

**Null Hypothesis: There is no significant difference between age and account to account transfer**

**TABLE-27 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN AGE AND ACCOUNT TO ACCOUNT TRANSFER**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.589 <sup>a</sup>	9	.182
Likelihood Ratio	12.441	9	.190
Linear-by-Linear Association	.928	1	.335
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and account to account transfer are associated significantly with each other.

**Null Hypothesis:** There is no significant difference between the age and due instalment enquiry

**TABLE-28 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE AGE AND DUE INSTALMENT ENQUIRY**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.758 <sup>a</sup>	9	.460
Likelihood Ratio	10.111	9	.342
Linear-by-Linear Association	3.090	1	.079
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and due instalment inquiry are associated significantly with each other.

**Null Hypothesis:** There is no significant difference between the gender and faster login facility

**TABLE-29 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN THE GENDER AND FASTER LOGIN FACILITY**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.417 <sup>a</sup>	12	.009
Likelihood Ratio	20.928	12	.051
Linear-by-Linear Association	.876	1	.349
N of Valid Cases	100		

**Inference:**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and faster login facility are associated significantly with each other.

**Null Hypothesis: There is no significant difference between age and transfer of funds**

**TABLE-30 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN AGE AND TRANSFER OF FUNDS**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.417 <sup>a</sup>	12	.009
Likelihood Ratio	20.928	12	.051
Linear-by-Linear Association	.876	1	.349
N of Valid Cases	100		

**Interpretation**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and transfer of funds are associated significantly with each other.

**Null Hypothesis: There is no significant difference between age and performance of plastic cards**

**TABLE-31 CHI SQUARE TABLE FOR SIGNIFICANT DIFFERENCE BETWEEN AGE AND PERFORMANCE OF PLASTIC CARDS**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.758 <sup>a</sup>	9	.460
Likelihood Ratio	10.111	9	.342
Linear-by-Linear Association	3.090	1	.079
N of Valid Cases	100		

**Interpretation**

P value is greater than 0.01 null hypothesis is accepted at 95% level of significance hence concluded that age and performance of plastic cards are associated significantly with each other.

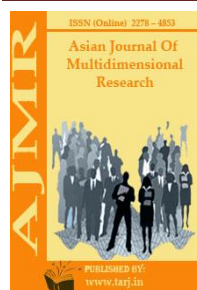
**DISCUSSION AND CONCLUSION**

The banking sector in India has undergone significant transformation in the past few years due to the role played by the technology. The ease of transaction is the result of advent of technology. This study reveals that in spite of the advent of technology people still prefer direct banking for cash transactions which in turn is loaded with crowd in banks. People feel direct banking as a platform of convenience. Customers are forced to go to banks for payments and still they do not feel comfortable due to long queues. Yet people are not aware of the utmost utilization of technology since they have a threat towards safety. The study emphasizes on the percentage of

awareness on maximum utilization of technology. Banks should take effective measures in creating awareness towards the effective usage of technology.

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## DOMAIN KNOWLEDGE MEDIATING THE RELATIONSHIP OF PERCEIVED IMPORTANCE AND CORRECTNESS OF PURCHASE JUDGMENT - AN INVESTIGATION IN A BEHAVIOURAL FINANCE CONTEXT.

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### ABSTRACT

*This study focused on testing the mediation effect of Investment Domain Knowledge of individual investors (IDK) on the relationship of Enduring Investment Importance for Financial Well-being (EIIFWB) and Acceptance of Equity Instruments (AES) [two dimensions of Investment Importance Perception on equity instruments of investors (IIPe)] respectively predicting Correctness of Judgment (Krishnan Rakesh and Ganesh 2015) on equity calls by the individual investors (CJe). The full model is tested with a sample size of 496. The responses were collected in interval scale using the questionnaire developed for the purpose in this study. The reliability and validity of the questionnaire was tested using appropriate tools before testing the final model. The indirect effect of EIIFWA getting mediated through IDK in predicting CJe is found statistically significant ( $p < .05$ ). The Sobel Test result also indicate that the indirect effect of EIIFWB through IDK in predicting CJe is significant ( $p < .05$ ). The independent variable (EIIFWB) has no significant direct predicting power for the dependent variable (CJe) in the presence of the mediating variable (IDK), and thus the perfect mediation model can be accepted. The indirect effect of AES getting mediated through IDK in predicting CJe is also found statistically significant ( $p < .05$ ). The Sobel Test result also indicate that the indirect effect of AES through IDK in predicting CJe is significant ( $p < .05$ ). The independent variable (AES) has no significant direct predicting power for the dependent variable (CJe) in the presence of the mediating variable (IDK), and thus the perfect mediation model was accepted.*



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**KEYWORDS:** *Individual Investor, Investment Domain Knowledge, Investment Importance Perception, Enduring Importance.*

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## INTRODUCTION

In the contemporary context saving and investment decisions play a focal role in the financial wellbeing of an individual. The need and importance of saving and investing among individuals are now widely accepted (Gerry Croy, Paul Gerrans and Craig Speelman, 2010), and the individuals around the world have also become increasingly responsible for their financial planning (Ron van Schie, Bas Donkers and Benedict G. C. Dellaert, 2012). The financial decisions for an individual come down to a choice between competing alternatives, but choice between current consumption and future consumption (i.e., saving and investing) forms a critical economic decision for him (Sanjay Kumar Mishra and Manoj Kumar, 2011). Considering the importance of increased savings and investments among individuals there appears a lack of research that addresses the intensity of motivations towards activities underlying the task of investing (Hershey, D. A., Jacobs-Lawson, J. M., McArdle, J. J., & Hamagami, F., 2007). Consumer behaviour literature indicates that product importance (Bloch, P. H., & Richins, L. M., 1983) influences the consumer decision making through the extent to which a consumer link a product to salient enduring goal (Bloch & Richins, 1983). Borrowing this thought to behavioural finance, the relative intensity of motives that governs an individual investor's activities (Howard. John A, 1974), becomes a strong triggering factor to determine the investor's behaviour. This is due to the fact that investors with high relative intensity of motives towards the task of investing are likely to perceive high stake in investing activities and thus engage in various kinds of activities that increases his domain knowledge (Mishra S.J & Kumar M, 2011). Thus the perceived importance towards investing (due to the subjective norms (Ajzen, 1991)) determines the intentions of achieving higher levels of domain knowledge in investments, and this further would help him approach better financial wellness. This study focuses on bring out mediating role of Investment Domain Knowledge (IDK) on the relationship of Investment Importance Preceptions (IIP) and Correctness of making Investment Judgments (CJ).

## Statement of the Research Problem and Review of Literature

How perceived importance of investing determines one's knowledge in the domain of financial markets, and how domain knowledge determines his success (in financial markets as an investor) is an important phenomenon. However, an appropriate model to explain the phenomenon as well as scales to measure various concepts in this phenomenon also seems to be still developed. This study is conducted with a view to operationalize various constructs (in the model) and explain this phenomenon.

Literature indicates the established fact that consumers as a group consider different products to be differentially important (Mishra S.J & Kumar M, 2011). Researchers have also suggested that for any particular product, perceptions of importance vary across consumers (Houston, M. J., & Rothschild, M. L., 1978). Accordingly, product importance signifies the importance as perceived by consumers rather than some object level of importance strictly inherent within the product itself (Bloch, P. H., & Richins, L. M., 1983). Most of concepts in consumer behavior like 'amount at stake' (Cox. Donald F, 1967) and 'importance of purchase' (Howard.

John A, 1974) relate to importance only to a specific context or an purchase situation (Bloch, P. H., & Richins, L. M., 1983). In other words, *importance* was viewed in a much narrow view restricting the importance on usage related and purchase related goals. Product importance has

been said to influence the consumer decision making (Howard & Sheth, 1969) through the extent to which a consumer link a product to salient enduring goal (Bloch, P. H., & Richins, L. M., 1983). Thus, a product may be perceived as having enduring importance even when a specific purchase or usage goal is not operative, for the importance perceptions here are based on the products ability to satisfy intrinsically consumers enduring needs. For example, many investors exhibit continuous monitoring efforts and portfolio altering tendencies, even if there is no immediate investment or usage (liquidation) plans.

Thus, enduring importance also becomes an important dimension in the importance perception of an individual towards the task of investing. Literature further records that high involvement in a task (to mean the task of investing here) could indicate an attachment of high importance towards such tasks or the intended usage situation of such tasks (Clarke, Keith and Russell Belk, 1979). But, constructs like 'task involvement' (Bloch, P. H., & Richins, L. M., 1983) or 'product involvement' seems too generic (Day, George S., 1970). Thus incorporating the dimensions of enduring importance, context specific importance and intensity of task involvement (Bloch, P. H., & Richins, L. M., 1983) was found more appropriate to operationalize the concept of investments importance perception in equity shares (IIPe). Conceptual definitions of constructs like 'product importance perception (PIP)' (Bloch, P. H., & Richins, L. M., 1983) showed strong formation of the construct definition (John R. Rossiter, 2002), but the operationalization was not found suitable for measuring investments importance perception in equity shares (IIPe).

Most of the literature on product importance revealed (from consumer behavior domain) a long term (enduring) importance for the product class and an instrumental importance which is of short term nature that a consumer maintains for a product (Bloch, P. H., & Richins, L. M., 1983). Literature also supported the concept of (Howard. John A, 1974). Further task involvement (Clarke, Keith and Russell Belk, 1979) also presented a dimension to look at product importance.

Literature also indicates that a high perceived importance for investing (Clarke, Keith and Russell Belk, 1979) could determine the financial well being of an individual (Lichtenstein, D. R., Kaufmann, P. J., & Bhagat, S., 1999). The perceived importance of the task (investing) is focal to the investor behavior domain (Jacoby, J, Chestnut, R.W., & Fisher, W.A., 1978, 1978), but interestingly, in research and literature the concept of product or task importance has received only little attention (Bloch, P. H., & Richins, L. M., 1983). Literature in behavioural finance also reveals that the concept of perceived importance towards investing has not received much research attention. Consumer behavior literature revealed that similar concepts to that of perceived importance of investment like 'amount at stake' (Cox. Donald F, 1967) and 'importance of purchase' (Howard. John A, 1974) relate to importance only to a specific context or an purchase situation (Bloch, P. H., & Richins, L. M., 1983).

Borrowing these arguments to a behavioural finance (Statman, 2004) context (from a product marketing context), the level of importance will vary due to the difference in inherent needs, values and goals of the investors. Investors who are highly concerned for financial security and retirement dreams and consider specific investment product(s) as viable option to satisfy the concern will attach high level of importance to that investment product(s) (Mishra S.J & Kumar M, 2011). Thus an investor might possess an enduring importance towards investments practice and a product (investment product) specific importance. Investors who attach high involvement to the investment decisions are likely to exhibit high level of enduring importance with the portfolio management (Huhmann, B. A., & Bhattacharya, N., 2005) and this in turn would lead to a higher knowledge level for investors. Moving to the domain knowledge, literature has

discussed very similar terms to that of Investment Domain Knowledge (IDK), like, product knowledge, and expertise etc. Product knowledge is a two dimensional construct (i.e., familiarity and expertise) ((Alba, J. W., & Hutchinson, J. W., 1987). Familiarity is measured by subjective assessment of the respondents' perceived familiarity with the MFs (Brucks, 1985). Expertise is operationalized as manifest variable measured by testing the knowledge of an investor regarding MFs through multiple option type financial quizzes (Alba, J. W., & Hutchinson, J. W., 1987). Knowledge is another frequently used term and which is defined as a fluid of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information (Davenport, T. H & Prusak, L, 1998). A knowledgeable consumer is one who has experience in a given context, possesses the ability to judge and evaluate product information and alternatives, and is efficient in obtaining desired information without excessive effort (Alba, J. W., & Hutchinson, J. W., 1987). Knowledge is also defined as "the understanding, awareness, or time", (Li-Su Huang & Cheng-Po Lai, 2012). Cognitive structure has generally referred to the factual knowledge (i.e., beliefs) that consumers have about products and the ways in which that knowledge is organized (Brucks, 1985). The principal function of cognitive structure is to differentiate various products and services in ways that are useful for decision making (Alba, J. W., & Hutchinson, J. W., 1987).

Thus, knowledge about investment product equips investors to successfully manage (to obtain the desired outcomes) their investments. This is because of the fact that due to their highly developed conceptual structures, they are able to comprehend product information (Alba, J. W., & Hutchinson, J. W., 1987) and restrict processing to relevant and important information (Johnson & Russo, 1984). Furthermore, knowledgeable investors rely more on informational sources than do novices, who are more normatively influenced (Choong and Lord 1996). This superior ability and preference for informational influence might enable and motivate knowledgeable investors to encode the abundance of cues presented in complex investment environment.

The primary relationship observed in this study was the relationship between the Investment Importance Perception (IIPe) and Investment Domain Knowledge (IDK). The individuals around the world have now a heightened importance towards the task of investing as they have become increasingly responsible for their financial planning (Ron van Schie, Bas Donkers and Benedict G. C. Dellaert, 2012). The decisions on investment which individual investors are required to make are becoming more complex due to the existence of an environment where available information pertaining to the domain of investing are often abundant, but frequently disorganized and incomprehensible (King & Hill, 1994). Therefore, there would be a heightened concern in the task of investing to balance the risk- return profile on one's portfolio in this dynamic environment. Investor who perceive high importance (Bloch, P. H., & Richins, L. M., 1983) in the task of investing are likely acquire higher knowledge of investment domain (Mishra S.J & Kumar M, 2011), due to their highly developed conceptual structures and ability to comprehend domain (Alba, J. W., & Hutchinson, J. W., 1987) and also restrict processing to relevant and important information (Johnson & Russo, 1984). Thus, an investor who attaches high importance to the task of investing is likely to acquire higher level of domain knowledge in investments and, through a higher knowledge an investor is likely approach towards better financial wellbeing. This is due to the fact that passive income (i.e., income from investment) determines the current life style and leisure activities as well as long term financial well being of individuals (Lichtenstein, D. R., Kaufmann, P. J., & Bhagat, S., 1999) and (Mishra S.J & Kumar M, 2011).

In financial markets, not all investors are equally competent in making correct investment decisions (John R. Graham, & Campbell R. Harvey, 2009). Knowledge about investment product equips investors to successfully manage (to obtain the desired outcomes) their investments. This is because of the fact that due to their highly developed conceptual structures, they would be able to comprehend product information (Alba, J. W., & Hutchinson, J. W., 1987) and restrict processing to relevant and important information (Johnson & Russo, 1984). The competence effect posits that people's willingness to act on their own judgments is affected by their subjective competence (John R. Graham, & Campbell R. Harvey, 2009). When people feel skillful or knowledgeable in a particular area, they are more willing to bet on their own judgments, and vice versa. The investors' capability of applying effectively the Investment Domain Knowledge (IDK) on financial decisions may require an investor to assimilate more macro variables and relate them to various subsets of IDK. Increasing investors' financial literacy is a public policy objective to improve welfare through better decision making (U.S. House of Representatives, Financial Services Committee 2009). The need for financial skills has grown rapidly over the last decade because 'financial markets have been deregulated and credit has become easier to obtain as financial institutions compete strongly with each other for market share (Beal, D.J. and Delpachitra, S.B, 2003). The high number of people with low levels of financial literacy presents a serious problem for both the economic well-being of nations and the personal well-being of such individuals (Morton, 2005). Thus, the Financial Literacy (FL) collectively of the people at large are important for any economy, and probably, the recent mortgage crisis, consumer over indebtedness and household bankruptcy rates provide evidence to support this thought. The terms financial literacy, financial knowledge and financial education often are used interchangeably in the literature and popular media. The need for research focused specifically on measurement of financial literacy is now becoming more relevant (Marcolin, S. & Abraham, A., 2006). Financial literacy is the ability to make informed judgments and to take effective decisions regarding the use and management of money (Noctor, M., Stoney, S. & Stradling, R, 1992). Financial literacy is the ability to use knowledge and skills to manage financial resources effectively for lifetime financial security. And the U.S. Financial Literacy and Education Commission (2007) defines financial literacy as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being. Thus, the higher FL enable individuals to navigate the financial world, make informed decisions about their money and minimize their chances of being misled on financial matters (Beal, D.J. and Delpachitra, S.B, 2003). In this study, broad framework of the concept of financial literacy is used to construct 'Correctness of judgment in Equity Decisions (CJe)' which is a measured based on objective quiz type self report responses from the investors.

### **Operationalization of Constructs**

#### **A) Investment Importance Perception in Equity Shares (IIPe)**

Investment importance perception in equity shares has been defined as the extent to which an investor links investments in equity shares to some salient goal. (Bloch, P. H., & Richins, L. M., 1983). In this study Investment Importance Perception in Equity Shares (IIPe) is been operationalized as a two dimensional construct, as measured by the 15 item scale developed in this study.

- i. Enduring Importance of Investments for Financial Well Being (EIIFWB) → is the long term cross situational importance of investments an investor attaches for his financial wellbeing as measured by the 9 item questionnaire developed in this study.

- ii. Secondly Acceptance of Equity Shares (AES) → is the investor's perceived capability of equity shares (as a investment product) to help him approach the desired level of financial wellbeing as measured by the 6 item questionnaire developed in this study.

The assumption made in this study is that the Investment Importance Perception in Equity Shares (IIPe) positively influence the Investment Domain Knowledge (IDK).

### **B) Investment Domain Knowledge (IDK)**

Investment Domain Knowledge (IDK) is defined as understanding of key financial terms and concepts needed to function daily in the socio-economic environment (Bowen 2002). In this study, Investment Domain Knowledge (IDK) is operationalized as a three dimensional construct → an individual investors' knowledge in Financial Markets, investors' knowledge in Investment

Instruments and knowledge in Risk- Return trade off, as measured by a 12 item scale developed in this study. The assumption made in this study is that the Investment Domain Knowledge (IDK) positively influence the Correctness of Judgment on Equity Decisions (CJe).

### **C) Correctness of Judgment on Equity Decisions (CJe)**

Correctness of Judgment on Equity Decisions is defined as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being (U.S. Financial Literacy and Education Commission 2007). Correctness of Judgments in Equity Investments (CJe) is operationalized as a three dimensional construct → an individual investors capability to make correct judgments in Valuation of Securities, Selection of Securities (for a given investment objective) and Interpretation on the Impact on the asset/security for macro/micro level changes in economic factors , as measured by a 12 item scale developed in this study.

This study focused on studying the mediating effect Investment Domain Knowledge (IDK) on the relationship of Perceived Importance of Investments in equities(IIPe) determining the Correctness of Judgment in Investment Decisions in Equity Segment (CJe). The following hypothesis is tested for this purpose:

**H1:** Investment Domain Knowledge (IDK) perfectly mediates the relationship of Enduring Importance of Investments for Financial Well Being (EIIFWB) predicting Correctness of Judgment on Equity Decisions (CJe). (See Section 3.11 for discussion)

**H2:** Investment Domain Knowledge (IDK) perfectly mediates the relationship of Acceptance of Equity Shares (AES) predicting Correctness of Judgment on Equity Decisions (CJe). (See Section 3.11 for discussion)

## **DATA AND METHODOLOGY OF THE STUDY**

The active investors from Kerala, India with more than 2 years of trading (transacting) experience in equity segment with a recognized stock broker/sub brokers constitute the population of the study. The study was conducted using data from 496 samples from the population, collected using nonrandom technique.

Multiple regression analysis and ANOVA are used for the testing of the hypotheses. The assumptions regarding multicollinearity, autocorrelation and homoscedasticity for regression analysis was checked using Variance Inflation Factor, Durbin-Watson coefficient, histogram and



scatter diagram. The criteria (Robert M. Baron and David A. Kenny, 1986) adopted for testing the mediation effect

## ANALYSIS AND RESULTS

The summary of analysis results are presented below.

### 1. Testing of Mediation Effect of IDK on the Relationship of EIIFWB Predicting CJe.

From Table No. 1.1 the regression coefficient for EIIFWB predicting CJe, EIIFWB predicting IDK and IDK predicting CJe are found statistically significant at 5% level of significance. Thus, it becomes logical to assume a mediation effect of IDK in this model (Nareesh K. Malhotra & Satyabhushan Dash, 2009). Table No. 6.6 presents the results on the mediation analysis when IDK is introduced as a mediator.

**Table No. 1.1. Results of Regression Analysis showing EIIFWB predicting IDK and CJe respectively.**

Regression Model	B Value	t	Sig.	Std Error	R	Adjusted R Square	ANOVA	
EIIFWB predicting CJe	0.482 (constant1.756)	8.228	.000	0.019	0.432	0.183	F	67.703
							Sig.	.000
EIIFWB predicting IDK	0.564 (constant1.397)	8.989	.000	.063	0.461	0.213	F	80.062
							Sig.	.000
IDK predicting CJe	0.854 (Constant.565)	44.805	.000	.019	.934	.871	F	2007
							Sig.	.000

**Source:** Output of analysis of primary data.

Table No. 1.2 shows that the direct effect of EIIFWA predicting appears statistically insignificant ( $p > .05$ ), when the mediating variable IDK is introduced. Further, it is found from Table No. 1.1 the indirect effect of EIIFWA getting mediated through IDK in predicting CJe is statistically significant ( $p < .05$ ). 87.1% of variance in CJe is explained by EIIFWB through IDK. The indirect effect (unstandardised) is computed as  $0.546 \times 0.854 = 0.466$ . Thus, a unit increase in the score of EIIFWB, 0.466 unit increase in the score of CJe is predicted. The Sobel Test result also indicate that the indirect effect of EIIFWB through IDK in predicting CJe is significant ( $p < .05$ ). As the independent variable (EIIFWB) has no significant direct predicting power for the dependent variable (CJe) in the presence of the mediating variable (IDK). The hypothesis (H1) that Investment Domain Knowledge (IDK) perfectly mediates the relationship of Enduring Importance of Investments for Financial Well Being (EIIFWB) predicting Correctness of Judgment on Equity Decisions (CJe) is accepted.

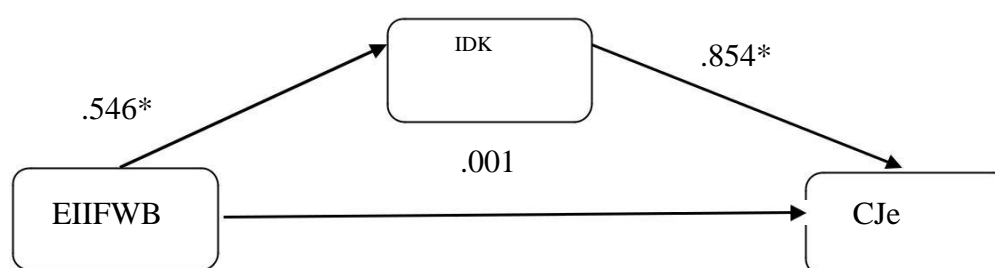


**Table No. 1.2. Results of Multiple Regression Analysis showing CJe predicted by EIIFWB and IDK.**

Variables	B Value	Std Error	Sig.	R	Adjusted R Square	Collinearity		Durbin-Watson coefficient
						Tolerance	VIF	
EIIFWB	0..001	0.026	.971	0.934	0.871	0.787	1.271	1.817
IDK	0..854	0.022	.000			0.787	1.271	

**Source:** Output of analysis of primary data.

The path coefficients are presented in Figure No. 1.1



Total effect 0.467 \* Significant at .005 level

**Figure No. 1.1.** Mediation Model showing the unstandardized path coefficients

#### B) Testing of Mediation Effect on of IDK on the Relationship of AES predicting CJe.

From Table No. 1.3 the regression coefficient for AES predicting CJe, AES predicting IDK and IDK predicting CJe are found statistically significant at 5% level of significance. Thus, it becomes logical to assume a mediation effect of IDK in this model (Nareesh K. Malhotra & Satyabhushan Dash, 2009). Table No. 1.4 presents the results on the mediation model when IDK is introduced as a mediator.

**Table No. 1.3 Results of Regression Analysis showing AES predicting IDK and CJe respectively.**

Regression Model	B Value	t	Sig.	Std Error	R	Adjusted R Square	ANOVA	
							F	
AES predicting IDK	0.296 (constant 2.609)	5.184	.000	.057	0.289	0.083	26.878	
							Sig.	.000
AES predicting CJe	0.259 (constant 2.775)	4.929	.000	0.073	0.275	0.073	24.292	
							Sig.	.000

**Source:** Output of analysis of primary data.

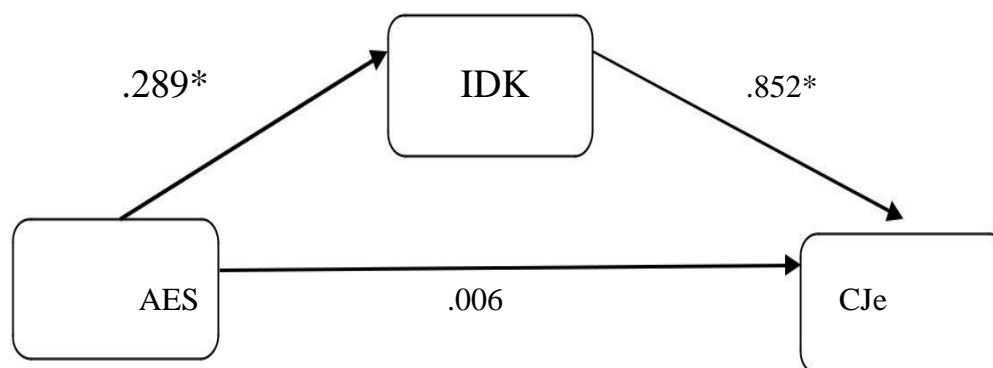
Table No. 1.4 presents the results on the mediation model when IDK is introduced as a mediator. The direct effect of AES predicting CJe appears statistically insignificant ( $p > .05$ ), when the mediating variable IDK is introduced. The indirect effect of AES getting mediated through IDK in predicting CJe is found statistically significant ( $p < .05$ ). 87.2% variance in CJe is explained by AES through IDK. The indirect effect (unstandardised) is computed as  $0.289 \times 0.852 = 0.246$ . Thus, a unit increase in the score of AES, a 0.426 unit increase in the score of CJe is predicted. The Sobel Test result also indicate that the indirect effect of AES through IDK in predicting CJe is significant ( $p < .05$ ). As the independent variable (AES) has no significant direct predicting power for the dependent variable (CJe) in the presence of the mediating variable (IDK), the hypothesis (H2) that Investment Domain Knowledge (IDK) perfectly mediates the relationship of Acceptance of Equity Shares (AES) predicting Correctness of Judgment on Equity Decisions (CJe) is accepted.

**Table No. 1.4. Results of Multiple Regression Analysis showing CJe predicted by AES and IDK.**

Variables	B Value	Std Error	Sig.	R	Adjusted R Square	Collinearity		Durbin-Watson coefficient
						Tolerance	VIF	
AES	0.006	0.020	.762	0.934	0.872	0.917	1.091	1.816
IDK	0.852	0.020	.000			0.917	1.091	

**Source:** Output of analysis of primary data.

The path coefficients are presented in Figure No. 1.2.



(Total effect 0.252) \* Significant at .005 level

**Figure No. 1.2.** Mediation Model showing the unstandardized path coefficients

## DISCUSSIONS

The mediation effect of IDK on the relationship of EIIFWB and AES (two dimensions of IIPe) respectively predicting CJe is also tested using multiple regressions (Robert M. Baron and David A. Kenny, 1986). In the initial analysis, a statistically significant relationship (regression coefficient) was noted on all three relationships viz., EIIFWB and AES respectively (the

independent variables) predicting CJe (dependent variable), EIIFWB and AES respectively predicting IDK (mediating variable) and IDK predicting CJe. Thus, a mediating model is established (Nareesh K. Malhotra & Satyabhushan Dash, 2009). The mediation analysis indicated a perfect mediation by IDK on the relationship of EIIFWB and AES respectively predicting CJe. This is due to the fact that the direct effect of EIIFWB and AES respectively predicting CJe is found statistically insignificant ( $p > 0.05$ ).

The direct effect of EIIFWB predicting CJe (at 5% level of significance) appears statistically insignificant, when the mediating variable IDK is introduced. The indirect effect of EIIFWB getting mediated through IDK in predicting CJe is found statistically significant ( $p < 0.005$ ). The indirect effect (unstandardised) is reported as  $(0.546 \times 0.854) = 0.466$ . Thus, a unit increase in the score of EIIFWB, 0.466 unit increase in the score of CJe is predicted. The Sobel Test result also indicate that the indirect effect of EIIFWB through IDK in predicting CJe is significant ( $p < 0.05$ ). Thus, independent variable (EIIFWB) has no significant direct predicting power for the dependent variable (CJe) in the presence of the mediating variable (IDK), and thus the perfect mediation model can be accepted. The direct effect of AES predicting CJe (at 5% level of significance) appears statistically insignificant, when the mediating variable IDK is introduced. The indirect effect of AES getting mediated through IDK in predicting CJe is found statistically significant. The indirect effect (unstandardised) is reported as  $(0.289 \times 0.852) = 0.246$ . Thus, a unit increase in the score of AES, a 0.246 unit increase in the score of CJe is predicted. The Sobel Test result also indicate that the indirect effect of AES through IDK in predicting CJe is significant ( $p < 0.05$ ). Thus, independent variable (AES) has no significant direct predicting power for the dependent variable (CJe) in the presence of the mediating variable (IDK), and thus the perfect mediation model can be accepted.

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## CONSUMER BUYING BEHAVIOUR TOWARDS FMCG PRODUCTS WITH REFERENCE TO TOILET SOAP

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### ABSTRACT

*A consumer is consuming various goods and services as per his/her requirements and needs. Now, a customer is getting many alternatives with superior and quality based goods and services. The various choices and needs of customers are the big challenges to a marketer in the present competitive market among competitors. Thus, the marketers should offer the goods and services in such manner to cater the various needs and requirements of customers. The marketers must study the behaviour of consumer before producing the goods and services as well as before offering the same to market. There are various factors which influence customers in making purchase decision, purchasing power, group influences, personal preferences, economic conditions and sustained marketing campaign. Consumer also goes through a life cycle and even there are behavioural changes which may take place. Above all, marketers have to carefully study the behaviour of consumer and changes have to be incorporated in product designing and pricing. A proper study would be helpful to find out the reasons thereof and the facts can be presented in such a manner that marketers can take the appropriate marketing decisions. The Balasore district of Odisha has been selected for the study. Against this backdrop, the present study discusses the behavior of consumers with regard to Toilet Soap.*

**KEYWORDS:** Consumer Behaviour, FMCG Product, Consumer, Toilet Soap And Retail Store

## INTRODUCTION

Study of consumer behaviour is very important as it helps to take the better marketing decisions regarding pricing and promotional strategies of products. Consumer behaviour helps to study the needs and requirements of consumers and level of satisfaction that is observed with certain level of service or quality of product. Products can be designed for the targeted group and changes made as and when it is required. Study of consumer behaviour provides more insights into the behaviour of people.. It enables a company to improve the services and products quickly. Consumer behaviour is affected by several factors i.e. social, personal, psychological factor, socio-cultural, economic, demographic factors, etc. Now, the competitive forces are at work and multinational corporations devote much time and attention to study the specific needs of consumers. The product line should be built up as per consumers' needs and requirements. Needs, preferences, attitude, life style, learning, culture, sub-culture, etc. go a long way in shaping the consumer behaviour. Consumer behaviour and market implications almost go side by side. Product development and pricing policies have to be done keeping in mind the behaviour and attitudes of customers. Understanding the consumer behaviour helps to investigate the way of consumers or a group of consumers behave. Study of consumer behaviour helps to optimize sales of products or services.

## REVIEW OF LITERATURE

The existing study on this topic occasionally, a few research articles are found in research journals and reports in this area. Here, an attempt has been made to review a few studies made by researchers in this area and has been presented in the following paragraphs.

**Sitamber & Manohar (1980)** conducted a study on shopping behaviour of consumers. The study has revealed that Indian consumers have no special choice in choosing his particular shop for making a purchase. In most of the families, the male head makes the purchases, restricting the choices of other members of the family to limited variety of goods. **Kaurshall et al. (1976)** conducted a study on purchasing behaviour pattern of consumer and their brand preferences for washing soaps. It was concluded that the formation of brand loyalty is significantly influenced by the educational level of the users of washing soaps. Lesser educated people from their brand loyalty on the basis of price, attractive packaging and easy availability in the market, whereas their educated counter parts i.e. users of washing soaps form their brand loyalty on the basis of easy lather formation and convenience in handling. Keeping in view these facts the sellers should adopt a separate marketing strategy for urban sector and rural sector.

**Ahtola (1984)** viewed that consumer crepitates the exchange-theory model where he gives up a certain price and expects in exchange a bundle of attributes. A consumer basically faces the give/get equation. **Bloemer & Kasper (1995)** viewed that the relationship between customer satisfaction and loyalty are moderated by consumers on the evaluation of the brand choice. With the growth of competition, retailers compete with manufacturers to increase their relative market power and share of the total channel profit pie.

**Tauseef (2011)** attempted to find the factors that affect customer impulsive buying behaviour in FMCG sector considering retail market in India. It was found that since income of each individual is increasing and more and more people are moving towards western culture in dressing sense, in eating etc., so the purchasing power of people has really gone up and thus the impulsive buying of commodities is on a high trend mainly due to pricing strategies of retail players and full festival offers throughout the year. **Talwar et al. (2011)** concluded that FMCG

companies mainly focus on specific customized promotional strategies which include using the local language and talent for a particular place. Many FMCG companies provide the various training programs to sales force in order to expand into rural and semi-urban market. **Cardoso & Pinto (2010)** explained that there are six forms of shopping activities based on motivation and behaviour i.e. adventure shopping, social shopping, gratification shopping, idea shopping, role shopping and value shopping. Several studies have identified the impacts of price differentials on consumers' brand preferences, changes in product cues on demand variations, changes in price on demand sensitivity and scarcity on consumer choice behaviour. **Mahalingam & Kumar (2012)** carried out a study on consumer behaviour towards selected Fast Moving Consumer Goods in Coimbatore City". The study concluded that the consumer behaviour plays an important role in marketing. Most of the consumers are influenced by brand and quality in purchase of FMCG products. Finally, the study suggested for improving the quality in FMCG product through product development and external monitoring. **Saradamma et al. (2012)** found that the move rural buyers from trial to preference, brands need to deliver on the value proposition as well as to dislodge someone else from the consumer's existing preference bathing soap. Brand loyalty is a scale and brands move up, down and even off that scale with and without a vigilant brand management strategy. Pricing, promotional deals and product availability, all have tremendous impact on the position of the brand in buyer's preference bathing soap. **Aggarwal (2014)** suggested that research of consumer behaviour is the scientific study of the processes, consumers use to select, secure, use and dispose of products and services that satisfy their needs. The findings have confirmed the factors influencing consumer buying behaviour for tooth paste brands available in the market. **Jhanigachalam & Vijayarani (2014)** carried out a study on consumer behaviour towards FMCG products in Puducherry. The objectives of the study are to know the consumer behaviour towards pre and post purchase decision towards FMCG products by setting the hypothesis. The study concluded that success of any business depends upon the ability to create and retain customers through brand loyalty.

**Kesar & Sharma (2015)** carried out a study on "*Understanding changing Buying Behaviour towards FMCG Segment in different Retail Format: A Study of Jammu Region*". The study concluded that consumer's shows preference for modern multi brand retail stores as compared to traditional kiryana stores. A greater amount of resources needs to be invested in improving the quality related attributes of kiryana stores. Customers are shifting their shopping pattern from unorganized retail i.e. Kiryana stores to organized retail i.e. multi brand retail stores due to various factors such as economical improvement and increased disposable income, payment option (credit/debit card), cleanliness, attractive offers and discounts, variety and fun during shopping.

**Chauhan & Singh (2016)** carried out a study on "*Indian Consumer Buying Behavior of FMCG Products (with special reference of Bathing Soap)*" to identify the factors influencing the consumer behavior during the purchasing of bathing soap. The study concluded that the perception of a rural consumer is as equal as the perception of an urban consumer. They know and collect the product related information through TV and newspaper ads. Consumers prefer and purchase the branded bathing soaps product and express the satisfaction level towards bathing soaps. It would be important that FMCG companies should integrate the new functional and cosmetics benefits in the coming years in order to continue growing the market. **Varadharajan (2016)** made a study on "Buyer Behaviour and Brand Loyalty of Toilet Soaps in Perambalur Town (Tamil Nadu)". The study revealed that 22 % of consumers prefer Hamam

soap which is the leading toilet soap in Perambalur district among other brand of toilet soaps. Chemical free, Ad in TV and newspaper and income of customers are the main influencing factors to purchase the toilet soaps. **Chauhan & Singh (2016)** carried out a study on “*Indian Consumer Buying Behavior of FMCG Products (with special reference of Bathing Soap)*” to identify the factors influencing the consumer behavior during the purchasing of bathing soap. The study concluded that the perception of a rural consumer is as equal as the perception of an urban consumer. They prefer purchasing of bath soaps mostly from convenience store or neighbor retail store. **Varadharajan (2016)** made a study on “*Buyer Behaviour and Brand Loyalty of Toilet Soaps in Perambalur Town (Tamil Nadu)*”. The study revealed that 22 % of consumers prefer Hamam soap which is the leading toilet soap in Perambalur district among other brand of toilet soaps. Chemical free, Ad in TV and newspaper and income of customers are the main influencing factors to purchase the toilet soaps.

**Kumar & Ahuja (2017)** carried out a study on “*Consumer Behavior towards Patanjali Products: A Study on Consumers with reference to Rohtak District of Haryana*” to know the factors affecting the consumer behaviour towards Patanjali products as well as to measure the association between independent variables and satisfaction level of consumers. The study concluded that there is no association between independent variables and satisfaction level of consumers. Satisfaction level is independent from demographic variables such as marital status, income, gender, occupation and age. Most of the people use the Patanjali products due to swadeshi factor and also due to reasonable price of it. But limitation of Patanjali products is of its availability because they are not easily available in the market. **Gurusanthosini & Gomathi (2017)** attempted a study on “*Consumer Preference towards Patanjali Products with special reference to Erode City*”. It was found that availability of products at reasonable price is one of the main factors for customers to purchase the product. The consumers prefer this product due to the ayurvedic ingredients. Further, most of consumers are satisfied with Patanjali products.

## RESEARCH GAP

The followings are the research gaps which have been taken for the study.

1. But, no study has been carried out by researchers in past on the topic of analysis of consumer buying behaviour towards various brands Toilet Soap in Balasore district.
2. There is also little study on brand preference of consumers towards selection of various brands Toilet Soap Toilet soap in Balasore district.
3. It was found the gap on exposure of media to create awareness among consumers of buying and selecting of various brands Toilet Soap.
4. It was noticed the gap on source of information through which customers came to know the various brands of Toilet Soap in this sampling area.

The present study makes an attempt to analyze the consumer buying behaviour of various brands Toilet Soap with reference to Balasore district of Odisha state with the new dimension.

## OBJECTIVES OF THE STUDY

The main objective of the present study is to examine in general the factors affecting the buying behaviour towards various brands of Biscuits. Apart from this, the other objectives of the present study are: (i) to study the consumers' brand preferences towards various brands of Toilet Soap, (ii) to know the media's exposing in buying and selecting of various brands of Toilet Soap, and



(iii) to know the source of information through which customers came to know the various brands of Toilet Soap.

### HYPOTHESIS OF THE STUDY

The following hypothesisess have been set keeping in mind which is based on objectives of the study. They are: (i) Hypothesis-1: Various brands of Toilet Soap create the awareness the different brand images in the minds of consumers. (ii)Hypothesis-2: The usage pattern of consumers or buying of various brands of Toilet Soap is affected by many factors or variables.

### RESEARCH METHODOLOGY

Research methodology typically refers to the techniques which are followed to conduct research. It provides to researcher(s) with a guideline of how to collect and analyze the data. Primary data has been collected from 400 consumers through a well structured questionnaire. Secondary data is obtained from secondary sources such as research reports, annual reports, books, journals and periodicals, websites, etc. The collected data has been analyzed through SPSS software, Percentage, 5-point Likert scale, reliability test, friedman's test, multi dimensional scaling, factor analysis, one-way ANOVA to get the inferences.

### Analysis and Interpretation of Data

#### Section-A: Demographic Profile of Consumers

**Table No.1: Age Wise Classification of Consumer**

Age Group	Frequency	Percentage (%)
Below 20	80	20
20-30	120	30
30-40	80	20
Above 40	120	30
Total	400	100
<i>Source: Primary Data</i>		

It is observed from the above table that 30 % of consumers belong to the age group of 20-30 years and above 40 years. Similarly, 20 % of consumers belong to the age group below 20 and 30-40 years.

**TableNo.2:Gender Wise Classification of Consumer**

Gender	Frequency	Percentage (%)
Male	240	60
Female	160	40
Total	400	100
<i>Source: Primary Data</i>		

It is observed from the table as well as from graph that 60 % of consumers (n=240) are in male and remaining consumers are in female category.

**Table No.3: Marital Status of Consumer**

Marital Status	Frequency	Percentage (%)
Married	280	70
Unmarried	120	30
Total	400	100
<i>Source: Primary Data</i>		



It is observed from the above table that 70 % of consumers are married and remaining consumers are unmarried category. It is concluded that majority of the consumers are in married category.

<b>TableNo.4: Family Size of Consumer</b>		
Family size	Frequency	Percentage (%)
1 to 3	160	40
4 to 7	200	50
7 to 10	20	05
Above 10	20	05
Total	400	100
<i>Source: Primary Data</i>		

It is seen from the table that 50 % of consumers are with the family size 4 to 7 members, 40 % of consumers are with the size 1 to 3 members and 5 % of consumers each are with the size of family 7-10 members and above 10 members

<b>Table No.5: Educational Qualification of Consumer</b>		
Educational Qualification	Frequency	Percentage (%)
No schooling	20	5
Primary	20	5
Secondary	28	7
Higher secondary	28	7
Graduation	224	56
Others	80	20
Total	400	100
<i>Source: Primary Data</i>		

It is observed from the above table that 56 % of consumers are graduate, 7 % each of consumers belong to higher secondary and secondary group, 5 % each of consumers are of primary level and non-schooling group, the rest consumers belong to other group.

<b>Table No.6: Monthly Income of Consumer</b>		
Monthly Income	Frequency	Percentage (%)
Up to Rs.5000	12	3
Rs. 5,000-10,000	32	8
Rs. 10,000-20,000	96	24
Rs. 20,000-30,000	164	41
Rs.30,000 and above	96	24
Total	400	100
<i>Source: Primary Data</i>		

It is observed from the above table that 41 % of consumers earn Rs.20,000 to Rs. 30,000, 24 % of consumers each earn Rs.10,000 to Rs.20,000 and more than Rs.30,000 per month. Further, 8% of consumer earn Rs.5,000 to Rs.10,000 and the rest 3 % earn upto Rs.5,000 per month.

<b>Table No.7: Occupational Position of Consumer</b>		
Occupation	Frequency	Percentage (%)
Farming	16	4
Govt. service	200	50
Pvt. service	48	12

Professional	24	6
Business	32	8
Study	32	8
others	48	12
Total	400	100
<i>Source: Primary Data</i>		

It is revealed from the above table that 50 % of consumers are government employees and 8% each of consumers are in businessmen and students occupational groups. Further, 6 % of consumers are in professional and 12 % of consumers are privately employed and the remaining consumers belong to other category.

### Section B: Consumers Buying Behaviour towards various Brands of Toilet Soap

<b>Table No. 8: Views on Using Toilet Soap</b>		
Use of Toilet Soap	Frequency	Percentage (%)
Yes	360	90
No	40	10
Total	400	100
<i>Source: Primary Data</i>		

The above table reveals that 90 % of consumers use the Toilet Soap while remaining consumers do not use the toilet soap. Thus, majority consumers use the Toilet Soap.

<b>Table No. 9: Views on Using Frequency of Toilet Soap</b>		
Frequency of using in a day	Frequency	Percentage (%)
Once	200	56
Twice	100	28
Thrice	60	16
Total	360	100
<i>Source: Primary Data</i>		

It is noticed from the above table that 56 % and 28 % of consumers are using the Toilet Soap once in a day and twice in a day respectively. Remaining consumers are using the toilet soap thrice in a day.

<b>Table No. 10: Monthly Budget of Consumers for Toilet Soap</b>		
Monthly Budget	Frequency	Percentage (%)
Upto 50	80	20
50-100	100	25
100-150	100	25
150 and above	120	30
Total	400	100
<i>Source: Primary Data</i>		

When enquired about monthly budget for purchasing Toilet Soap, 30 % of consumers have opined that the budget is Rs.150 and above. 25 % of each respondent have opined that the monthly budget is between Rs.50-Rs.100 and Rs.100-Rs.150 and 20 % of consumers have opined that the monthly budget is average of up to Rs.50.

<b>Table No. 11: Views on Using No. of Toilet Soap Brand</b>		
Using No. of Toilet Soap Brand	Frequency	Percentage (%)
One	20	05
Two	20	05
Three	120	30
More than 3	240	60
Total	400	100
<i>Source: Primary Data</i>		

When enquired views towards using no. of brands of Toilet Soap, 60 % and 30 % of consumers are using more than 3 brands and three brands respectively and 5 % of consumers each are using one and two brands of Toilet Soap.

<b>Table No. 12: Preferable Attributes of Selection of Toilet Soap</b>							
<i>Rating Scale: (4- Most Preferred Attributes and 1- Least Preferred Attributes)</i>							
Rank Attributes	4	3	2	1	Total Score	Mean Score	Ranking
Goodness	1000	180	100	40	1320	3.30	4 <sup>th</sup>
Long lasting	1044	216	70	32	1374	3.43	3 <sup>rd</sup>
Chemical free	1100	255	70	05	1430	3.56	2 <sup>nd</sup>
Use of natural things	860	345	76	32	1312	3.28	5 <sup>th</sup>
Skin Care	1136	255	62	-	1435	3.63	1 <sup>st</sup>
<i>Source: Primary Data</i>							

The above table shows that “skin care” is indicated as the most preferred attribute for selection of Toilet Soap. Chemical free and long lasting attributes of Toilet Soap are ranked as 2<sup>nd</sup> and 3<sup>rd</sup> respectively among consumers. It is observed that using of natural things of Toilet Soap is the least preferable attributes for selection of Toilet Soap among consumers. It is suggested that the marketer should offer the Toilet Soap based on skin care and chemical free ingredients.

<b>Table No. 13: Preferable Brand of Consumers on Toilet Soap</b>								
<i>Rating Scale : (5- Most Preferred Brand and 1- Least Preferred Brand)</i>								
Rank Brand	5	4	3	2	1	Total Score	Mean Score	Ranking
Lux	1095	392	279	126	27	1919	4.80	1 <sup>st</sup>
Cinthol	1150	356	117	98	43	1764	4.41	4 <sup>th</sup>
Liril	1100	364	285	146	21	1916	4.80	1 <sup>st</sup>
Rexona	890	368	279	156	49	1742	4.36	5 <sup>th</sup>
Dove	905	380	288	166	45	1784	4.46	3 <sup>rd</sup>
Lifebuoy	1090	340	114	96	11	1651	4.13	7 <sup>th</sup>
Dettol	1010	348	117	100	22	1607	4.02	9 <sup>th</sup>
Mysore Sandal	1050	340	129	110	07	1636	4.09	8 <sup>th</sup>
Johnson Baby	910	404	270	68	12	1664	4.16	6 <sup>th</sup>
Nivea	585	448	216	116	41	1406	3.52	14 <sup>th</sup>
Vivel	1005	312	135	88	32	1572	3.93	11 <sup>th</sup>
Salvon	890	460	135	84	20	1589	3.98	10 <sup>th</sup>
Flame	690	300	162	184	41	1377	3.44	16 <sup>th</sup>

Santoor	860	376	225	86	16	1563	3.91	12 <sup>th</sup>
Neem	765	356	114	136	57	1428	3.57	13 <sup>th</sup>
Amway	760	296	132	130	65	1383	3.46	15 <sup>th</sup>
Joy	745	300	141	136	61	1383	3.46	1 <sup>th</sup>
Any other	475	444	105	86	116	1226	3.07	17 <sup>th</sup>
<i>Source: Primary Data</i>								

It is observed from the above table that the mean score of the various brands of Toilet Soap vary from 3.07 to 4.80. On the basis of mean score, it is found that the following brands of Toilet Soap namely Lux, Liril, Cinthal, Dove, Rexona, Jhonson Baby and Lifebuoy are being rated highly by consumers. Further, the respondent have the least preference towards Flame, Amway, Nevea, Neem, Vivel, Santhor brands of Toilet Soap. It is concluded that Lux, Liril, Cinthal are the most preferred brands of Toilet Soap among consumers.

<b>Table No. 14: Sources of Information and Knowledge on Toilet Soap</b> (Rating Scale: 5- Main Source and 1- Least Source)			
Source of Information	Total Score	Mean Score	Ranking
Newspaper Ad	1212	3.03	2 <sup>nd</sup>
Poster/Wall Paintings	980	2.40	6 <sup>th</sup>
Ad in Television/D.T.H.	1362	3.41	1 <sup>st</sup>
Internet	682	1.71	9 <sup>th</sup>
Radio Ad.	736	1.84	8 <sup>th</sup>
Sales Personnel	1224	3.06	3 <sup>rd</sup>
Word of Mouth	1180	2.95	4 <sup>th</sup>
Reference Group	936	2.34	7 <sup>th</sup>
Retailers/Distributors	1026	2.57	5 <sup>th</sup>
Any other source	536	1.34	10 <sup>th</sup>
<i>Source: Primary Data</i>			

It is observed from the above table that Ads in Television/DTH is ranked as 1<sup>st</sup> as the main source of getting information about various brands of Toilet Soap, newspaper Ad and sales personnel are ranked as 2<sup>nd</sup> and 3<sup>rd</sup> respectively. Further, radio Ad and internet are ranked as the least preferred source of getting information and knowledge to know the same. It is concluded that Ad in Television/DTH and newspaper are the main sources of getting information and knowledge to know about various brands of Toilet Soap which influence to consumers for selection as well as to buy the same.

<b>Table No. 15: Preference of Consumers on Retail Store</b> (Rating Scale: 5- Most Preferred and 1- Least Preferred)			
Retail Store	Total Score	Mean Score	Ranking
Departmental Stores/Shopping Malls	1182	2.96	2 <sup>nd</sup>
Super Market	988	2.47	3 <sup>rd</sup>
Convenient Stores	1288	3.22	1 <sup>st</sup>
Kirana Stores	886	2.22	4 <sup>th</sup>
<i>Source: Primary Data</i>			

It is observed from the above table that convenient stores and departmental stores/shopping malls are ranked as 1<sup>st</sup> and 2<sup>nd</sup> respectively for buying the various brands of Toilet Soap as compared to other retail stores. Further, the super market and kiran stores are least ranked by consumers. It is concluded that the customers prefer more the convenient stores and departmental stores/shopping malls to buy the same because of many alternatives, credit facility, distance and more discounts.

<b>Table No. 16: Opinion on main Buying Reason from Retail Store</b> (Rating Scale : 5- Most Preferred Reason and 1- Least Preferred Reason)			
Buying Reason from Retail Store	Total score	Mean score	Ranking
Discount	1306	3.27	1 <sup>st</sup>
Variety	1293	3.23	2 <sup>nd</sup>
Service	942	2.36	3 <sup>rd</sup>
Proximity	920	2.30	4 <sup>th</sup>
Ambience	822	2.06	5 <sup>th</sup>
<i>Source: Primary Data</i>			

It is observed from the above table that discount and variety on various brands of Toilet Soap are ranked as 1<sup>st</sup> and 2<sup>nd</sup> respectively which are the main preferable reasons of buying the same from retail store. Further, proximity, service aspects of retailers and ambience of retail stores are the least other preferable reasons among consumers to buy the same from the retail store. Thus, discount and variety are the main preferable reasons among customers to choose and buy the Toilet Soap from the retail store.

### Views on Factors Influencing the Consumer Buying Decision on FMCG Products

The views of consumers on factors influencing the buying decision on Toilet Soap have been analyzed through factor analysis. The purpose of the study is to identify the underlying dimensions or factors that explain the correlations among the set of variables that define the perception of customers towards selection of Toilet Soap. The views of consumers have been analyzed through SPSS.

### Reliability–Cronbach's Alpha

The reliability test in the form of Cronbach's Alpha suggests that a high reliability measure of .975 indicates appropriate internal consistency of the established subscale used.

<b>Table No. 17 (A): Reliability Statistics</b>		
Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	No. of Items
.923	.921	34
<i>Source: SPSS Output</i>		

<b>Table No. 17(B): Reliability Statistics (Variable wise)</b>				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
v1	118.9000	732.810	.772	.923
v2	118.9000	750.582	.835	.924

v3	120.1500	777.711	.712	.921
v4	118.9000	762.369	.721	.923
v5	118.9000	742.804	.723	.921
v6	118.9000	775.549	.732	.923
v7	120.1500	775.743	.621	.922
v8	118.9000	772.359	.760	.924
v9	118.9000	782.803	.772	.923
v10	118.9000	771.582	.861	.923
v11	120.1500	755.713	.641	.921
v121	118.9000	725.820	.772	.924
v13	118.9000	752.539	.763	.924
v14	120.0151	759.723	.723	.923
v15	118.9000	772.329	.721	.923
v16	118.9000	732.810	.753	.923
v17	118.9000	770.589	.865	.923
v18	120.1050	722.743	.652	.924
v20	118.9000	772.379	.765	.925
v21	118.9000	782.800	.761	.926
v22	118.9000	790.555	.560	.923
v23	120.2500	789.187	.566	.923
v24	119.9200	800.261	.557	.923
v25	119.2500	786.345	.631	.922
v26	120.2100	714.976	.653	.922
v27	120.2100	749.634	.542	.921
v28	117.9000	711.366	.563	.934
v29	120.2100	793.231	.621	.925
v30	120.2100	801.325	.652	.924
v31	118.2000	793.221	.564	.925
v32	118.9500	806.366	.563	.924
v33	120.2100	782.000	.596	.923
v34	119.4000	806.366	.563	.923

Source:SPSS Output

Corrected item-total correlation should be at least .40 and all the values are above .50 . Alpha if item deleted, this is probably the most important thing the researcher looks after. This represents the scale's Cronbach's Alpha reliability coefficient for internal consistency, if the individual item is removed from the scale and no item is required to be deleted as is evident from above table.

The purpose of the study is to identify the underlying dimensions or factors that explain the correlations among the set of variables that define the perception of the customers towards the selection of Toilet Soap. Thus, factor analysis has been considered to be an ideal technique for the co-relation matrix. The Principal Component Method is considered to be appropriate as the primary purpose is to determine the minimum number of factors that would account for the maximum variance in the data collected for the purpose of the study. Eigen Value greater than 1, results in **seven** factors being extracted from the data collected. Only factors with Eigen Value, values greater than 1 is retained and other factors are not included in the analysis. By comparing the Varimax rotated factor matrix with unrotated factor matrix entitled as component matrix, rotation has provided the simplicity and has enhanced the interpretability. Four factors have been extracted from the rotated factor matrix.

The variables from X1-X34 indicate the attributes of selecting of Toilet Soap

X1 = Price of the product	X18=Social Class
X2 = Print Advertisement	X19=Culture
X3 = T.V commercials	X20 =Environment
X4 = Word of mouth	X21 =Advice of a doctor
X5 = Sales people	X22 =Packaging of the product
X6 = Incentives schemes	X23 =Labelling of the product
X7 = Test/Fragrance	X24 =Quality of the product
X8 = Own experience	X25 =Taste change
X9 = Credit Facility	X26 =Outdated product
X10= Advice of beautician	X27 =New Ingredients
X11 = Availability of product	X28 =Brand loyalty
X12= Personality	X29 =Life of the product
X13 = Advertisement Trail	X30 =To follow the celebrity
X14 = Peer groups	X31=Personality and life style
X15=Income	X32 =Attitude and behaviour
X16=Family	X33 =Need and Motives
X17=Age	X34 =Quality of the product

KMO and Bartelett's test is used to test the significance of using factor analysis.

<b>Table No. 17(C): KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.831
Bartlett's Test of Sphericity	Approx. Chi-Square	233.635
	Df	107
	Sig.	.000
<i>Source:SPSS Output</i>		

Kaiser-Meyer-Olkin Measure of Sampling Adequacy=0.831 and it signifies the accuracy of factor analysis. The first item from the output is a table of communalities which shows how much of the variance in the variables has been accounted for by the extracted factors.



**Table No. 17(D): Communalities**

Communalities	Initial	Extraction	Communalities	Initial	Extraction
X1	1.000	.621	X18	1.000	.652
X2	1.000	.638	X19	1.000	.589
X3	1.000	.821	X20	1.000	.698
X4	1.000	.685	X21	1.000	.702
X5	1.000	.731	X22	1.000	.811
X6	1.000	.778	X23	1.000	.712
X7	1.000	.655	X24	1.000	.752
X8	1.000	.821	X25	1.000	.713
X9	1.000	.652	X26	1.000	.699
X10	1.000	.725	X27	1.000	.701
X11	1.000	.721	X28	1.000	.651
X12	1.000	.589	X29	1.000	.598
X13	1.000	.721	X30	1.000	.599
X14	1.000	.658	X31	1.000	.601
X15	1.000	.658	X32	1.000	.612
X16	1.000	.741	X32	1.000	.561
X17	1.000	.711	X34	1.000	.632
<i>Extraction Method: Principal Component Analysis.</i>					
<i>Source:SPSS Output</i>					

**Principal Component Analysis**

The result shows all the factors extractable from the analysis along with their Eigen values, the percent of variance attributable to each factor and the cumulative variance of the factor and the previous factors.

**Table No. 17 (E) : Explanation of Total Variance**

Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Total	% of Variance	% of Cumulative	Total	% of Variance	% of Cumulative	Total	% of Variance	% of Cumulative
2.912	20.631	20.631	2.912	20.631	20.631	2.251	20.631	20.631

2.831	19.123	39.754	2.831	19.123	39.754	2.241	19.123	39.754
2.726	12.120	51.874	2.726	12.120	51.874	2.240	12.120	51.874
1.965	10.586	62.46	1.965	9.586	61.46	1.968	9.586	61.46
1.568	9.231	71.691	1.568	8.231	69.691	1.863	8.231	69.691
1.452	8.250	79.941	1.452	6.250	75.941	1.452	6.250	75.941
1.063	4.211	84.152	1.063	3.211	79.152	1.321	3.211	79.152
.923	3.120	87.272						
.865	2.863	89.135						
.811	2.532	92.667						
.798	1.745	94.412						
.756	1.432	95.844						
.734	.911	96.755						
.721	.801	97.556						
.711	.832	97.751						
.685	.659	98.583						
.655	.456	99.242						
.642	.056	99.698						
.631	.041	99.754						
.622	.032	99.795						
.611	.021	99.827						
.601	.020	99.848						
.596	.019	99.868						
.544	.018	99.887						
.436	.017	99.905						
.422	.015	99.922						
.411	.014	99.937						
.321	.014	99.951						
.301	.013	99.965						
.210	.013	99.978						
.112	.011	99.991						
6.071E-03	.009	100						

*Explanation of Total Variance, Extraction Method: Principal Component Analysis*

*Source:SPSS Output*

It is noticed from above table that the first factor accounts for 20.631 % of the variance, the second factor accounts for 19.123 % and so on.

**Table No. 17(F): Component Matrix**

	Component						
	1	2	3	4	5	6	7
X1	.256	.51	-.243	-5.207E-02	.608	-.329	-8.179E-02
X2	-.896	-5.207E-02	.222	-.436	.526	.593	.682
X3	.258	-.439	.713	5.919E-02	-.339	-1.521E-02	-.345
X4	-.583	-4.086E-02	.775	-.457	.143	.125	2.226E-02
X5	.775	-.457	.376	-.336	-.132	.562	.349
X6	.376	-.336	-.243	-5.207E-02	.605	.529	1.179E-02
X7	-9.531E-02	-.344	.222	-.439	.326	.393	-.182
X8	-.417	-.600	.713	5.919E-02	.339	-1.521E-02	-.345
X9	-.345	.526	-.583	4.086E-02	.795	4.788E-02	-.213
X10	.228	.755	.775	-.457	.143	.129	2.226E-02
X11	.579	-6.046E-02	.376	-.336	-.132	.562	.349
X12	.82	.528	6.802E-02	.152	3.213E-02	.986	.754
X13	.465	4.560E-02	.538	.398	.243	.589	.745
X14	-.583	-4.086E-02	.775	-.457	.143	.129	2.226E-02
X15	.775	-.457	.376	-.336	-.132	.562	.349
X16	.976	-.336	-.243	-5.207E-02	.608	-.329	2.179E-02
X17	-9.531E-02	-.344	.222	-.439	.326	.393	.782
X18	.817	-.600	.713	5.919E-02	-.339	-1.521E-02	.745
X19	-.785	.526	-.583	-4.086E-02	-.695	4.788E-02	-.213
X20	.929	.789	.789	-.457	.143	.729	5.226E-02
X21	.879	3.046E-02	.376	-.356	-.132	.562	.349
X2	.572	.528	6.802E-02	.552	3.213E-02	.855	.745
X14	-.469	2.562E-02	.538	.398	.243	.778	.478
X23	-.583	3.026E-02	.775	.457	.143	.129	2.226E-02
X24	.775	.478	.776	-.736	-.132	.562	.349
X25	.976	.389	-.243	5.207E-02	.608	-.325	-2.179E-02
X26	-9.531E-02	.378	.722	-.739	.326	.793	.782
X27	-.417	-.600	.713	5.919E-02	.339	-1.521E-02	.745
X28	-.245	.526	.583	-4.056E-02	-.695	4.788E-02	.213
X29	.229	.755	.855	-.457	.843	.659	9.226E-02
X30	.579	-6.046E-02	.376	.336	-.132	.562	.349
X31	.572	.528	6.802E-02	.152	3.213E-02	.456	.568
X32	.465	4.560E-02	.538	.398	.243	.756	.635
X33	-.583	-4.086E-02	.785	.437	.143	.529	9.226E-02

X34	.778	-.457	.876	.336	.132	.562	.949
<i>Extraction Method: Principal Component Analysis. 6 components extracted.</i>							
<i>Source:SPSS Output</i>							

The idea of rotation is to reduce the number factors on which the variables under investigation have the high loadings. Rotation does not actually change anything but makes the interpretation of the analysis easier.

<b>Table No.17(G): Rotated Component Matrix</b>							
	Component						
	1	2	3	4	5	6	7
X1					<b>.912</b>		
X2						<b>.689</b>	
X3						<b>.714</b>	
X4						<b>.714</b>	
X5					<b>.875</b>		
X6					<b>.745</b>		
X7					<b>.653</b>		
X8					<b>.559</b>		
X9					<b>.745</b>		
X10			<b>.813</b>				
X11		<b>.778</b>					
X12	<b>0.659</b>						
X13						<b>.621</b>	
X14				<b>.667</b>			
X15							<b>.568</b>
X16				<b>.598</b>			
X17							<b>.587</b>
X18				<b>.812</b>			
X19				<b>.779</b>			
X20							<b>.745</b>
X21			<b>.745</b>				
X22		<b>.665</b>					
X23		<b>.611</b>					
X24			<b>.658</b>				
X25	<b>.899</b>						
X26			<b>-.810</b>				
X27	<b>.756</b>						
X28		<b>.709</b>					
X29			<b>.714</b>				
X30	<b>.856</b>						
X31	<b>.669</b>						
X32							<b>.853</b>
X33				<b>.704</b>			

X34							
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*Extraction Method: Principal Component Analysis. 6 components extracted. Source:SPSS Output*

<b>Table No. 17 (H): Extracted Factors</b>		
Factor	Factor interpretation	Variables included in the factors
F1	Trend	X27 =New Ingredients X12= Personality X30 =To follow the celebrity X31=Life style X25 =Taste change
F2	Brand and Packaging	X22 =Packaging of the product X28 =Brand loyalty X23 =Labelling of the product X11 = Availability of product
F3	Quality	X10= Advice of beautician X21 =Advice of a doctor X26 =Outdated product X29 =Life of the product X24 =Quality of the product
F4	Influence of Peer group	X14 = Peer groups X16=Family X18=Social Class X19=Culture X33 =Need and Motives
F5	Ambience and facility of the store	X1 = Price of the product X5 = Sales people X6 = Incentives Schemes X7 = Fragrance X8 = Own Experience X9 = Credit Facility
F6	Advertisement	X2 = Print Advertisement X3 = T.V commercial X4 = Word of mouth X13 = Advertisement Trail
F7	Age and Income	X15=Income X17=Age X20 =Environment X32 =Attitude
<i>Source:SPSS Output</i>		

Present study explores seven important factors of choosing FMCG products like Trend (F1), Brand and Packaging (F2), Quality (F3), Influence of Peer group (F4), Ambience and facility of the store (F5), Advertisement (F6), Age and Income (F7). Factor-1, Factor-3 and Factor-4 have five significant loadings each, while Factor-2, Factor-6 and Factor-7 have four factor loadings each, Factor 5 has six factor loadings.

- 1) The First factor, **Trend** is accounted for 20.631 % of the variance.
- 2) The second one is the Brand and Packaging is accounted for 19.123 % of variance.
- 3) The third factor Quality is accounted for 12.120 % of variance.
- 4) The fourth extracted factor is Influence of Peer group is accounted for 10.586 % of variance.
- 5) The sixth factor Ambience and facility of the store is accounted for 9.231 % of the variance.
- 6) The fifth factor **Advertisement** is accounted for 8.250 % of the variance.
- 7) The seventh factor **Age and income** is accounted for 4.211 % of the variance.

### Testing of Hypothesis

*Hypothesis-1: Various brands of Toilet Soap create the awareness towards different brand images in the minds of consumers.*

### Reliability–Cronbach's Alpha

A scale is considered as reliable when it gives similar or repeatable results in different applications or with different samples. Coefficient Alpha is a widely used internal reliability measure. The Alpha statistic assesses the extent to which the items intended to measure the given construct are interrelated and whose variance is derived from a common source. Consequently, highly correlated items suggest these items are measuring the same latent variable. An Alpha score of 0.7 or more is considered as a minimum figure of acceptability for scale's reliability. The reliability test in the form of Cronbach's Alpha suggests that a high reliability measure of .873 indicates appropriate internal consistency of the established subscale used. Here, 17 different product categories of Toilet Soaps such as Lux, Cinthol, Liril, Rexona, Dove, Lifebuoy, Dettol, Mysore Sandal, Johnsons Baby, Nivea, Salvon, Flame, Santoor, Neem, Amway and Joyhave been taken for the purpose of study. The basic objective is to place the brands of selected Toilet Soap on the ground of consumers' perception using MSD approach. The reliability test in the form of Cronbach's Alpha suggests that a high reliability measure of .913 indicates appropriate internal consistency of the established subscale used.

Table No. 18 (A): Reliability Statistics			
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Based on	N of Items
.913	.910		17
<i>Source: SPSS Output</i>			

Table No. 18 (B): Reliability Statistics (Variable wise)				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
v1	116.9200	689.610	.762	.913
v2	112.9200	699.584	.845	.913
v3	117.1210	702.211	.652	.911
v4	117.0200	711.320	.774	.913



v5	117.0200	712.129	.753	.911
v6	118.9000	721.124	.756	.913
v7	117.0221	719.002	.523	.912
v8	117.0120	702.121	.662	.911
V9	116.2100	721.011	.762	.913
V10	116.2000	705.512	.845	.913
V11	115.9600	656.211	.652	.911
V12	115.9400	698.269	.774	.913
V13	116.2100	702.023	.753	.910
V14	117.0000	721.511	.756	.910
V15	116.0120	726.213	.523	.912
V16	117.0100	735.352	.662	.912
V17	115.9300	711.310	.762	.910

*Source: SPSS Output*

Corrected Item-Total Correlation should be at least .40 and all the values are above .50. Alpha if item deleted, this is probably the most important thing the researcher looks after. This represents the scale's Cronbach's Alpha reliability coefficient for internal consistency, if the individual item is removed from the scale and no item is required to be deleted as is evident from above table.

**Table No. 18 (C): Iteration History for the 3 Dimensional Solution**

Alteration history for the 3 dimensional solutions (in squared distances)

Young's S-stress formula 1 is used.

Iteration	S-stress	Improvement
1	.02474	
2	.02035	.00440
3	.02016	.00019

Iterations stopped because:

S-stress improvement is less than .001000

Stress and squared correlation (RSQ) in distances

RSQ values are the proportion of variance of the scaled data (disparities) in the partition (row, matrix, or entire data) which is accounted for by their corresponding distances.

Stress values are Kruskal's stress formula 1.

For matrix, Stress = .02355 RSQ = .99738

*Source: SPSS Output*

**Table No. 18 (D): Configuration Derived in 3 Dimensions Stimulus Coordinates Dimension**

Configuration derived in 3 dimensions Stimulus

Coordinates Dimension

	Stimulus	1	2	3
Number	Name			
1	Lux	2.5395	-.0524	-.1081
2	Cinthol	2.0159	.2581	-.1177
3	Liril	1.3518	.0518	.6585
4	Rexone	2.0283	-.1297	.0314
5	Dove	2.7630	.0198	-.0934
6	Lifebouy	-.5289	1.6113	-.4214
7	Dettol	.4727	.2574	-.0212
8	Sandal	.2273	.6795	-.1878
9	J.Baby	-.6863	1.4311	.0249
10	Nivea	-2.3409	-.1155	.6743
11	Vivel	-.4902	.5167	-.6148
12	Salvon	-.5754	-.8455	.2207
13	Flame	-1.9003	.5396	-.0823
14	Santoor	-1.6090	-.3156	-.0903
15	Neem	-.7377	.7586	-.0019
16	Amway	-1.0895	.6507	.0231
17	Joy	-1.4405	.7690	.1061

*Source: SPSS Output*

The choice of number of dimensions fitting the data is based on the stress value of 3 dimensional solutions. Stress value for 3-dimensionanl solution is **.02355**. The stress value is closer to zero, so, 3-dimensionanl solution is good fit to the data. R-square values (RSQ=0.99738) is more than 0.5, the solution is acceptable. The disparities and the distances (above table) show a straight line of points indicating a good fit. So for the present problem, 3-dimensional solution is better one.

On dimension-1, Lux (3.5395), Cinthol (2.0159), Liril (1.3158), Rexona (2.0283) and Dove (2.7630) Toilet Soaps have the maximum weightage. Nivea (-2.3409), Flame (-1.9003), Santoor (-1.6090), Amway (-1.0895) and Joy (-1.0045) Toilet Soaps have the least weightage. *Liril* is a popular soap brand sold, to a large degree, in India, and Asia of HUL. Looking at their positions, *dimension-1* is named as “*Brand Value*”. Lifebuoy (1.6993), Johnsons Baby soap (1.6113) are leading in *dimension-2*. Lifebuoy, the world's leading health soap, creates accessible health and hygiene products for the family including bar soap, body wash, and hand wash of HUL.

*Johnson's Baby Soap* is enjoying its market share as leading child care soap. Looking at their positions, *dimension-2* is named as “*Hygienic Product*”.

Liril (0.6585) and Nivea 0.6743) lead in *dimension-3*. Liril soap enjoys many benefits. It contains tea tree oil which works for pimples, itches and body odour. Nivea is a leading international skin care company offering consumers high quality and innovative skin and beauty care products. The dimension is so named as ‘skin care’.

*Hypothesis-2: The usage pattern of consumers or buying of various brands of Toilet Soap is affected by many factors or variables.*

The purpose of using regression analysis is to find out the weights of the independent variables: goodness, long lasting freshness, chemical free, use of natural ingredients and skin care on the dependent variable usage of Toilet Soap (coded variable). The linear equation used for a regression analysis is:

$$Y = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5$$

Where Y= usage of Toilet Soap,  $X_1$  = goodness,  $X_2$  = long lasting freshness,  $X_3$  = chemical free,  $X_4$  = use of natural ingredients,  $X_5$  = skin care,  $B_0$  is a constant and treated as an error in analysis.  $B_1, B_2, \dots$  are the regression coefficients and these coefficients give the estimated change in dependent variable associated with a unit change in the corresponding independent variable with the condition that other independent variables remain constant. The data so collected has been analyzed by using SPSS-11.

Table No. 19(A): Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	$X_1$ =goodness, $X_2$ =long lasting freshness, $X_3$ = chemical free, $X_4$ =use of natural ingredients, $X_5$ = skin care		Enter
a. All requested variables entered. b. Dependent Variable: Toilet Soap usage Source: SPSS Output			

The above table shows about the predictor variables and the method is used. Here, it can be seen that all the predictor variables have entered simultaneously. (Because it has been selected the Enter method)

Table No.19 (B): Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.912	.832	<b>.802</b>	2.0322
Predictors: (Constant) goodness, long lasting freshness, chemical free, use of natural ingredients, skin care Source: SPSS Output				

The multiple correlation coefficient is  $R = 0.832$  which indicates that there is a strong correlation between the profitability and the variables predicted by the regression analysis. The Adjusted R Square value explains that this model accounts for 81.1% of variance i.e. a very good model.

**Table No.19 (C): Analysis of Variance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	463.52	4	115.88	23.79	<b>.000</b>
	Residual	34.19	7	4.87		
	Total		11			

a. Predictors: (Constant) goodness, long lasting freshness, chemical free, use of natural ingredients, skin care  
b. Dependent Variable: Toilet Soap usage  
Source: SPSS Output

The above ANOVA table provides an F-test for the null hypothesis that none of the predictor variable is related to toothpaste usage. Thus, it may be rejected the null hypothesis ( $F(4, 7) = 23.79$ ,  $P < 0.05$ ), and it is concluded that at least one of the independent variables is related to the dependent variable.

**Table No.19 (D): Coefficients**

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	6.832	1.968		1.702	.006
	Goodness	.985	.231	.121	.869	.056
	Long lasting	.875	.219	.017	.617	.064
	Chemical free deposits	1.564	.466	.293	1.403	.029
	Use of natural ingredients	1.723	.445	.451	1.050	.021
	Skin care	1.865	.578	.452	2.135	.009

Dependent Variable: Toilet Soap usage

Source: SPSS Output

The 't' and Sig (p) values give a rough indication of the impact of each predictor variable i.e. big absolute 't' value and small 'p' value suggest that predictor variable is having a large impact on the criterion variable. The unstandardized Beta Coefficients give a measure of the contribution of each variable to the model. A large value indicates that a unit change in this predictor variable has a large effect on the criterion variable while other predictors remain constant. It is clear from the regression analysis that all the variables are positively correlated with 'Toilet Soap usage'. The variables skin care (1.865), use of natural ingredients (1.723), and chemical free deposits (1.564) significantly influence the variable dependent variable, whereas the impact of all other variables is insignificant. This is also evident from lower 'p' and higher absolute value of 't'.

### Summary of Major Findings of the Study

The analysis and interpretation of data from consumers' point of view towards various brands of Toilet Soap reveals the following major findings as per setting the objective and hypothesis of the study as well as other findings of this chapter. They are presented given below. 30 % of consumers belong to the age group of 20-30 years. Similarly, 20 % of each consumers belong to the age group below 20 and 30-40 years. 60 % of consumers are in male and remaining consumers are in female category. 70 % of consumers are in married and remaining consumers are in unmarried group. 50 % of consumers are with the family size 4 to 7 members, 40 % of consumers are with the size 1 to 3 members and 5 % of consumers each are with the size of

family 7-10 and above 10 members. 56 % of consumers are graduate. 41 % of consumers earn Rs.20,000 to Rs. 30,000, 24 % of the consumers each earn Rs.10,000 to Rs.20,000 and more than Rs.30,000 per month. 50 % of consumers are government employees. 80 % of consumers are staying within one km from the retail shops. 90 % of consumers use the Toilet Soap while remaining consumers do not use. Majority consumers normally use the Toilet Soap once in a day. 30 % of consumers have opined that the budget is Rs.150 and above. 25 % of each consumers have opined that the monthly budget is between Rs.50-Rs.100 and Rs.100-Rs.150. Majority consumers are using more than 3 brands of Toilet Soap. 'Skin care' is indicated as the most preferred attribute of selection of Toilet Soap. Chemical free and long lasting attributes of Toilet Soap are ranked as 2<sup>nd</sup> and 3<sup>rd</sup> among consumers. Trend, brand and packaging, quality, peer group, advertisement, ambience and facility of the store, age and income of consumers are the major factors which influence the buying decision of consumers towards various brands of Toilet Soap. Lux, Liril, Cinthal, Dove, Rexona, Jhonson Baby and Lifebuoy are the most preferable brands of Toilet Soap among consumers. Ads in Television/DTH and newspaper and sales personnel are main source of getting information to create the awareness and getting knowledge about Toilet Soap for consumer buying decision. Lux, Cinthol, Liril, Lifebuoy, Johnsons Baby, Rexona and Dove brand of toilet soap have the maximum weightage to create the brand awareness in the minds of consumers due to product features. All the variables are positively correlated with 'Toilet Soap usage'. The variables skin care, use of natural ingredients and chemical free deposits significantly influence the variable dependent variable, whereas the impact of all other variables is insignificant.

### Major Recommendations

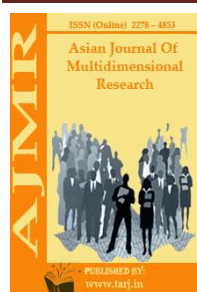
All types of brands should be available in the store for better consumer choice. The display board should be attractive and updated to customers. The store personnel should focus on customers' service and satisfaction not for profit motive. The retailers/distributors should give importance on after sales service of exchanging the product if required. The Toilet Soap should be based on chemical free and healthy to skin.

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## DOES THE STRAITS TIMES INDEX HAVE AN IMPACT ON THE SPOT NIFTY? AN ECONOMETRIC ANALYSIS OF THE INTERLINKAGES BETWEEN THE SGX NIFTY FUTURES, STRAITS TIMES INDEX AND THE SPOT NIFTY.

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### ABSTRACT

*This study examines the interlinkages between the Straits Times Index, Spot Nifty and SGX Nifty. The Straits times index and the SGX Nifty futures trade on the same exchange and since the global macro- variables that impact early trade are common across all exchanges we infer that these effects should have a similar impact on all stocks and derivatives traded on the exchange. We test this assumption using the Granger Causality and Johansen Cointegration test. The log of the returns is taken for the purposes of calculation and the data is tested for stationarity using the Phillips Perron test. For the purpose of lag selection we assess the data on 5 different criteria – Likelihood ratio, Final Prediction error, Akaike Information criterion, Schwarz information criterion and the Hannan Quinn criterion. The relationship between SGX futures and Nifty spot is tested using the Granger causality test. This test is run in order to confirm the presence of a relationship between the SGX futures and Spot Nifty. The methodology suggested by Johansen and Juselius is adopted for identifying the presence of co-integrating vectors between the SGX Nifty, Nifty spot and Straits times index. The Granger causality test confirms the presence of causality between SGX futures and Spot Nifty. The Johansen cointegration test clearly specifies the presence of co-integrating vectors. This research has substantial implications for investors, fund managers and researchers.*

**KEYWORDS:** Co-Integrating, Implications, Interlinkages, Cointegration

## INTRODUCTION

Globalization coupled with technological progress has brought about seamless flow of capital and resources between nations. Technological changes have also resulted in information flowing efficiently across borders. This is one of the underlying reasons for the increasing efficiency of markets. Emerging markets such as Indian markets have seen surge in investor activity and are a fit case for analysis of the impact of integration between markets. A study of the co-integration of markets therefore assumes significance for investors as also for researchers exploring financial economics. The absence or presence of co-integration provides critical insight for investors and researchers into the workings of that particular exchange.

Should I purchase this stock today? Should I sell this stock? Investors always look for cues that will help them determine the right time to buy or sell. The SGX Nifty provides one such market cue for the investor trading the Indian bourses. The SGX Nifty opens well before the Nifty opens and thereby provides an indication of market direction. But is the SGX Nifty a reliable indicator? This study seeks to assess the effectiveness of the SGX Nifty as a valid predictor of early market movement on the Nifty. However, it is also possible that the movement of the SGX Nifty is influenced by the values of the Singapore index. This study seeks to explore the existence of possible co-integration between Singapore and Indian markets. The study explores the Straits, SGX Nifty futures and Nifty spot prices to find possibilities of interlinkages.

### Brief note on the SGX Nifty and Nifty

The SGX Nifty is a derivative product with the underlying being the Nifty index and is officially traded on the Singapore Stock exchange. Investors rely on SGX Nifty as the first indication of market movement for the Indian bourses. The SGX Nifty trades even when the Indian market is closed and the official timings for the SGX Nifty is between 6.30 AM to 11.30 PM (IST). It is suggested that the effect on the Nifty is likely to be pronounced during the opening trade and this study seeks to explore the impact of the SGX on the Nifty and also seeks to study the impact of Nifty closing prices on the SGX Nifty. The Nifty 50 is a flagship index of the National Stock Exchange (NSE), India and consists of 50 stocks from multiple sectors. It constitutes about 60% of the market capitalization of stocks listed on the NSE.



### Need for study

This study tries to identify the impact of the SGX Nifty on the opening prices of the Indian Nifty. This study is critical in that it explores the impact of signaling in the Indian markets. It also seeks to provide evidence on various aspects related to the efficient market hypothesis and more specifically the informational efficiency prevailing in the Indian stock market. The study also takes into account the possibilities of interlinkage between the Straits index and the SGX and the consequent possible spillover into the Indian spot market.

The study is particularly useful to the large base of investors who study the SGX Nifty as a predictor variable to determine the stock movement of the Indian bourses especially the Nifty. Investors therefore explore the SGX Nifty futures prices as an indicator of information that also incorporates changes that have taken place after the previous day's close of the Indian bourses.



## Literature review

### Why Indian bourses?

Not much attention has been given to the Indian capital markets and co-integration between markets is sufficient ground for further investigation. Tripathy, Naliniprava (2011) examined various aspects of the Indian stock markets and among the various findings the study also points that the Indian stock market is sensitive towards changing behavior of international markets.

Is there any linkage between forward markets and spot markets? Studies find interlinkages between the derivative and spot markets. Research by Koch, Kawaller, Koch (1987) examined price discovery using the three stage least squares regression model. The S & P 500 index and its futures market with data from 1984 to 1985 were used for the purposes of the study. They conclude that the futures market leads the underlying spot market.

Is the Indian stock market cointegrated with global stock markets?

The literature in this regard largely veers to the finding that a possible correlation exists between markets. Janak Raj and Sarat Dhal (2008) examined the integration of India's stock market with global and major regional markets. The study concludes that India's markets and other markets are integrated. Prices convey information (Hayek, 1945) and investors assume that critical information such as global trends are factored into prices. This is again a reflection of the efficiency of markets. The strong form of the efficient market hypothesis postulates that stocks reflect all available information. The concomitant rider is that stock prices cannot be predicted with any degree of accuracy.

Subha and Nambi [2010] examined the Indian and American stock markets using the Engel-Granger test and concluded the absence of cointegrating relationships between these two markets. Studies by Gupta and Guidi (2012) on the Indian stock market and the three Asian markets (Japan, Singapore and Hong Kong) show evidence of cointegration between these markets. They also explain that the correlation is seen to be very high during crisis periods. Wong, Agarwal and Du (2005) determine that the Indian markets are co-integrated with world markets.

We also explored the literature with regard to possible existence of linkages between markets. Multiple studies have been conducted in various markets on the impact of co-integration between markets. Study by Taylor and Tonks (1989) focused on cointegration between US, Germany, Netherlands and Japan using monthly data for sub-periods and by employing the pairwise granger causality test. The main finding is that the stock price index of UK was cointegrated with the stock price index of the US markets.

Kasa (1992) studied linkages between stock markets and confirmed strong evidence displaying common trends in the US, Japan, Germany, British and Canadian markets. These studies provide evidence of the possibility of information flow between markets and thereby the impact on the market. Studies by Masih and Masih (1997) find evidence for a cointegrating relationship between the markets in Taiwan, Hong Kong, Singapore, South Korea with the markets in USA, Japan, UK and Germany. Evidence against cointegration was found in the study of Nath and Verma (2003) who studied the Nifty, STI and Taiex. Research by Tse (1998) determined that the price movement in a market is explained by a common trend when the markets are efficient.

Ali, Butt and Kashif identified short run correlation between the stock market of Pakistan with those of India, China, Indonesia, Singapore, Taiwan, Malaysia, Japan, USA and UK but did not find any conclusive evidence of co-integration between markets.

#### Is it possible to forecast the markets?

Investors explore various options to forecast the markets and this has given rise to a spate of prediction based stock models. Timmerman and Granger, 2004 cite evidence that predictive stock return models have been unsuccessful in accurately predicting stock returns. Investors however continue to invest in the firm belief that predictions are possible. The existence of predictive modelling software and the plethora of recommendations dotting the investment landscape is evidence of the fact that investors do explore possibilities that will help them determine stock prices. Lacerda and Santa-Clara, 2010, studied prediction models and provide evidence that returns are predictable.

The bandwagon effect is another reason that makes the SGX Nifty a popular indicator for predictability. The movement of the SGX Nifty is a reflection of the direction of the market and thereby of herding within that market. The tendency of investors to jump onto the bandwagon is because it provides the path of least resistance in the face of uncertainty. Market conditions are also a determinant of the predictability of models as the bandwagon effect is pronounced during certain market phases such as the bull or bear phase (Economou et al, 2010).

#### How does the futures market aid in price discovery in the spot market?

The efficient market hypothesis suggests that security prices at any point in time reflect all available information related to that security. This hypothesis has been tested by researchers and the study by Covrig, Ding and Low (2004) examined informational efficiency in the Nikkei 225 index spot and the SGX futures market. They conclude that futures market prices are an important aid in price discovery.



#### **Identification of research gap**

Much of research is focused on long run or short run cointegrating relationships among exchanges. The SGX futures has not been explored much except for a few papers with the most prominent among them being the one by Kotha and Bose (2016). The paper by Kotha and Bose is a relatively recent study and explores the Nifty spot, Nifty futures and the SGX Nifty. There is almost no research available to connect the impact between the Straits, SGX futures and SGX Nifty spot. This paper covers that lacuna by exploring the possibility of cointegration amongst the Nifty Spot, Straits spot and SGX Nifty.



#### **Data and methodology**

Data for the purposes of this study relates to the SGX daily data and the Nifty daily data for the period 01/04/2011 to the data for the SGX and the NIFTY relate to the day open prices. Adjustments were undertaken to exclude days whereby both exchanges were not operational on the same day. This adjustment is necessary as the lag effect of holidays could result in an output that could lead to spurious inferences. Another reason for exclusion of the data is to avoid testing an unbalanced panel. The period has been chosen in a manner that it excludes periods that related to political upheavals. The rationale behind this is to control for factors that have large scale effects on one market and thereby blurring the overall assessment of co-integration effects.

The log of the difference of the daily closing prices against the previous closing price has been taken for the purposes of study. The return series was tested for stationarity using the Phillips Perron test. The Phillips Perron test takes the Null Hypothesis that the series is non-stationary. The testing is done on the return series as any meaningful statistical analysis requires that the data be stationary.

Though the Nifty and SGX Nifty are situated at different exchanges and are likely to follow their own individual courses there could be underlying properties that cause them to move together when studied over a period of time. The linkage of the SGX Nifty and the Nifty 50 is best studied by studying the cointegrating relationships. Cointegration tests help in identifying whether there are common factors driving the movement within the set of stocks being tested. We assess the cointegrating relationships using the Granger causality test and also the Johansen cointegration test. The number of lags for the test is assessed before running the cointegration test. The steps adopted for the testing are:

### ☰ **Testing and Analysis**

The research adopts the following steps in conducting the required tests. i. i. Step 1 – stationarity test

ii. Step 2 - Assessing lags

iii. Step 3 – Granger causality test on SGX Nifty and Nifty spot

iv. Step 4 – The Johansen cointegration test

#### **Step 1 - Stationarity test – Phillips Perron test**

a)Phillips Perron test - SGX Nifty futures return series

Classifying the variables as stationary enables us to run tests that will help us avoid spurious regression results. We test stationarity at level and work on differencing it till it becomes stationary. For the purposes of our analysis we use the Phillips Perron test.

Null Hypothesis: LSGX has a unit root

Exogenous: Constant

Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.812627	0.3744
Test critical values: 1% level	-3.439852	
5% level	-2.865624	
10% level	-2.569002	

\*MacKinnon (1996) one-sided p-values.

The data is seen to be stationary at level in the SGX Nifty return series.

b) Phillips Perron test – Opening values of spot Nifty

Null Hypothesis: LNIFTYOPEN has a unit root

Exogenous: Constant

Bandwidth: 6 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.683720	0.4391
Test critical values: 1% level	-3.439852	
5% level	-2.865624	
10% level	-2.569002	

\*MacKinnon (1996) one-sided p-values.

The data is seen to be stationary at level for the opening values of the Nifty 50 series.

c) Phillips Perron test – Straits index

Null Hypothesis: LSTRAITS has a unit root

Exogenous: Constant

Bandwidth: 9 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.947615	0.3104
Test critical values: 1% level	-3.439852	
5% level	-2.865624	
10% level	-2.569002	

\*MacKinnon (1996) one-sided p-values.

## **Step 2 – assessing the required lags**

The Johansen test is sensitive to lag lengths and it is therefore important to assess the correct lag length in order to ensure that the model is not misspecified. The lags are assessed on the following criteria:

- Likelihood ration
- Final Prediction error
- Akaike Information criterion
- Schwarz information criterion
- Hannan Quinn criterion

Though the AIC criterion and Schwarz criterion are generally used to choose optimal lag length. We however explore the other criteria also before arriving at the appropriate lag length.

VAR Lag Order Selection Criteria

Endogenous variables: LSGX LSTRAITS LNIFTYOPEN

LNIFTYCLOSE

Exogenous variables: C

Date: 04/29/18 Time: 10:41

Sample: 3/31/2011 1/22/2014

Included observations: 653



Lag	LogL	LR	FPE	AIC	SC	HQ
0	6699.824	NA	1.46e-14	-20.50788	-20.48043	-20.49724
1	9492.962	5543.502	2.95e-18	-29.01367	-28.87641*	-28.96044
2	9538.474	89.76876	2.69e-18	-29.10405	-28.85698	-29.00824*
3	9557.982	38.23962	2.67e-18	-29.11480	-28.75792	-28.97640
4	9576.874	36.80038	2.64e-18	-29.12366	-28.65697	-28.94268
5	9596.929	38.81982	2.61e-18*	-29.13608*	-28.55958	-28.91251
6	9605.151	15.81571	2.67e-18	-29.11226	-28.42595	-28.84611
7	9621.370	30.99669	2.67e-18	-29.11293	-28.31681	-28.80420
8	9630.113	16.60244	2.73e-18	-29.09070	-28.18478	-28.73939
9	9638.386	15.60842	2.80e-18	-29.06703	-28.05130	-28.67314
10	9644.428	11.32594	2.88e-18	-29.03653	-27.91099	-28.60006
11	9658.751	26.67130	2.90e-18	-29.03140	-27.79605	-28.55234
12	9667.483	16.15371	2.97e-18	-29.00914	-27.66398	-28.48749
13	9674.008	11.98964	3.05e-18	-28.98012	-27.52515	-28.41589
14	9685.650	21.25311	3.10e-18	-28.96677	-27.40199	-28.35996
15	9695.969	18.70880	3.15e-18	-28.94937	-27.27478	-28.29997
16	9711.669	28.27449	3.16e-18	-28.94845	-27.16405	-28.25647
17	9726.286	26.14532	3.17e-18	-28.94421	-27.05001	-28.20965
18	9737.311	19.58581	3.22e-18	-28.92898	-26.92497	-28.15183
19	9752.576	26.92948*	3.23e-18	-28.92673	-26.81290	-28.10700
20	9763.911	19.85721	3.28e-18	-28.91244	-26.68881	-28.05013

\* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

We adopt the AIC criterion for the purposes of the Johansen cointegration test and take 5 lags for the purposes of the Johansen cointegration test. The Johansen test is sensitive to lags and Akaike information criterion and Final Prediction error indicate the possibility of 5 lags.

### **Step 3 Granger Causality Test**

The degree and direction of the relationship between the variables is studied using the pairwise granger causality test. The Engel Granger Causality test examines whether the variables of one series explain the variables of other series after taking into account the necessary lags. The hypothesis is framed as follows:

Null Hypothesis (H0) – The SGX Nifty does not granger cause Nifty 50

Alternate Hypothesis (H1) – There is a linear dependence between the SGX Nifty and Nifty 50

Granger Causality Test

Date: 04/22/18 Time: 21:05

Sample: 11/23/2009 1/22/2014

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LOGSGX does not Granger Cause LOGNSEOPEN	1018	8.54092	0.0002

The Null hypothesis that SGX Nifty does not granger cause Nifty 50 series is rejected and the results clearly indicate a high degree causality.

#### **Step 4 Johansen Cointegration test**

The Johansen's method serves to assess cointegration by assessing the number of eigenvalues are present in the matrix  $\Pi$  as the number of eigenvalues is proportionate to the rank of the matrix. Cointegration is determined based on the value of the trace statistic and the max eigen value statistic.

The Johansen Cointegration test takes the Null Hypothesis that the series are cointegrated. We reject the null if the trace statistics is more than the critical value at 5% level of significance.

#### **Johansen Cointegration test**

Date: 04/29/18 Time: 10:58

Sample (adjusted): 4/08/2011 1/22/2014

Included observations: 667 after adjustments

Trend assumption: Linear deterministic trend

Series: LSGX LSTRAITS LNIFTYOPEN

Lags interval (in first differences): 1 to 5

#### **Unrestricted Cointegration Rank Test (Trace)**

Hypothesized	No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0	0.092285	73.87590	29.79707	0.0000
At most 1	1	0.009909	9.293625	15.49471	0.3389
At most 2	2	0.003968	2.651621	3.841466	0.1034

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

#### **Unrestricted Cointegration Rank Test (Maximum Eigenvalue)**

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.092285	64.58227	21.13162	0.0000
At most 1	0.009909	6.642004	14.26460	0.5323
At most 2	0.003968	2.651621	3.841466	0.1034

Max-eigenvalue test indicates 1 cointegratingeqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'\*S11\*b=I):

LSGX	LSTRAITS	LNIFTYOPE N
-381.9174	-6.925332	390.5763
6.375808	33.16937	-28.37088
-35.13694	-5.767299	52.84867

Unrestricted Adjustment Coefficients (alpha):

D(LSGX)	0.001627	-0.000528	-0.000664
D(LSTRAITS)	0.000193	-0.000813	-0.000157
D(LNIFTYOPE)	0.000279	-0.000354	-0.000725

1 Cointegrating Equation(s):	Log likelihood	7063.265
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Normalized cointegrating coefficients (standard error in parentheses)

LSGX	LSTRAITS	LNIFTYOPE N
1.000000	0.018133 (0.01077)	-1.022672 (0.00888)

Adjustment coefficients (standard error in parentheses)

---

D(LSGX)	-0.621228
	(0.19250)
D(LSTRAITS )	-0.073556
	(0.12828)
D(LNIFTYO PEN)	-0.106698
	(0.18103)

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2 Cointegrating Equation(s):	Log likelihood	7066.586
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Normalized cointegrating coefficients (standard error in parentheses)

LSGX	LSTRAITS	LNIFTYOPE N
1.000000	0.000000	-1.010685
		(0.00517)
0.000000	1.000000	-0.661060
		(0.15791)

Adjustment coefficients (standard error in parentheses)

D(LSGX)	-0.624593	-0.028774
	(0.19237)	(0.01707)
D(LSTRAITS )	-0.078741	-0.028309
	(0.12771)	(0.01133)
D(LNIFTYO PEN)	-0.108954	-0.013670
	(0.18097)	(0.01605)

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The results of the Johansen test indicate the presence of cointegrating vectors. It's clear from the test that there is a long run association among the three variables.

### Practical implications

Observing trading signals and identifying information critical to investing is part of the strategy adopted by investors. Investors gain from the knowledge of interrelationships among exchanges. This paper provides clear indication of the interrelationship between the Straits Times, SGX Nifty and Nifty spot and this has clear implications for investors trading on the Nifty Spot. The

information flow from SGX and Straits happens well before the NSE Nifty opens and this gives enough leeway for investors to plan out their strategy well in advance. The study also has implications for policy makers as ‘signaling’ in markets is a critical component of the decision making matrix in policy decision making. This paper also has serious implications for efficiency market theorists.



## CONCLUSION

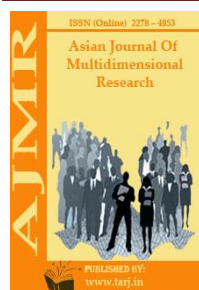
The study indicates that a causal relationship exists between the Indian stock market and the SGX Nifty. The opening prices of the SGX also have a linkage with the opening prices of the Nifty 50. Informationally efficient markets lead the other markets but in the case of the SGX Nifty, the advantage of opening time confer it a distinct advantage in providing investors an indication of the early morning movement of the Nifty 50. The Granger causality test clearly provides an indication that the SGX Nifty is an important variable in the price discovery process of the Nifty spot market. The most important finding is that of the presence of a linkage between the Straits times, SGX Nifty and the Nifty spot. The research is limited to a short period and is restricted to identifying the presence of co-integration and there is a possibility to explore it further by using the Vector Error Correction Model.

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## DOES CORPORATE GOVERNANCE IS RELEVANT TO FINANCIAL PERFORMANCE OF AGRICULTURAL AND ALLIED SECTOR IN INDIA?

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### ABSTRACT

*This research paper examined the effect of revised Clause 49, 2014 on agriculture and allied firms in India. The period of the study is of eleven years from 2007 to 2017. The analysis is done for two-time frames: 2007 to 2014 and 2015 to 2017. Furthermore, in the first time frame (2007 to 2014), the analysis is breakdown into two ways; one, taking first three years (2007 to 2009) and second for last five years (2010 to 2014). The regression results of first three years (2007 to 2009) is done to compare the results with second time frame (2015 to 2017) of the regression analysis. Analysis from 2010 to 2014 is done to know the impact of Clause 49, 2006 after first three years of its implementation. The nature of corporate governance is measure through six variables; board size, board independence, number of board meetings attended by the independent directors, percentage of annual general meeting attended by the independent directors, related party income and related party expenses. The results of the study suggests that revised Clause 49, 2014 does not have significant effect on the financial performance of the firms.*

**KEYWORDS:** Agriculture And Allied Firms, Panel Data Regression, Corporate Governance Regulations.

## INTRODUCTION

Corporate governance is essential for balancing the interest of firms, financial institutions and markets. Corporate governance helps in harmonizing shareholder-manager conflicts of interest (Williamson, 1984). It signifies fair and transparent functioning of the system, and increases accountability of the company for avoiding massive disasters. Investors value firms which practice good corporate governance principles (Pae and Choi, 2011). Moreover, it is believed that good corporate governance practices lead to superior firm performance. Hence, this study focuses on whether it is true for Agricultural and Allied Sectors in India keeping revised Clause 49, 2014 as a benchmark.

### Recent Developments in Indian Corporate Governance Regulations

Changes in Corporate Governance Regulations under Indian Companies Act, 2013 made a crucial step in India's corporate law regime which helps in reaching both Indian companies and overseas investors. The major changes in Clause 49 on corporate governance includes amendments in constitution of the board, decision-making power of the board, related party transactions, corporate social responsibility, inter-corporate loans, capital raising, insider trading, buy-back of shares, minority squeeze-out, layered investments through subsidiaries, mergers, class action suits, and enforcement of shareholder's agreement and entrenchment which make corporate governance framework more effective.

In revised Clause 49, there is a significant change in board composition of companies. All listed companies as prescribed under delegated legislation need to have at least one woman director on their board. It is compulsory that at least one director must reside in India for a minimum period of 182 days throughout the preceding calendar year. An independent director should be other than nominee director, and it should possess appropriate skills, experience, and knowledge in the field of managerial activities or other disciplines related to the company's business. Independent directors are prohibited from having any stock options and companies shall disclose director's remuneration in the Annual Report. Moreover, the company should provide training to the independent directors to acquaint them with the company, and their roles and responsibilities towards the company. Previously an ordinary resolution was sufficient for taking a decision on the board of directors, but now it requires passing of three-fourth majority of shareholders for making any decision.

Related party transactions under Company Act 2013 is modified significantly as compared to 1956 Act. A shareholder of the company, who is a related party is not allowed to vote while approving the transactions of the company. Additionally, 2013 Act introduces an "associate company", a company other than a subsidiary in which at least 20 percent of the share capital is of main company. Such associate company is also considered as related party and can't vote in company resolution, giving power to minority shareholders in decision-making.

A company which has a net worth of at least ₹ 5 billion or turnover of at least ₹ 10 billion during any financial year must constitute "Corporate Social Responsibility Committee" with at least three directors to administer the company's corporate social responsibility activities. Every such company must spend two percent or more of its average net profits every financial year on corporate social responsibility activities. Conversely, any profits arising from overseas operations through foreign subsidiaries and dividend received from another company in India will be excluded.

For an inter-corporate loan, consent of the three-fourth majority of shareholders is required for surpassing the set limit of 60 percent of paid-up capital, free reserves and securities premium account, or 100 percent of free reserves and securities premium, whichever is higher. This clause will also be applicable to private companies who give loans to its affiliated companies. In case of insider trading, every individual, including director or manager of a company are strictly prohibited from the involvement.

Referring to 1956 Company Act, in a single financial year a company can do multiple buy-backs of shares except in certain specific cases, but now it requires mandatory one-year period between any type of buy-back, even if an Indian court approves buy-back. It also specifies that a company refrains from buy-back if it has any default in repayments of deposits or interests, or redemption of debentures, preference shares, payment of dividend, or in repayment of a term loan to a financial institution.

The 2013 Company Act makes a significant change in layered investments through subsidiaries to avert complex structures and diversion of financial assets. According to the new law, a company can no longer invest in more than two layers of investment companies except in two circumstances. First, a foreign acquisition is conceivable if the acquired company (offshore target) has investment subsidiaries of three or more levels as per the laws of the foreign country, second an investment subsidiary exists to comply with earlier regulatory requirements.

To make mergers less time consuming and more flexible, 2013 Act introduced two concepts; fast track mergers and cross border mergers. "Fast track merger" is for certain class of companies such as wholly-owned subsidiary, subject to the approval of more than 90 percent of the shareholder of the holding company with no objection being raised by the Registrar. "Cross border merger" allows both types of mergers; merger of foreign companies with Indian companies and merger of Indian companies with foreign companies, although such mergers require prior approval from RBI.

### **Why to Study Board Characteristics and Related Party Transactions?**

The goal of every firm is not only to survive but to sustain in the market by improving its performance. To compete in the market, the firm must continuously increase its performance (Arslan&Staub, 2013). Empirical studies advocate the importance of leadership for achieving the performance of the firm (Boal&Hooijberg 2000; Peterson et al., 2003). Katz & Kahn, 1978; Peterson et al. 2003 suggest that the leadership plays a vital role in achieving the high level of firm performance, however, studies from Pfeffer(1977) and Meindl et al. (1985) found that leadership has no significant role in achieving firm performance. Therefore, there is need to know and understand the role of leadership in firm performance.

Managers who act as leaders are hired by the shareholders for better proficiency in running the firm, and to overview the performance of managers, the board of directors (BODs) are appointed by the firm. The board is accountable to the shareholders, and every year in AGM the board has to report on the firm's performance as well as future plans and strategies of the firm. The key purpose of the board is to oversee the management and governance of the firm and issues related to corporate social responsibility (CSR) and corporate ethics.

Due to the explosion of scandals, mismanagement, and frauds in last two decades, regulators around the world were forced to ponder on improvement in corporate governance practices. As a part of this initiative for ensuring firms to follow ethical and normative rules of the business,

firms were directed to have a certain percentage of their board who are not affiliated with the firm i.e. independent directors. These independent directors must have industry experience and are well qualified to sit on the board without having a responsibility in any other activities of the firm.

Scandals in the U.S. and other parts of the world witnesses RTPs as a means to manage firm's earnings and divert resources from the firms. Misuse of RTPs is a cause of anxiety to the regulators, owners, employees, investors as well as the economy of a country. Abusive RTPs will not only reduce the returns of outside shareholders, but it will also raise uncertainties on the effectiveness of corporate governance practices, which in turn hinders the growth of the firm in the equity market. For these reasons, there is a need to study board characteristics and RTPs parameters with respect to firm performance.

## LITERATURE REVIEW

Empirical studies examine the relationship between firm performance and corporate governance measures like board size, board independence, executive compensation, board tasks, etc. Lipton & Lorsch (1992), Jensen (1993) and Yermack (1996), Eisenberg et al. (1998), Mak & Kusnadi, (2003) and Alshimmiri (2004) found that large boards are less effective than small boards. Kohli & Saha, (2008) argues that the ideal board size is seven or eight to ensure effective firm performance, as larger board size might become dysfunctional. However, El Mir and Seboui (2008) agreed on the importance of board size in enhancing firm performance but could not reach any consensus about the size of the board.

Studies are conducted in the US to find a linkage between independent directors and firm performance through correlation as a statistical tool. The proportion of independent non-executive directors showed a positive correlation with the accounting measure of performance (Baysinger & Butler, 1985; Hambrick & Jackson, 2000). On the other hand, studies done by Hermalin & Weisbach (1988), Bhagat & Black (1997), and Klein (1998) found no significant relation between high proportion of independent directors and future accounting performance, though Agrawal and Knoeber (1999) found a negative relationship between board independence and firm's performance. Results of cross-sectional regression model on board composition and firm performance found biased due to endogeneity of the variables and simultaneous equation methods (Hermalin & Weisbach, 1988). To correct this biasness, panel regression model is used with lagged firm performance variables; result did not show the relationship between firm performance and board composition. Studies on board structure conducted in the US, UK, and Japan found that proportion of insiders of boards varied significantly between these three countries; 30 percent, 34 percent and 49 percent respectively (Dalton & Kesner, 1987).

Percentage of independent directors has significant impact on financial position of the firm. Higher percentage of independent directors in the board make the management more effective (Bhagat and Black, 2001) and the board is less likely to commit corporate frauds (Uzun et al., 2004). However, studies on the relationship between independent directors and firm performance are mixed. Byrd and Hickman (1992) show positive relationship between independent directors and financial performance of the firms while Klein (2002) finds inverse association between board independence and firm performance. Though, Garg (2007) conducted a study on Indian firms and results are in support of Byrd and Hickman (1992) findings. The number of board meetings attended by independent directors can be a good proxy to know the seriousness of directors towards monitoring managerial activities.

The effect of RPTs on the financial performance of the firms is mixed. RPTs are more likely to arise where controlling shareholders (shareholder owning the majority of the outstanding shares of the firm) exploit firm resources for their benefits at the cost of minority shareholders (Claessens et al., 2000; Cheung et al., 2006; Nekhili and Cherif, 2011). Firms controlled by related party has higher level of RPTs, and it has an adverse effect on the financial performance of the firms (Chen et al., 2009). In China, group companies use RPTs to achieve higher return on equity (Chen and Yuan, 2004; Liu and Lu, 2007), but contradictorily studies found that RPTs do not impact the firm performance (Chen et al. 2011).

In India, the presence of institutional investors in a firm has a positive impact on firm performance in terms of profitability (Patibandla, 2006). However, Kambhabhampati (2006) found an insignificant impact on foreign financial institutions on firm efficiency, but foreign ownership has a positive impact on firm efficiency. Studies conducted on Indian firms shows negative association of financial performance with RPTs for group firms, however positive association for stand-alone firms (Saha, 2006).

This study will contribute to the literature on corporate governance practices and its impact on financial performance of the firms in a number of ways. First, the study focuses on agricultural and allied firms which have not received much focus of attention in India. Second, the study will capture the impact of revised Clause 49, 2014 on firm performance which is untouched till now. Third, previous studies centres around board composition, specifically board size and independence but this study also emphasises on participation of independent directors in the annual general meeting (AGM), the number of board meeting attended by independent directors (BMA) and related party transactions (RPTs). Fourth, the study uses panel data methodology to remove unobservable heterogeneity.

### **Sampling Design and Data Collection Sources**

The study aims to focus on Agricultural Inputs firms (Agrochemicals and Fertilizers industry), derived Agro-Forestry products firms (Edible Oils and Paper & Paper Products) and Other Agricultural Products firms which are listed on BSE. The study is following complete enumeration approach for all five industries for eleven years, from 2007 to 2017.

The analysis is done for two-time frames: 2007 to 2014 and 2015 to 2017. Furthermore, in the first time frame (2007 to 2014), the analysis is breakdown into two ways; one, taking first three years (2007 to 2009) and second for last five years (2010 to 2014). The regression results of first three years (2007 to 2009) is done to compare the results with second time frame (2015 to 2017) of the regression analysis. Analysis from 2010 to 2014 is done to know the impact of Clause 49, 2006 after first three years of its implementation.

The data used in this study gathered from various sources. First, the list of Agricultural Inputs firms (Agrochemicals and Fertilizers industry), derived Agro-Forestry products firms (Edible Oils and Paper & Paper Products) and Other Agricultural Products firms are obtained from BSE website. Second, corporate governance variables of the firms are collected from annual reports downloaded from their website, BSE, and reportjunction.com. Finally, capital structure variables, financial performance variables, and firm value variables are collected from ProwessIQ (Prowess for Interactive Querying). ProwessIQ is a powerful internet-based application which provides financial information of the companies listed on BSE and NSE. Data missing for a firm is due to two reasons; either data is absent (not present) in the annual report of the firm as well as from ProwessIQ or firm is not listed on BSE in that particular year.



## EMPIRICAL METHODOLOGY

The study uses panel data regression, as data is a combination of time series and cross-sectional data. In short, panel data has both space and time dimensions.

Advantages of panel data as listed by Baltagi (2008) are as follows:

- a) Panel data regression analysis provides ‘more informative data, less collinearity among variables, more variability, more degree of freedom and more efficiency’. It is also better suitable to study the dynamics of change.
- b) Since panel data relate to individuals over time, there is every possibility of heterogeneity in the units. Use of panel data regression takes heterogeneity explicitly into account by considering for subject-specific variables.
- c) Panel data helps to study more complex behavioural models.

Panel data has two structure types; balanced and unbalanced panel. A panel data is said to be balanced if each subject has the same number of time series observations for each cross-sectional unit, but if subjects have some cross-sectional unit for different time, then it is known as an unbalanced panel. As data is missing for firms, so this study has unbalanced panel data which is more common in economic and financial fields.

There are two models in panel data; fixed effect and random effect model, which are used to eliminate omitted variable biasness by measuring change within a group. In fixed effect model, the individual-specific effect is a random variable that is correlated with the independent variables. When the individual-specific effect is a random variable that is allowed to be uncorrelated with the independent variables, then it is random effect model. Hausman test is used to determine which of these two model is appropriate for the analysis of data. Hausman test actually looks for whether there is a correlation between the unique error terms and the independent variables in the model. Hypothesis for Hausman test is as follows:

Null Hypothesis,  $H_0$ : Random effect model is appropriate

Alternative Hypothesis,  $H_1$ : Fixed effect model is appropriate

After choosing from above two models, the model has to pass Residual Diagnostics tests as well as Fixed/Random Effects Testing based on which it is decided whether there is need to have robustness in the model or not.

## Instrumentation of variables

### Corporate Governance

The corporate governance variables used for the study are board size, board independence, board meeting attendance, AGM attendance and related party transactions. All these variables are discussed below in detail:

**Board size:** Board size means the total number of directors (dependent and independent directors) on the board.

**Board independence:** It is measured as a ratio of independent directors to a total number of directors in the board or board size (Pandya, 2011). Independent director is defined as a member who (a) is not an employee of the company or its subsidiaries, (b) does not have any business relationship with the company (supplier, creditor or buyer), and (c) does not have a significant shareholding in the company (owns five percent or more of the total shares of the company).

$$\text{Board Independence} = \frac{\text{Number of independent directors in the board}}{\text{Total number of directors in the board}}$$

**Board meeting attendance:** It is compulsory to have board meetings at least four times in a year with a gap not more than four months between two meetings. Attendance of directors in board meetings is an important channel through which directors familiarize about firm-specific information and able to fulfil their responsibilities towards firm.

$$\text{Board Independence} = \frac{\text{Number of board meeting attended by independent directors}}{\text{Number of board meeting in a year * number of independent directors}}$$

**AGM attendance:** AGM is a mandatory annual gathering of company's interested shareholders (any individual or unit how has enough voting rights to affect company decisions). In AGM, directors present an annual report containing information about company's performance and strategy to the shareholders. AGM is an open-ended session where an individual can give his views on vital decisions taken by the company. Failing to participate in AGM will deprive one from the live discussion and cannot give general agreement or disagreement on various topics raised in the meeting.

$$\text{AGM attendance} = \frac{\text{Number of independent directors attended AGM}}{\text{Total number of independent directors in the board}}$$

**Related party transactions:** RPTs is a business transaction between a company and its related entities like subsidiaries, joint ventures, substantial shareholders, executives, directors and their families. RPTs can play a major role in improving the operating efficiency of a company, but accounting frauds cause a concern all over the world. RPTs disclosure in the annual report is not uniform across firms like many firms do not report the names of the related parties and their relationships, the type of transaction (sale/purchase), etc. To deal with this problem author studies RPTs through two variables; first, ratio of related party income to the total income of the firm in period  $t$  and second, ratio of related party expenses to the total expenses of the firm in period  $t$ .

### Firm Performance

It tells how well a firm uses its assets to generate revenues. There is no single ideal way for determining long-term firm performance (Healey, 1985), so it is measured by three variables; ratio of EBIT to assets, ratio of sales to assets, and earning per share (EPS).

**Ratio of EBIT to assets:** It is also known as return on assets, and it indicates how profitable a firm is in relation to its total assets. It is computed as,

$$\text{Ratio of EBIT to assets} = \frac{\text{EBIT}}{\text{Total assets}}$$

### MODELS FOR HYPOTHESES

The primary objective of the study is "To analyse the relationship of board characteristics and RPTs on firm performance". This objective has two major hypotheses;

H<sub>1</sub>: Board characteristics is associated with the financial performance of the firms



H<sub>2</sub>: RPTs is associated with the financial performance of the firms.

To analyse H<sub>1</sub>, there are four sub-hypotheses, and for H<sub>2</sub>, there are two sub-hypotheses.

H<sub>1a</sub> says that board size is positively associated with the financial performance of the firms.

$$EBIT\_A_{it} = \alpha + \beta_0 + \beta_1 BSIZE_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 RISK_{it} + \beta_5 DE_{it} + \varepsilon_{it}$$

**Equation 1**

H<sub>1b</sub> is board independence is positively associated with the financial performance of the firms.

$$EBIT\_A_{it} = \alpha + \beta_0 + \beta_1 BI_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 RISK_{it} + \beta_5 DE_{it} + \varepsilon_{it}$$

**Equation 2**

H<sub>1c</sub> states that board meeting attendance is positively associated with the financial performance of the firms.

$$EBIT\_A_{it} = \alpha + \beta_0 + \beta_1 BMA_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 RISK_{it} + \beta_5 DE_{it} + \varepsilon_{it}$$

**Equation 3**

H<sub>1d</sub> is AGM attendance is positively associated with the financial performance of the firms

$$EBIT\_A_{it} = \alpha + \beta_0 + \beta_1 AGMA_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 RISK_{it} + \beta_5 DE_{it} + \varepsilon_{it}$$

**Equation 4**

There are two sub-hypotheses to check hypothesis 2 which says “RPTs is negatively associated with the financial performance of the firms”.

H<sub>2a</sub>: Related party income is negatively associated with the financial performance of the firms

H<sub>2b</sub>: Related party expenses is negatively associated with the financial performance of the firms

$$EBIT\_A_{it} = \alpha + \beta_0 + \beta_1 RP\_INC_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 RISK_{it} + \beta_5 DE_{it} + \varepsilon_{it}$$

**Equation 5**

$$EBIT\_A_{it} = \alpha + \beta_0 + \beta_1 RP\_EXP_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 RISK_{it} + \beta_5 DE_{it} + \varepsilon_{it}$$

**Equation 6**

## Empirical Results

### Descriptive Statistics

#### Agrochemicals Industry

Table 1 shows descriptive statistics of Agrochemicals companies. There are eight variables in the study, out of which one variable, debt to equity ratio (DE) measures financial leverage. DE from the year 2007 to 2009 is somewhat same, but there are fluctuations in the variable from the period 2010 to 2014. However, after the revised Clause 49, 2014 there is a sudden decline in DE from 1.119 to 0.63 (mean values). The outcome of the median for the period 2007 to 2009 dropped from 0.95 to 0.73, however median for five years 2010 to 2014 is almost same (near to 0.55) but it decreases in the last three year of the study. Earnings before interest and tax to total assets (EBIT\_A) is a proxy to quantify financial performance of the firm. Higher the ratio of EBIT\_A, the more efficaciously the firm is using its assets. Mean of EBIT\_A for the companies for the year 2013 to 2015 is much higher than in any other year considered in the study. To increase production, sales and earnings, firms buy more and more assets but they are unable to increase sales as well as earning in the same proportion, leading to decrease in EBIT\_A.

Board size of the industry varies from four to 14 and median and mode of board size is eight; previous studies also suggest that board size (BSIZE) between six to nine is suitable for meaningful discussion in the board (Lipton and Lorsch, 1992; Jensen, 1993). Mean board independence (BI) is near to fifty percent which is the optimum proportion of board independence as suggested by Garg (2007), but it ranges from 20 percent to 73 percent. Board meeting attendance (BMA), as well as annual general meeting attendance (AGM), varies from 40 percent to 100 percent and zero to 100 percent respectively. Regular board meetings result in better management monitoring, and this will in turn impact overall corporate performance (Francis et al., 2015 and Ntim, 2009). But annual general meeting might not be taken so seriously by independent directors in many companies even after the revised Clause 49, 2014. There are many companies in which independent directors did not turn up at the AGM which is not a good sign for the firm's owners.

As the study is related to firms which are small in size (on the basis of market capitalization), so the proxies for related party transactions is interesting to study. The author used two variables to measure related party transactions, the ratio of related party income to the total income of the firm in a period (RP\_INC) and the ratio of related party expenses to the total expenses of the firm in a period (RP\_EXP). The spread of these variables varies from the lowest possible value i.e. zero to 50 percent. Zero value means there are no related party transactions between the firm and the other party (any associate company, subsidiary, any individuals who have control over management decisions, etc.) and one means related party expenses or incomes of the firms are caused only by firm's related parties. Out of 22 firms, around 12 have zero related party incomes in any particular year. This is the reason why mode for RP\_INC is zero in all the years.

[Insert Table 1]

### **Fertilizers Industry**

Table 2 depicts the descriptive analysis of Fertilizers Industry. Mean, and medium of DE is same for all years except in the year 2009 where mean of DE is 17.63. EBIT\_A shows a diminishing pattern over eleven years of study. The two foremost reasons for declining EBIT\_A are drop in sales and increase in expenses over the study period. As the financial performance of this sector is not good, it has an effect on share prices too and results in poor firm value.

Mean, and medium of BSIZE is around eight in all eleven years of study supporting the optimum BSIZE between six to nine as per the previous studies (Lipton and Lorsch, 1992; Jensen, 1993). Likewise, average BI is also in line with the previous studies recommendations i.e. 50 percent (Garg, 2007). Both BMA and AGMA varies from zero to 100 percent. The value of RP\_INC ranges from zero to 0.77 while average RP\_EXP ranges from zero to 0.55.

[Insert Table 2]

### **Edible Oils Industry**

Descriptive statistics of Edible Oils Industry are shown in Table 3. Application of revised Clause 49, 2014 has a significant impact on financial leverage proxy as mean and medium of DE continually decreases during the 2015 to 2017 period. However, there are firms which have zero DE indicating the company has no debt during that year. Indian Edible Oils Industry witnessed economic stress due to droughts, rising production costs caused due to high cost of raw material, and labour and cheaper imports. This leads to decline in annual sales and profits, as a result decline in EBIT\_A.

Medium and mode of BSIZE are six for almost all eleven years of study; unlike the findings from Agrochemicals and Fertilizers Industry. Though mean and medium of BI is same as that of Agrochemicals and Fertilizers Industry, i.e. 50 percent. Mode for BMA and AGMA is 100 percent signifying the importance of meetings given by managers, yet few companies have zero AGMA. Good attendance in AGMA is important for every board member; nevertheless, it alone doesn't appear to have a considerable impact on companies' success. Average of RP\_INC and RP\_EXP are same as that of two industries studied earlier, but few edible oils companies are dependent on related party transactions as the maximum value of RP\_INC and RP\_EXP are very high (close to 0.70 and 0.90 respectively).

[Insert Table 3]

### **Paper & Paper Products Industry**

Table 4 represents descriptive statistics of Paper & Paper Products Industry. Mean of DE is around two except in the years 2007, 2011 and 2012. High DE in 2007 is because of Ganga Papers India Limited as DE is 728.63, in 2011 Shree Bhawani Paper Mills Limited has DE 119.45 and in 2012 Saffron Industries Limited has DE 840.13. There is a significant increase in the mean of EBIT\_A in 2016 as only two companies are in losses, so negative values of EBIT\_A does not impact much the mean of the variable.

BSIZE of the industry varies from three to 21 while mean and medium is close to eight across all years. Mean, medium and mode for BI is 50 percent roughly same as that of its counterparts. BMA improves over the years from 71 percent in 2007 to 81 percent in 2016. Average of AGMA is near to 55 percent. Six out of 41 companies do not enter into related party expenses, which means these companies have not even given remuneration to their directors in that particular year. However, 17 out of 41 companies do not depend on their related parties for annual income in some specific years. After the implementation of revised Clause 49, 2014 mean of RP\_INC and RP\_EXP has increased as compared to previous years.

[Insert Table 4]

### **Other Agricultural Products Industry**

Table 5 displays descriptive statistics of Other Agricultural Products Industry. Mean of DE varies from 0.65 to 1.2 over the years. This indicates that the companies are less burdened to pay debt expenses. EBIT\_A declines gradually year after year which is not a good sign for investors. The reason for the decline in EBIT\_A is the bulk investment in fixed assets (building and machinery), but companies were not able to ride out to increase their sales proportionally.

All three measures of central tendency, mean, medium and mode of BSIZE is six. Like all other industries studied in this research, this industry too has mean and mode of BI equal to 50 percent. Average BMA progresses from 2007 (67.55 percent) to 2017 (69.6 percent) while mean of AGMA fluctuates from 57.9 percent to 86.7 percent. Nearly 65 percent companies have zero RP\_INC and 17 percent of zero RP\_EXP in any particular year.

[Insert Table 5]

### **Regression output of relationship of board characteristics and RTPs on firm performance**

Table 6 to 10 represent regression output of all five industries considered in the study. BSIZE and BI is found to be positively associated with financial performance for Agrochemical firms in first two time frames, 2007 to 2009 and 2010 to 2014. However, only BSIZE is statistically

significant to Fertilizer firm performance in the same time frames. While, all other four corporate governance variables, BMA, AGMA, RP\_INC and RP\_EXP are statistically insignificant to all five industries considered in the study throughout the study period.

[Insert Table 6]

[Insert Table 7]

[Insert Table 8]

[Insert Table 9]

[INSERT TABLE 10]

## CONCLUSION

The results of the study suggests that revised Clause 49, 2014 does not have significant effect on the financial performance of the firms. Hence, regulators need take a note that these firms require different set of practices in managing their operating activities. Some of the critical challenges encountered by majority of the agricultural and allied sector in India are discussed below. First, intense competition and increasing dependency on export industry specifically China is denting the financial performance of Indian firms. It is essential for Indian firms to build plants with economic scale and advanced technologies. Moreover, firms need to get products and services registered for hastening entry in the international market. Second, this sector in India is not brand conscious, but the market is vulnerable to fake and dubious products. The government must redress against fake and dubious product sellers at high priority and ensure truthfulness towards the firms as well as to the farmers. Third, this sector must spend more on R&D to improve the quality of final product. As plants are genetically engineered to increase productivity and tackling pests so the role of fertilizers and chemicals like insecticides, herbicides, fungicides and bio stimulants are being questioned. Fourth, this sector faces complexities in supply chain and logistic inadequacies resulting in huge losses in past few years. Storage facilities must be built to avoid hiccups and new technology like Internet of Things can be used for real-time tracking of items. Fifth, Oil seed crops require rainfall water and are energy rich crops but unfortunately, these firms are witnessed financial stress over the years due to climate change. Sixth, there is more use of nitrogenous fertilizer as compared to phosphorous and potash fertilizer as nitrogenous fertilizer is relatively cheaper. For maintaining soil health, it is necessary that farmers use all three major nutrients nitrogen, phosphorous and potassium in the right mix. Excessive use of nitrogenous fertilizer is degrading soil quality, which in turn is negatively influencing crop response rate for fertilizer. Hence, there is a need to check on the use of nitrogenous fertilizer and fertilizer industry must work on the concept of 'balanced fertilisation', which emphasises on micronutrients in soil. Seventh, one of the foremost disadvantage of the Paper and Paper Products firms is depletion of forest resources. It is difficult for this industry to use wheat straw or other renewable resources to produce pulp and its products. Therefore, most of the firms in this sector are in search of improved technological methods and reduction in production costs to increase profit margins. These above stated reasons are responsible for slow growth and development of agriculture and allied sector in India.

There are many other factors which influence firm performance but are not considered in the study majorly due to lack of information available in the database. Variables like directors' remuneration, their shareholding patterns, age of the directors, directors' qualification, board

decision-making process, audit committee, gender diversity can be examined by future researchers which are ignored in the study.

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**TABLE 1: DESCRIPTIVE STATISTICS OF AGROCHEMICAL FIRMS**

DE	Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	Mean	0.93	0.93	0.94	0.91	0.97	0.56	1.36	1.34	1.12	0.67	0.63
	Median	0.95	0.88	0.73	0.59	0.42	0.57	0.62	0.61	0.49	0.51	0.20
	S.D.	0.67	0.75	0.89	1.29	1.47	0.32	3.01	3.17	2.38	0.73	0.77
	Minimum	0.18	0.18	0.08	0.01	0.08	0.09	0.01	0.00	0.01	0.01	0.00
	Maximum	2.51	2.61	3.30	4.60	5.72	1.41	13.22	14.21	10.93	2.71	2.12
EBIT_A	Mean	0.11	0.10	0.12	0.11	0.10	0.07	0.22	0.22	0.26	0.18	0.11
	Median	0.09	0.09	0.13	0.12	0.08	0.08	0.09	0.09	0.12	0.10	0.11
	S.D.	0.11	0.08	0.06	0.07	0.12	0.09	0.54	0.49	0.68	0.36	0.07
	Minimum	-0.01	-0.01	-0.02	-0.03	-0.05	-0.23	0.01	-0.02	-0.02	0.00	-0.02
	Maximum	0.41	0.35	0.25	0.27	0.54	0.18	2.38	2.20	3.12	1.69	0.22
Bsize	Mean	8.31	8.31	8.45	8.52	8.45	8.63	8.14	8.41	8.68	8.64	8.40
	Median	8	7	8	8	8	8	8	8	8	8	8
	Mode	8	6	8	8	7	8	8	8	6	7	8
	S.D.	2.24	2.31	2.43	2.58	2.46	2.49	2.32	2.54	2.63	2.54	2.41
	Minimum	6	6	4	4	4	4	4	5	5	5	5
BI	Mean	48.82	50.75	49.12	49.89	51.21	48.37	50.01	48.08	48.07	48.19	47.58
	Median	50	50	50	50	50	50	50	50	50	50	50
	Mode	50	50	50	50	50	50	50	50	50	50	50
	S.D.	0.09	0.11	0.10	0.10	0.12	0.11	0.10	0.10	0.08	0.11	0.12
	Minimum	33.33	33.33	25.00	25.00	25.00	25.00	25.00	20.00	33.33	20.00	20.00
	Maximum	62.50	75.00	70.00	70.00	72.73	72.73	70.00	63.64	62.50	70.00	63.64
BMA	Mean	73.52	75.47	81.75	81.59	82.20	83.68	84.46	83.42	83.06	88.37	91.98
	Median	68.00	78.57	81.94	81.82	83.33	83.33	87.50	81.48	86.93	88.54	100.00
	Mode	66.67	100	80	100	83.33	100	100	100	100	100	100
	S.D.	0.16	0.18	0.11	0.14	0.13	0.12	0.13	0.25	14.34	14.50	15.25
	Minimum	42.11	38.89	57.50	51.52	56.67	62.00	46.43	40.63	44.44	58.73	50.00
	Maximum	100	100	100	100	100	100	100	100	100	100	100
AGMA	Mean	71.13	65.58	66.71	72.81	69.05	72.99	73.54	68.48	77.42	73.10	92.00
	Median	75.00	66.67	80.00	75.00	77.50	75.00	77.50	70.83	100.00	73.21	94.44



	<b>Mode</b>	100	100	100	100	100	100	100	100	100	100	100
	<b>S.D.</b>	0.30	0.29	0.36	0.26	0.31	0.27	0.30	0.29	30.08	26.83	0.07
	<b>Minimum</b>	25	25	0	25	0	0	0	0	0	25	80
	<b>Maximum</b>	100	100	100	100	100	100	100	100	100	100	100
<b>RP_INC</b>	<b>Mean</b>	0.07	0.06	0.06	0.05	0.06	0.08	0.09	0.06	0.07	0.07	0.04
	<b>Median</b>	0.05	0.02	0.03	0.00	0.01	0.03	0.03	0.01	0.01	0.01	0.02
	<b>Mode</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>S.D.</b>	0.09	0.09	0.08	0.08	0.10	0.11	0.15	0.11	0.12	0.12	0.06
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>Maximum</b>	0.31	0.31	0.34	0.34	0.38	0.40	0.55	0.49	0.47	0.50	0.18
<b>RP_EXP</b>	<b>Mean</b>	0.10	0.08	0.09	0.06	0.07	0.12	0.26	0.08	0.07	0.07	0.08
	<b>Median</b>	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.03	0.02	0.03
	<b>S.D.</b>	0.12	0.09	0.17	0.09	0.09	0.25	0.87	0.11	0.10	0.10	0.14
	<b>Minimum</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Maximum</b>	0.38	0.31	0.73	0.34	0.36	0.40	0.41	0.38	0.40	0.37	0.56

**TABLE 2: DESCRIPTIVE STATISTICS OF EDIBLE OIL FIRMS**

<b>DE</b>	<b>Year</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
	<b>Mean</b>	1.19	1.14	1.09	1.05	1.10	1.30	0.95	0.93	0.94	0.78	0.58
	<b>Median</b>	1.05	0.84	0.89	0.90	0.97	0.73	0.65	0.73	0.62	0.50	0.51
	<b>S.D.</b>	0.93	0.92	0.88	1.04	0.99	1.31	0.90	0.93	0.90	1.00	1.93
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	-5.94
	<b>Maximum</b>	3.47	3.29	3.15	4.92	3.53	5.18	3.27	4.11	3.35	3.78	4.51
<b>EBIT_A</b>	<b>Mean</b>	0.07	0.07	0.05	0.06	0.07	0.09	0.08	0.08	0.06	0.00	0.06
	<b>Median</b>	0.06	0.07	0.06	0.06	0.07	0.06	0.07	0.06	0.04	0.05	0.05
	<b>S.D.</b>	0.07	0.06	0.08	0.05	0.04	0.10	0.08	0.09	0.10	0.24	0.05
	<b>Minimum</b>	-0.03	-0.05	-0.12	-0.04	-0.01	-0.02	-0.01	-0.12	-0.21	-1.07	-0.07
	<b>Maximum</b>	0.26	0.19	0.20	0.20	0.17	0.44	0.38	0.31	0.39	0.17	0.16
<b>BSIZE</b>	<b>Mean</b>	6.50	6.88	7.00	6.80	6.77	6.69	6.69	6.65	7.12	6.88	6.90
	<b>Median</b>	6	6	6	6	6	6	6	6	7	6	6
	<b>Mode</b>	8	6	6	6	8	6	6	6	8	6	6
	<b>S.D.</b>	2.67	2.88	3.09	2.38	2.18	2.22	2.07	2.24	2.61	2.05	2.05
	<b>Minimum</b>	4	4	4	4	4	4	4	4	3	3	4
	<b>Maximum</b>	12	12	14	12	12	12	12	12	16	11	11
<b>BI</b>	<b>Mean</b>	0.52	0.52	0.53	0.55	0.53	0.54	0.54	0.52	0.51	0.53	0.52
	<b>Median</b>	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	<b>Mode</b>	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	<b>S.D.</b>	0.09	0.07	0.10	0.10	0.08	0.08	0.08	0.07	0.10	0.10	0.09
	<b>Minimum</b>	0.38	0.40	0.33	0.40	0.40	0.40	0.40	0.40	0.20	0.29	0.27

	<b>Maximum</b>	0.75	0.75	0.79	0.75	0.75	0.75	0.75	0.75	0.67	0.78	0.67
<b>BMA</b>	<b>Mean</b>	71.36	69.34	74.48	77.66	78.65	78.53	79.56	83.89	81.43	84.39	74.83
	<b>Median</b>	73.61	73.61	77.88	84.72	82.73	79.58	80.95	87.08	85.16	90.23	90.00
	<b>Mode</b>	100	100	100	100	100	100	100	100	100	100	100
	<b>S.D.</b>	23.72	24.18	20.02	21.90	20.78	17.22	16.79	17.37	20.58	19.13	27.79
	<b>Minimum</b>	28.57	12.50	28.57	25.00	25.00	50.00	50.00	38.71	23.08	34.29	33.33
	<b>Maximum</b>	100	100	100	100	100	100	100	100	100	100	100
<b>AGMA</b>	<b>Mean</b>	66.25	69.87	69.57	73.60	74.29	66.99	76.28	73.33	66.03	70.88	83.49
	<b>Median</b>	70.83	70.83	70.83	83.33	75.00	70.83	75.00	87.50	70.83	77.50	89.71
	<b>Mode</b>	100	100	100	100	100	100	100	100	100	100	100
	<b>S.D.</b>	35.11	29.45	29.23	28.81	24.35	30.14	25.79	30.71	34.31	31.86	17.27
	<b>Minimum</b>	0.00	0.00	0.00	33.33	33.33	0.00	16.67	0.00	0.00	0.00	55.56
	<b>Maximum</b>	100	100	100	100	100	100	100	100	100	100	100
<b>RP_INC</b>	<b>Mean</b>	0.02	0.02	0.06	0.06	0.05	0.05	0.04	0.03	0.05	0.07	0.07
	<b>Median</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Mode</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>S.D.</b>	0.04	0.06	0.17	0.14	0.11	0.13	0.12	0.13	0.14	0.16	0.18
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>Maximum</b>	0.15	0.29	0.81	0.61	0.41	0.52	0.61	0.65	0.66	0.71	0.73
<b>RP_EXP</b>	<b>Mean</b>	0.08	0.10	0.14	0.13	0.10	0.09	0.04	0.04	0.08	0.08	0.03
	<b>Median</b>	0.01	0.01	0.03	0.03	0.02	0.01	0.00	0.00	0.01	0.02	0.01
	<b>S.D.</b>	0.19	0.20	0.25	0.21	0.20	0.19	0.08	0.08	0.17	0.16	0.03
	<b>Minimum</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Maximum</b>	0.86	0.87	0.85	0.85	0.92	0.92	0.36	0.35	0.84	0.76	0.09

**TABLE 3: DESCRIPTIVE STATISTICS OF FERTILIZER FIRMS**

<b>DE</b>	<b>Year</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
	<b>Mean</b>	0.90	0.82	17.63	2.51	1.02	1.34	1.37	1.35	1.20	1.30	1.15
	<b>Median</b>	0.88	0.82	0.93	0.92	0.70	0.98	1.11	0.91	0.80	0.92	0.80
	<b>S.D.</b>	0.52	0.47	63.01	5.72	1.42	1.22	1.06	1.24	1.15	1.31	1.02
	<b>Minimum</b>	0.18	0.17	0.05	0.24	0.05	0.00	0.00	0.11	0.12	0.00	0.00
	<b>Maximum</b>	1.86	1.58	236.53	23.41	6.12	4.05	3.67	4.47	4.58	4.23	3.26
<b>EBIT_A</b>	<b>Mean</b>	0.07	0.08	0.09	0.09	0.13	0.10	0.07	0.06	0.06	0.05	0.05
	<b>Median</b>	0.07	0.07	0.07	0.09	0.10	0.08	0.06	0.05	0.06	0.05	0.06
	<b>S.D.</b>	0.08	0.04	0.05	0.07	0.08	0.06	0.07	0.07	0.04	0.03	0.03
	<b>Minimum</b>	-0.12	0.03	0.03	-0.02	0.02	0.02	-0.03	-0.01	-0.01	0.00	-0.01
	<b>Maximum</b>	0.22	0.18	0.21	0.27	0.32	0.22	0.30	0.27	0.11	0.09	0.12
<b>BSIZE</b>	<b>Mean</b>	8.06	8.13	7.88	8.29	7.71	7.78	7.67	7.33	7.82	7.59	7.88

	<b>Median</b>	8	8	8	9	8	8	8	7	7	8	8
	<b>Mode</b>	9	8	8	9	6	9	9	7	7	8	8
	<b>S.D.</b>	2.59	2.39	2.33	1.90	2.11	2.05	1.75	1.78	1.51	2.53	1.26
	<b>Minimum</b>	4	4	4	4	4	5	5	5	6	5	6
	<b>Maximum</b>	12	12	12	12	12	12	12	12	11	12	10
<b>BI</b>	<b>Mean</b>	51.94	54.82	56.22	57.69	55.30	52.01	50.85	49.31	47.24	46.51	49.22
	<b>Median</b>	50	50	50	55.56	55.56	55.56	50	50	50	50	50
	<b>Mode</b>	50	50	50	50	50	50	50	50	50	50	50
	<b>S.D.</b>	0.17	0.13	0.15	0.14	0.17	0.18	0.18	0.14	0.11	0.11	0.05
	<b>Minimum</b>	16.67	33.33	33.33	30	0	0	0	16.67	14.29	14.29	37.5
	<b>Maximum</b>	83.33	85.71	88.89	88.89	77.78	77.78	77.78	77.78	57.14	62.50	57.14
<b>BMA</b>	<b>Mean</b>	64.94	67.10	78.57	70.83	77.34	71.19	74.05	79.81	77.37	89.17	81.28
	<b>Median</b>	69.42	67.76	80.00	76.47	80.00	74.17	81.67	85.42	79.17	93.33	84.17
	<b>Mode</b>	68	58.33	80	100	91.67	83.33	100	100	100	100	80
	<b>S.D.</b>	0.27	0.18	0.18	0.21	0.18	0.22	0.25	0.19	0.17	0.15	0.14
	<b>Minimum</b>	0	25	20	20	26.6667	0	0	40	40	40	50
	<b>Maximum</b>	100	87.5	100	100	100	100	100	100	100	100	100
<b>AGMA</b>	<b>Mean</b>	60.31	61.41	65.05	63.19	62.59	62.71	67.13	71.08	72.65	79.80	77.60
	<b>Median</b>	63.33	70.83	66.67	60.00	66.67	66.67	73.33	83.33	66.67	100.00	87.50
	<b>Mode</b>	100	100	100	100	100	100	100	100	100	100	100
	<b>S.D.</b>	0.35	0.46	0.30	0.33	0.34	0.34	0.33	0.33	0.27	0.29	0.24
	<b>Minimum</b>	0	0	0	20	0	0	0	0	20	20	40
	<b>Maximum</b>	100	100	100	100	100	100	100	100	100	100	100
<b>RP_IN C</b>	<b>Mean</b>	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.05	0.06	0.05	0.07
	<b>Median</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	<b>Mode</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>S.D.</b>	0.04	0.02	0.02	0.05	0.03	0.02	0.05	0.14	0.19	0.15	0.19
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>Maximum</b>	0.15	0.07	0.05	0.17	0.10	0.06	0.19	0.60	0.80	0.61	0.77
<b>RP_E XP</b>	<b>Mean</b>	0.02	0.02	0.04	0.03	0.02	0.04	0.03	0.04	0.04	0.04	0.11
	<b>Median</b>	0.00	0.00	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.05
	<b>S.D.</b>	0.04	0.03	0.06	0.05	0.04	0.05	0.04	0.10	0.09	0.05	0.15
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>Maximum</b>	0.13	0.09	0.23	0.16	0.13	0.18	0.13	0.42	0.35	0.18	0.55

**TABLE 4: DESCRIPTIVE STATISTICS OF OTHER AGRICULTURAL PRODUCTS FIRMS**

DE	Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015	2017
	Mean	0.66	1.05	0.89	0.93	0.99	0.97	0.90	1.05	0.99	0.99	0.85
	Median	0.6	0.79	0.7	0.76	0.71	0.75	0.61	0.64	0.63	0.63	0.47
	S.D.	1.46	1.08	0.91	1.09	1.32	1.16	1.43	1.25	1.15	1.15	1.70
	Minimum	0.13	0.05	0.01	0.01	0.04	0.03	0.02	0.05	0.06	0.06	-3.60
	Maximum	3.25	4.17	3.03	3.41	4.76	3.54	4.13	5.13	4.77	4.77	4.94
EBIT_A	Mean	0.14	0.13	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.03
	Median	0.10	0.12	0.11	0.08	0.06	0.08	0.07	0.09	0.09	0.08	0.06
	S.D.	0.21	0.13	0.11	0.11	0.12	0.10	0.08	0.07	0.07	0.09	0.12
	Minimum	0.02	0.02	-0.03	-0.12	0.00	0.01	0.00	0.01	0.00	-0.12	-0.33
	Maximum	0.98	0.63	0.53	0.51	0.62	0.44	0.38	0.33	0.26	0.33	0.24
BSIZE	Mean	6.68	6.84	6.63	6.09	6.61	6.35	6.35	6.39	6.68	7.08	7.08
	Median	6	6	6	6	6	6	6	6	6	6	6
	Mode	6	6	6	4	6	6	6	6	5	6	6
	S.D.	2.16	2.36	2.27	2.39	2.52	2.27	2.23	2.17	2.46	2.20	2.20
	Minimum	4	4	4	4	4	3	3	3	3	3	3
	Maximum	12	13	12	12	12	12	12	12	12	12	12
BI	Mean	50.70	50.73	53.01	52.45	50.52	51.47	50.87	50.82	50.86	53.22	0.53
	Median	50	50	50	50	50	50	50	50	50	50	0.5
	Mode	50	50	50	50	50	50	50	50	50	50	0.5
	S.D.	7.68	8.10	9.41	10.33	9.45	8.23	8.48	7.54	10.61	7.20	0.06
	Minimum	37.50	33.33	37.50	28.57	28.57	33.33	33.33	33.33	20.00	33.33	0.40
	Maximum	71.43	75	75	75	75	66.67	71.43	66.67	66.67	66.67	0.67
BMA	Mean	67.55	72.16	79.59	78.98	80.61	85.76	87.31	88.74	86.62	87.43	0.70
	Median	76.67	75.00	83.33	85.00	87.50	88.89	93.75	96.30	90.00	93.75	0.80
	Mode	100	100	100	100	100	100	100	100	100	100	100
	S.D.	28.50	21.29	19.35	22.47	20.97	16.68	15.62	15.76	14.88	14.36	0.30
	Minimum	0.00	33.33	33.33	20.00	29.63	45.00	44.44	41.67	48.15	44.44	0.20
	Maximum	100	100	100	100	100	100	100	100	100	100	100
AGMA	Mean	66.23	65.00	65.44	57.97	67.75	71.38	69.28	71.23	68.73	73.73	0.87
	Median	66.67	66.67	66.67	50.00	66.67	75.00	66.67	75.00	66.67	83.33	0.89
	Mode	100	100	100	100	100	100	100	100	100	100	100
	S.D.	35.78	36.69	31.69	35.13	29.23	28.59	29.66	31.91	32.86	31.26	0.15
	Minimum	0	0	0	0	0	0	0	0	0	0	0.5
	Maximum	100	100	100	100	100	100	100	100	100	100	100
RP_IN C	Mean	0.03	0.03	0.09	0.07	0.11	0.07	0.06	0.08	0.03	0.07	0.09
	Median	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0.00

	<b>Mode</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>S.D.</b>	0.07	0.06	0.22	0.21	0.24	0.16	0.14	0.15	0.06	0.20	0.20
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>Maximum</b>	0.25	0.19	0.92	0.97	0.96	0.69	0.59	0.59	0.21	1.00	0.89
<b>RP_E XP</b>	<b>Mean</b>	0.03	0.02	0.07	0.07	0.06	0.06	0.04	0.06	0.09	0.06	0.07
	<b>Median</b>	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.02
	<b>S.D.</b>	0.05	0.03	0.14	0.13	0.11	0.10	0.07	0.16	0.21	0.16	0.21
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>Maximum</b>	0.22	0.09	0.59	0.49	0.40	0.41	0.30	0.76	0.82	0.81	0.98

**TABLE 5: DESCRIPTIVE STATISTICS OF PAPER AND PAPER PRODUCTS FIRMS**

<b>DE</b>	<b>Year</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
	<b>Mean</b>	22.42	3.44	2.00	2.03	8.08	26.43	2.04	2.62	1.89	2.11	0.86
	<b>Median</b>	1.35	1.67	1.66	1.50	1.49	1.58	1.20	1.20	1.18	1.00	0.49
	<b>S.D.</b>	122.89	9.91	1.51	2.04	27.68	136.07	2.47	4.49	2.33	3.59	2.79
	<b>Minimum</b>	0.17	0.1	0.17	0.03	0.12	0.11	0.1	0.11	0.02	0.02	-5.72
	<b>Maximum</b>	728.63	59.83	6.49	8.90	127.98	840.13	10.98	24.13	10.10	17.64	11.87
<b>EBIT_A</b>	<b>Mean</b>	0.10	0.10	0.09	0.08	0.08	0.07	0.09	0.10	0.09	0.19	0.07
	<b>Median</b>	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.09
	<b>S.D.</b>	0.24	0.22	0.20	0.11	0.18	0.19	0.20	0.20	0.20	0.65	0.10
	<b>Minimum</b>	-0.23	-0.07	-0.06	-0.08	-0.10	-0.20	-0.15	-0.11	-0.05	-0.10	-0.13
	<b>Maximum</b>	1.42	1.31	1.16	0.60	1.05	1.10	1.14	1.19	1.16	3.65	0.30
<b>BSIZE</b>	<b>Mean</b>	8.30	8.16	8.41	8.23	7.71	7.73	7.39	7.41	7.59	7.54	7.62
	<b>Median</b>	8	8	8	8	8	8	7	7	7	8	8
	<b>Mode</b>	8	7	8	6	8	6	8	8	7	6	6
	<b>S.D.</b>	2.82	2.78	3.42	3.29	2.52	2.86	2.76	3.04	2.17	2.08	1.61
	<b>Minimum</b>	3	4	3	3	3	3	3	3	4	3	5
	<b>Maximum</b>	19	18	21	20	14	15	13	19	12	12	10
<b>BI</b>	<b>Mean</b>	55.12	54.89	53.82	56.59	56.20	56.41	54.57	52.80	51.57	49.58	51.31
	<b>Median</b>	50	55.56	50	50	54.55	50	50	50	50	50	50
	<b>Mode</b>	50	50	50	50	50	50	50	50	50	50	50
	<b>S.D.</b>	13.69	10.44	9.53	14.24	13.05	14.63	13.21	13.69	7.91	9.46	9.40
	<b>Minimum</b>	36.36	36.36	33.33	20	20	33.33	20	16.67	33.33	25	25
	<b>Maximum</b>	100	75	77.78	100	100	100	100	100	71.43	71.43	71.43
<b>BMA</b>	<b>Mean</b>	70.94	69.54	70.83	71.24	78.70	73.59	80.69	80.47	81.83	80.88	60.34
	<b>Median</b>	75	72.5	70.37	77.08	83.33	75	85.71	80	83.33	81.82	50
	<b>Mode</b>	75	88.8889	66.6667	83.3333	100	100	100	100	100	100	100
	<b>S.D.</b>	17.69	24.71	339.64	23.60	18.43	19.16	18.28	18.23	15.08	16.06	28.97

	<b>Minimum</b>	9.09	45.24	33.33	0.00	29.63	27.78	30.56	25.00	53.33	44.44	0.00
	<b>Maximum</b>	92.86	97.14	21.36	100	100	100	100	100	100	100	100
<b>AGMA</b>	<b>Mean</b>	51.40	58.14	53.35	50.24	54.54	54.36	57.68	56.81	59.66	56.92	82.90
	<b>Median</b>	50	57.14	50	50	50	50	66.67	66.67	60	60	85
	<b>Mode</b>	100	100	100	100	100	100	100	100	100	100	100
	<b>S.D.</b>	34.71	31.49	33.81	33.78	35.57	34.06	33.31	37.96	34.57	33.12	15.70
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	50
	<b>Maximum</b>	100	100	100	100	100	100	100	100	100	100	100
<b>RP_IN C</b>	<b>Mean</b>	0.02	0.02	0.02	0.02	0.02	0.05	0.04	0.04	0.05	0.07	0.03
	<b>Median</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Mode</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>S.D.</b>	0.05	0.05	0.05	0.04	0.05	0.16	0.15	0.16	0.17	0.20	0.07
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>Maximum</b>	0.20	0.19	0.23	0.23	0.24	1.00	0.92	0.94	0.88	0.92	0.25
<b>RP_E XP</b>	<b>Mean</b>	0.03	0.02	0.03	0.03	0.02	0.03	0.02	0.04	0.07	0.08	0.08
	<b>Median</b>	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	<b>S.D.</b>	0.08	0.05	0.08	0.05	0.05	0.06	0.03	0.08	0.16	0.17	0.26
	<b>Minimum</b>	0	0	0	0	0	0	0	0	0	0	0
	<b>Maximum</b>	0.34	0.23	0.33	0.21	0.20	0.30	0.15	0.37	0.87	0.80	1.40

**TABLE 6: REGRESSION OUTPUT OF AGROCHEMICAL FIRMS**

	CG <sub>1</sub> = BSIZE				CG <sub>2</sub> = BI			CG <sub>3</sub> = BMA			CG <sub>4</sub> = AGMA		CG <sub>5</sub> = RP_INC			CG <sub>6</sub> = RP_EXP		
Variables	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17
CG <sub>i</sub>	0.211 <sup>a</sup>	1.044 <sup>a</sup>	-0.178	0.125 <sup>a</sup>	-1.807 <sup>a</sup>	0.102	-0.041	0.268	0.161	-0.101	-0.049	0.009	0.373	-0.148	-3.793	0.065	-0.286	-0.178
	(4.392)	(3.452)	(-0.194)	(4.836)	(-4.227)	(0.123)	(-0.382)	(0.636)	(0.308)	(-1.912)	(-0.242)	(0.071)	(1.592)	(-0.551)	(-0.955)	(1.128)	(-0.433)	(-0.121)
FSIZE	-0.011	-0.017	-0.823 <sup>a</sup>	0.019	0.032	-0.825 <sup>a</sup>	-0.005	0.014	-0.820 <sup>a</sup>	0.019	0.015	-0.824 <sup>a</sup>	-0.008	0.015	-0.755 <sup>a</sup>	-0.005	0.016	-0.819 <sup>a</sup>
	(-0.104)	(-1.177)	(-7.535)	(0.174)	(1.746)	(-7.538)	(-0.225)	(0.591)	(-7.465)	(0.232)	(0.648)	(-7.517)	(-0.374)	(0.836)	(-5.840)	(-0.247)	(0.697)	(-6.971)
FAGE	0.123	1.642 <sup>b</sup>	-1.864	0.129	0.217	-1.706	0.024	0.132	-2.054	-0.042	0.122	-1.824	0.022	0.124	-1.786	0.017	0.166	-1.756
	(0.359)	(2.151)	(-0.578)	(0.290)	(0.791)	(-0.528)	(0.633)	(0.357)	(-0.620)	(-0.104)	(0.331)	(-0.557)	(0.582)	(0.753)	(-0.571)	(1.648)	(0.433)	(-0.551)
RISK	1.163	-0.189	0.333	0.707	-0.349	0.368	0.738 <sup>b</sup>	-0.113	0.375	0.668	-0.104	0.333	0.448	-0.001	0.829	0.730	-0.095	0.257
	(1.709)	(-1.684)	(0.441)	(1.008)	(-0.504)	(0.463)	(2.159)	(-0.176)	(0.491)	(0.808)	(-0.008)	(0.439)	(-2.267)	(-0.019)	(0.918)	(-2.008)	(-0.131)	(0.258)
DE	-0.065 <sup>b</sup>	0.034	0.008	-0.075	-0.008	0.008	-0.054	-0.003	0.008	-0.073	0.001	0.007	-0.057	0.094	0.011	-0.054	-0.002	0.007
													6					



	(-2.646)	(0.548)	(0.251)	(-3.271)	(-0.585)	(0.247)	(-2.176)	(-0.155)	(0.254)	(-3.241)	(-0.144)	(0.223)	(1.175)	(-1.306)	(0.341)	(1.711)	(-0.105)	(0.221)
LM Test	16.213 <sup>a</sup>	11.17 <sup>3a</sup>	8.204 <sup>a</sup>	15.73 <sup>3a</sup>	10.71 <sup>3a</sup>	9.116 <sup>7a</sup>	27.51 <sup>7a</sup>	22.78 <sup>6a</sup>	6.232 <sup>4a</sup>	17.66 <sup>4a</sup>	22.37 <sup>9a</sup>	6.600 <sup>1a</sup>	28.37 <sup>1a</sup>	21.67 <sup>2a</sup>	8.502 <sup>a</sup>	26.41 <sup>0a</sup>	23.47 <sup>1a</sup>	8.265 <sup>a</sup>
Adjusted R <sup>2</sup>	0.828	0.561	0.808	0.824	0.126	0.808	0.167	0.011	0.809	0.839	0.007	0.808	0.166	0.007	0.815	0.075	0.007	0.808
F-statistic	12.528 <sup>a</sup>	6.045 <sup>3a</sup>	10.78 <sup>3a</sup>	12.22 <sup>2a</sup>	3.696 <sup>6a</sup>	10.77 <sup>2a</sup>	1.808	0.186	10.81 <sup>1a</sup>	13.38 <sup>6a</sup>	0.117	10.76 <sup>7a</sup>	3.002 <sup>1a</sup>	0.134	11.20 <sup>6a</sup>	1.809	0.141	10.77 <sup>1a</sup>
Hausman Test	13.486 <sup>b</sup>	11.75 <sup>3b</sup>	15.58 <sup>9a</sup>	15.79 <sup>7a</sup>	6.719	14.84 <sup>1b</sup>	7.455	4.107	21.95 <sup>6a</sup>	14.60 <sup>3b</sup>	4.998	20.25 <sup>0a</sup>	7.295	4.367	18.14 <sup>6a</sup>	8.365	3.577	19.38 <sup>1a</sup>
Redundant Test	14.875 <sup>a</sup>	5.058 <sup>a</sup>	7.247 <sup>a</sup>	13.41 <sup>3a</sup>	N.A.	7.761 <sup>a</sup>	N.A.	N.A.	8.165 <sup>a</sup>	15.40 <sup>5a</sup>	N.A.	8.229 <sup>a</sup>	N.A.	N.A.	8.906 <sup>a</sup>	N.A.	N.A.	8.554 <sup>a</sup>

**Note:** t-statistics are in parentheses. <sup>a</sup> indicates significance at 1% and <sup>b</sup> indicates significance at 5%.

**Source:** Compiled by researcher

**TABLE 7: REGRESSION OUTPUT OF EDIBLE OIL FIRMS**

	CG <sub>1</sub> = BSIZE				CG <sub>2</sub> = BI			CG <sub>3</sub> = BMA			CG <sub>4</sub> =AGMA		CG <sub>5</sub> = RP_INC			CG <sub>6</sub> = RP_EXP		
Variables	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17
CG <sub>i</sub>	CG <sub>i</sub>	0.81	0.32	-0.52	-0.39	-0.46	-0.314	-0.014	0.029	0.061	0.007	-0.018	-0.004	-0.037	0.317	-0.068	-0.063	-0.257
		(1.361)	(0.394)	(-1.191)	(-0.528)	(-1.411)	(-2.291)	(-0.322)	(0.588)	(0.575)	(0.833)	(-1.069)	(-0.067)	(-0.173)	(2.536)	(-0.916)	(-0.612)	(-2.411)
FSIZE	-0.011	0.0263 <sub>b</sub>	0.008	-0.006	0.027 <sup>b</sup>	0.004	-0.015	0.028 <sup>b</sup>	-0.001	-0.009	0.027	-0.001	-0.008	0.130 <sup>a</sup>	-0.005	-0.006	0.028 <sup>b</sup>	-0.001
	(-0.886)	(2.006)	(0.130)	(-0.576)	(2.315)	(0.313)	(-0.887)	(2.358)	(-0.063)	(-0.790)	(2.258)	(-0.055)	(-0.580)	(4.362)	(-0.309)	(-0.503)	(2.429)	(-0.034)
FAGE	-0.082	0.018	-0.449	-0.087	0.017	0.110 <sup>b</sup>	-0.432	0.020	0.107	-0.098	0.023	0.113	-0.086	-0.456 <sup>b</sup>	0.105	-0.081	0.029	0.118
	(-1.479)	(0.311)	(-0.651)	(-1.481)	(0.301)	(2.108)	(-1.880)	(0.348)	(1.465)	(-1.608)	(0.397)	(1.491)	(-1.471)	(-2.198)	(1.475)	(-1.377)	(0.507)	(1.630)
RISK	-0.195	-1.405 <sup>a</sup>	0.001	-0.201	-1.407 <sup>a</sup>	-0.015	-0.152	-1.374 <sup>a</sup>	0.002	0.229	1.412	0.004	0.233	1.391 <sup>a</sup>	0.001	-0.204	-1.362 <sup>a</sup>	-0.005
	(-0.527)	(-2.878)	(0.085)	(-0.540)	(-2.916)	(-0.775)	(-0.408)	(-2.816)	(0.145)	(0.630)	(2.895)	(0.229)	(0.632)	(2.889)	(0.026)	(-0.551)	(-2.881)	(-0.292)

DE	0.009	-0.014 <sup>b</sup>	0.016	0.003	-0.015 <sup>b</sup>	0.012	0.003	-0.014 <sup>b</sup>	0.016 <sup>b</sup>	0.005	-0.015	0.016 <sup>b</sup>	0.005	-0.015 <sup>b</sup>	0.016 <sup>b</sup>	0.005	-0.015 <sup>b</sup>	0.017 <sup>b</sup>
	(0.982)	(-2.333)	(1.393)	(0.388)	(-2.432)	(1.861)	(0.295)	(-2.379)	(2.299)	(0.595)	(-2.405)	(2.213)	(0.559)	(-2.478)	(2.273)	(0.591)	(-2.502)	(2.352)
LM Test	25.616 <sup>a</sup>	73.450 <sup>a</sup>	4.785 <sup>b</sup>	28.330 <sup>a</sup>	72.411 <sup>a</sup>	3.549	11.693 <sup>a</sup>	70.527	7.289 <sup>a</sup>	31.004 <sup>a</sup>	78.005 <sup>a</sup>	7.109 <sup>a</sup>	27.865 <sup>a</sup>	59.32 <sup>a</sup>	6.880 <sup>a</sup>	28.30 <sup>a</sup>	75.180 <sup>a</sup>	7.635 <sup>a</sup>
Adjusted R <sup>2</sup>	0.078	0.107	0.473	0.058	0.121	0.141	0.805	0.108	0.049	0.067	0.116	0.042	0.053	0.696	0.057	0.059	0.151	0.068
F-statistic	0.921	3.675 <sup>a</sup>	3.212 <sup>a</sup>	0.665	4.072 <sup>a</sup>	2.940 <sup>b</sup>	11.166 <sup>a</sup>	3.706 <sup>a</sup>	1.608	0.779	3.916 <sup>a</sup>	1.511	0.605	10.412 <sup>a</sup>	1.722	0.678	4.961 <sup>a</sup>	1.868
Hausman Test	9.988	9.228	12.334 <sup>b</sup>	8.944	9.782	N.A.	22.05 <sup>a</sup>	9.404	4.604	7.860	7.519	6.661	8.954	19.017 <sup>a</sup>	4.947	8.372	9.833	4.418
Redundant Test	N.A.	N.A.	3.033 <sup>a</sup>	N.A.	N.A.	N.A.	9.027 <sup>a</sup>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	9.520 <sup>a</sup>	N.A.	N.A.	N.A.	N.A.

**Note:** t-statistics are in parentheses. <sup>a</sup> indicates significance at 1% and <sup>b</sup> indicates significance at 5%.

**Source:** Compiled by researcher

**TABLE 8: REGRESSION OUTPUT OF FERTILIZER FIRMS**

	CG <sub>1</sub> = BSIZE			CG <sub>2</sub> = BI			CG <sub>3</sub> = BMA			CG <sub>4</sub> = AGMA		CG <sub>5</sub> = RP_INC			CG <sub>6</sub> = RP_EXP		
Variables	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17
CG <sub>i</sub>	0.039	-0.016	-0.076	0.170 <sup>a</sup>	0.001 <sup>b</sup>	-0.009	0.012	0.043	11.719	0.031	-0.018	0.019	0.233	0.154	-0.076	0.141	0.063
	(0.463)	(-0.157)	(-1.024)	(3.018)	(2.319)	(-0.238)	(0.423)	(0.505)	(0.832)	(2.089)	(-1.155)	(0.687)	(0.659)	(2.292)	(-2.721)	(0.603)	(2.783)
FSIZE	-0.010	0.035	0.013	-0.001	-0.008	0.012	-0.007	0.035	1.558	-0.012	0.036	0.014	-0.008	0.067 <sup>b</sup>	0.002	-0.003	0.047 <sup>a</sup>
	(-0.495)	(1.546)	(1.507)	(-0.006)	(-0.521)	(1.345)	(-0.411)	(1.498)	(1.091)	(-0.958)	(1.591)	(1.560)	(-0.625)	(3.285)	(0.323)	(-0.211)	(3.720)
FAGE	0.141	-0.727 <sup>a</sup>	-0.033	0.091	-0.001	-0.046	0.119	-0.760 <sup>a</sup>	10.585	0.111	-0.701 <sup>a</sup>	-0.053	0.144	-0.864 <sup>a</sup>	-0.029	0.111	-0.734 <sup>b</sup>
	(1.270)	(-2.773)	(-0.542)	(1.374)	(-0.371)	(-0.736)	(1.176)	(-2.837)	(1.156)	(1.593)	(-2.813)	(-0.874)	(1.814)	(-2.479)	(-0.769)	(1.452)	(-2.106)
RISK	0.053	0.520	0.163	-0.136	0.724 <sup>a</sup>	0.137	-0.005	0.521	38.3501 <sup>a</sup>	-0.307	0.530	0.031	0.472	0.517	0.466	0.323	0.501

	(0.043)	(1.819)	(0.283)	(-0.112)	(2.665)	(0.238)	(-0.005)	(1.795)	(3.023)	(-0.231)	(1.877)	(0.052)	(0.352)	(1.518)	(0.882)	(0.231)	(1.515)	(0.209)
DE	-0.002	0.001	-0.007	0.001	0.002	-0.008	-0.003	0.001	-3.251 <sup>a</sup>	-0.011	0.001	-0.008	0.004	0.001	-0.006	0.002	0.003	-0.009
	(-0.072)	(0.597)	(-1.247)	(0.019)	(0.095)	(-1.439)	(-0.169)	(0.657)	(-3.124)	(-0.593)	(0.487)	(-1.537)	(0.251)	(0.234)	(-1.513)	(0.174)	(1.610)	(-1.650)
LM Test	3.414 <sup>b</sup>	36.382 <sup>a</sup>	5.719 <sup>b</sup>	0.121	37.818 <sup>a</sup>	6.756 <sup>a</sup>	2.975 <sup>b</sup>	32.581 <sup>a</sup>	3.766	1.846	39.281 <sup>a</sup>	5.726 <sup>b</sup>	3.419	34.737 <sup>b</sup>	3.563	3.242	63.680 <sup>a</sup>	7.813 <sup>a</sup>
Adjusted R <sup>2</sup>	0.063	0.694	0.098	0.208	0.084	0.075	0.071	0.691	0.273	0.107	0.701	0.085	0.134	0.698	0.133	0.132	0.719	0.036
F-statistic	0.445	9.471 <sup>a</sup>	0.918	3.001 <sup>b</sup>	2.512 <sup>b</sup>	0.684	0.502	9.167 <sup>a</sup>	4.530 <sup>a</sup>	1.918	9.737 <sup>a</sup>	0.782	1.022	9.831 <sup>a</sup>	2.445 <sup>b</sup>	1.006	11.167 <sup>a</sup>	1.352
Hausman Test	4.452	16.07 <sup>a</sup>	2.142	N.A.	11.041	2.783	2.282	19.142 <sup>a</sup>	N.A.	N.A.	15.171 <sup>a</sup>	2.576	N.A.	18.594 <sup>a</sup>	N.A.	N.A.	13.604 <sup>a</sup>	2.482
Redundant Test	N.A.	9.446 <sup>a</sup>	N.A.	N.A.	N.A.	N.A.	N.A.	8.943 <sup>a</sup>	N.A.	N.A.	9.964 <sup>a</sup>	N.A.	N.A.	9.369 <sup>a</sup>	N.A.	N.A.	12.054 <sup>a</sup>	N.A.

**Note:** t-statistics are in parentheses. <sup>a</sup> indicates significance at 1% and <sup>b</sup> indicates significance at 5%.

**Source:** Compiled by researcher

**TABLE 9: REGRESSION OUTPUT OF OTHER AGRICULTURAL PRODUCTS FIRMS**

	CG <sub>1</sub> = BSIZE				CG <sub>2</sub> = BI			CG <sub>3</sub> = BMA			CG <sub>4</sub> = AGMA		CG <sub>5</sub> = RP_INC			CG <sub>6</sub> = RP_EXP		
Variables	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17	2007-09	2010-14	2015-17
CG <sub>i</sub>	0.728	-0.064	0.002	0.113	0.106	0.064	-0.023	-0.135	0.031	-0.052 <sup>b</sup>	-0.003	0.089	-0.065	-0.051	0.003	0.219	-0.116	-0.037
	(0.699)	(-0.451)	(0.015)	(0.0643)	(0.0611)	(0.436)	(-0.58)	(-1.61)	(0.228)	(-2.394)	(-0.254)	(1.239)	(-0.592)	(-0.784)	(0.054)	(1.763)	(-1.129)	(-0.676)
FSIZE	-0.077	-0.062 <sup>b</sup>	0.071	-0.041	-0.062 <sup>b</sup>	0.068	0.041	0.002	0.071	-0.038	-0.001	0.066	-0.033	-0.001	0.069	-0.025	-0.074 <sup>b</sup>	0.083 <sup>b</sup>
	(-1.888)	(-2.301)	(1.981)	(-0.893)	(-2.313)	(1.938)	(-0.87)	(0.127)	(2.023)	(-0.959)	(-0.036)	(1.890)	(-0.828)	(-0.003)	(1.948)	(-0.528)	(-2.561)	(2.091)
FAGE	0.078	0.098	-0.912 <sup>a</sup>	0.023	0.071	-0.929 <sup>a</sup>	0.029	0.084	-0.917 <sup>b</sup>	0.034	0.072	-0.944 <sup>a</sup>	0.041	0.066	-0.915 <sup>a</sup>	-0.029	0.086	-0.901 <sup>a</sup>
	(0.562)	(0.719)	(-2.847)	(0.131)	(0.546)	(-2.898)	(0.160)	(1.165)	(-2.87)	(0.223)	(1.001)	(-2.874)	(0.267)	(0.915)	(-2.812)	(-0.161)	(0.676)	(-2.835)
RISK	0.542 <sup>a</sup>	-0.1	-0.1	0.945	-0.1	-0.0	0.85	-0.16	-0.0	0.677	-0.1	-0.2	0.732	-0.1	-0.1	0.818	-0.2	-0.1

		76	03		81	93	1	7	94		49	18		49	03		06	08
	(2.7 24)	(- 0.8 91)	(- 0.1 32)	(0. 89 0)	(- 0.9 15)	(- 0.1 21)	(0. 7 66 )	(- 0.85 )	(- 0.1 2)	(0. 66 3)	(- 0.7 55)	(- 0.2 73)	(0. 59 2)	(- 0.7 59)	(- 0.1 32)	(0. 82 1)	(- 1.0 41)	(- 0.1 41)
DE	0.01 1	- 0.0 11	0.0 12	- 0.0 02	- 0.0 09	0.0 12	0. 00 1	- 0.00 7	0.0 12	- 0.0 01	- 0.0 06	0.0 11	- 0.0 05	- 0.0 05	0.0 12	- 0.0 02	- 0.0 11	0.0 11
	(0.4 29)	(- 0.6 85)	(1. 81 2)	(- 0.0 72)	(- 0.5 62)	(1. 867 )	(- 0. 03 )	(- 0.64 )	(1. 77 1)	(- 0.0 43)	(- 0.6 20)	(1. 641 )	(- 0.1 96)	(- 0.5 12)	(1. 84 5)	(- 0.0 79)	(- 0.6 31)	(1. 73 4)
LM Test	23.8 9 <sup>a</sup>	23. 316 a	7.3 09 <sup>a</sup>	35. 95 9 <sup>a</sup>	36. 23 <sup>a</sup>	9.5 04 <sup>a</sup>	36. 6 7 <sup>a</sup>	38.1 39 <sup>a</sup>	9.5 82 <sup>a</sup>	27. 83 3 <sup>a</sup>	37. 184 a	8.6 81 <sup>a</sup>	32. 48 9 <sup>a</sup>	36. 13 <sup>a</sup>	9.3 16 <sup>a</sup>	37. 64 <sup>a</sup>	36. 19 1 <sup>a</sup>	9.3 81 <sup>a</sup>
Adjust ed R <sup>2</sup>	0.07 2	0.5 54	0.6 47	0.0 46	0.5 55	0.6 49	0. 04 5	0.04 1	0.6 48	0.0 46	0.0 19	0.6 51	0.0 43	0.0 24	0.6 47	0.0 96	0.5 61	0.6 51
F- statisti c	1.85 3	6.2 21 <sup>a</sup>	5.5 56 <sup>a</sup>	0.4 84	6.2 41 <sup>a</sup>	5.5 92 <sup>a</sup>	0. 46 9	0.90 4	5.5 66 <sup>a</sup>	1.5 36	0.4 11	5.4 07 <sup>a</sup>	0.4 52	0.5 24	5.5 56 <sup>a</sup>	1.0 63	6.3 43 <sup>a</sup>	5.6 43 <sup>a</sup>
Hausm an Test	7.82 5	13. 232 b	21. 17 4 <sup>a</sup>	2.9 06	11. 44 7 <sup>b</sup>	19. 094 a	2. 42 2	10.5 13	18. 97 4 <sup>a</sup>	6.8 59	10. 767	17. 993 a	9.2 48	10. 94 3	18. 50 7 <sup>a</sup>	4.0 38	12. 01 4 <sup>b</sup>	19. 49 6 <sup>a</sup>
Redun dant Test	N.A.	4.8 29 <sup>a</sup>	5.3 35 <sup>a</sup>	N. A.	6.0 61 <sup>a</sup>	5.5 73 <sup>a</sup>	N. A.	N.A. .	N. A.	N. A.	N. A.	5.1 57 <sup>a</sup>	N. A.	N. A.	5.4 37 <sup>a</sup>	N. A.	6.1 28 <sup>a</sup>	5.6 15 <sup>a</sup>

**Note:** t-statistics are in parentheses.<sup>a</sup> indicates significance at 1% and <sup>b</sup> indicates significance at 5%.

**Source:** Compiled by researcher

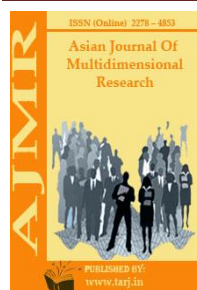
**TABLE 10: REGRESSION OUTPUT OF PAPER AND PAPER PRODUCTS FIRMS**

	CG <sub>1</sub> = BSIZE				CG <sub>2</sub> = BI			CG <sub>3</sub> = BMA			CG <sub>4</sub> = AGMA		CG <sub>5</sub> = RP_INC			CG <sub>6</sub> = RP_EXP		
Vari ables	200 7- 09	20 10 - 14	201 5- 17	20 07 - 09	2010 -14	201 5- 17	20 07 - 09	201 0-14	20 15- 17	20 07- 09	201 0- 14	201 5- 17	20 07- 09	20 10- 14	20 15- 17	20 07- 09	20 10- 14	20 15- 17
CG <sub>i</sub>	- 0.18 5	0.0 92	0.66 5	- 0.0 78	0.003	1.1 95	0. 01 4	0.00 1	0.7 44	- 0.0 11	- 0.0 02	- 0.3 93	- 0.5 62	- 0.0 47	0.3 05	0.2 54	0.0 56	0.2 50
	(- 1.72 7)	(1. 45 5)	(1.4 66)	(- 0.7 01 )	(0.05 1)	(1. 672 )	(0. 7 72 )	0.05 6	(0. 99 1)	(- 0.8 82)	(- 0.2 21)	(- 3.3 49)	(- 1.8 95)	(- 0.3 02)	(1. 53 7)	(0. 87 3)	(0. 48 8)	(3. 74 2)
FSIZ E	- 0.05 3	0.0 35	0.53 3	0.0 21	0.036 0	0.0 05	0. 05 2	0.03 8	0.5 14 <sup>a</sup>	- 0.0 56	0.0 38	0.4 91 <sup>a</sup>	0.0 44	0.0 34	0.5 41	0.0 17	0.0 34	0.5 36 <sup>a</sup>
	(- 1.42 8)	(1. 38 5)	(1.8 72)	(0. 44 4)	(1.42 7)	(0. 145 )	(- 1. 37 2)	1.46 6	(5. 33 9)	(- 1.4 66)	(1. 451 )	(5. 569 )	(0. 90 1)	(1. 28 3)	(1. 93 4)	(0. 35 8)	(1. 29 3)	(1. 93 3)
FAGE	0.032	0.064	3.46 3 <sup>a</sup>	-0.6 06 <sup>b</sup>	0.055	0.277 <sup>a</sup>	0.00 4	0.052	3.395	- 0.007	0.055	3.563	0.608 b	0.052	3.826 <sup>a</sup>	-0.557	0.051	3.446
	(0.214)	(0.48 8)	(3.091)	(- 2.043 )	(0.431)	(3.148 )	(- 0.028 )	0.391	(1.111 )	(- 0.058)	(0.41 6)	(1.273 )	(- 2.061)	(0.385 )	(2.939 )	(- 1.853)	(0.386 )	(2.879 )

RISK	-0.008	0.681	-0.277	-0.053	0.757	-0.518	0.031	0.758	-1.124	0.111	0.774	0.215	-0.013	0.772	-0.562	0.083	0.745	-0.426
	(-0.011)	(1.032)	(-0.672)	(-0.073)	(1.130)	(-0.866)	(0.042)	1.137	(-0.352)	(0.155)	(1.151)	(0.074)	(-0.019)	(1.133)	(-0.962)	(0.115)	(1.093)	(-0.719)
DE	-0.001	-0.001	0.001	0.005	-0.003	0.004 <sup>b</sup>	-0.002	-0.002	0.004	-0.002	-0.002	-0.006	-0.004	-0.007	0.001	-0.004	-0.008	0.001
	(-1.431)	(-0.018)	(0.567)	(0.251)	(-0.045)	(2.161)	(-1.338)	-0.032	(0.593)	(-1.578)	(-0.034)	(-0.092)	(-0.649)	(-0.092)	(0.695)	(-0.735)	(-0.103)	(0.651)
LM Test	90.438 <sup>a</sup>	281.97 <sup>a</sup>	5.739 <sup>b</sup>	86.79 <sup>a</sup>	261.45 <sup>a</sup>	2.421	89.606 <sup>a</sup>	284.58 <sup>a</sup>	5.272 <sup>b</sup>	90.546 <sup>a</sup>	283.55 <sup>a</sup>	7.231 <sup>a</sup>	79.172 <sup>a</sup>	27.4327 <sup>a</sup>	5.776 <sup>b</sup>	81.51 <sup>a</sup>	23.8079 <sup>a</sup>	5.605 <sup>b</sup>
Adjusted R <sup>2</sup>	0.007	0.009	0.503	0.970	0.024	0.037	0.027	0.025	0.508	0.029	0.025	0.587	0.973	0.024	0.505	0.971	0.024	0.502
F-statistic	1.015	1.346	3.643 <sup>a</sup>	85.53 <sup>a</sup>	0.869	1.671	0.557	0.904	3.701 <sup>a</sup>	0.584	0.912	4.707 <sup>a</sup>	95.105 <sup>a</sup>	0.821	3.661 <sup>a</sup>	90.727 <sup>a</sup>	0.552	3.633 <sup>a</sup>
Hausman Test	9.586	4.204	25.779 <sup>a</sup>	13.309 <sup>a</sup>	6.411	N.A.	9.899	2.305	27.977 <sup>a</sup>	9.617	2.503	25.642 <sup>a</sup>	16.509 <sup>a</sup>	4.154	26.418 <sup>a</sup>	14.167 <sup>b</sup>	8.458	26.177 <sup>a</sup>
Redundant Test	N.A.	N.A.	3.987 <sup>a</sup>	N.A.	N.A.	N.A.	N.A.	N.A.	4.089 <sup>a</sup>	N.A.	N.A.	4.359 <sup>a</sup>	76.852 <sup>a</sup>	N.A.	4.032 <sup>a</sup>	67.438 <sup>a</sup>	N.A.	4.011 <sup>a</sup>

**Note:** t-statistics are in parentheses. <sup>a</sup> indicates significance at 1% and <sup>b</sup> indicates significance at 5%.

**Source:** Compiled by researcher



## EMPLOYEE EMPOWERMENT - A STUDY OF INDIAN CORPORATE SECTOR

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### ABSTRACT

*The main idea behind this research paper was to assess self-perceived employee- empowerment level as found in sample of employees working in corporate sector in Delhi-NCR Region. Spreitzer (1995) scale was used to capture meaning, competence, impact and self-determination dimensions of empowerment. To collect data online questionnaire was created using Google drive. In total 107 employees from Delhi NCR region, employed at different level participated in the survey. All the respondents were given opportunity to rate their empowerment level on 5 point likert scale. To test the significance of tenure of employee on their empowerment level, F test was used. Mean score for employee empowerment is maximum for banking employees with long tenure i.e. 10 years and above whereas mean score for employee empowerment is minimum for employees with medium tenure i.e. 5-10 years. Statistical significant difference was found in employee empowerment mean score on the basis of length of service. An effort was also made to do the comparison of employee empowerment in the organization on the basis years served in their organizations. It is observed that there is statistically significant relationship between length of service and employee empowerment.*

**KEYWORDS:** Self-Determination, Self-Perceived, Opportunity, Respondents



## INTRODUCTION

Corporate sector these days are giving significant importance to Employee empowerment practices. Empowerment is a powerful tool with the organizations that can help in increasing employee productivity thereby improves the efficiency and effectiveness of the organization.

With empowered employees managers can easily follow principle of management by exception and can dedicate their time towards other significant task. Employee empowerment is used as strategies by companies today to face competition and to reduce labour turnover rate. Several studies reveal that Empowerment plays pivot role in increasing satisfaction level of employee and thereby improves their performance.

Empowerment is associated with control of one's own fortune in the organization and is also defined as the process of empowering individuals to think, to decide and take action, and control work independently. Given the competitive environment of today it will be difficult for the companies to face competition if its employees are not properly empowered.

Empowerment involves delegating control at lower level with a view to enhance ability to handle problems as they arise. Gandz (1990) assert that empowerment involves giving decision making authority to employees at lower level that traditionally was prerogative of top management only.

A study conducted by Menon (1995) reveals that enhanced job autonomy and enhanced clarity of the job leads to enhanced perceived control and enhanced empowerment that ultimately leads to enhanced motivation to work and reduced job stress and increased commitment towards organizational goals.

Study conducted by Smith (1997) reveals that unless employees are developing organization cannot develop and found that to empower it is necessary to encourage employee to open up with more power and to reveal their hidden potential. For empowerment to flourish it is necessary that employee have the feeling that they are valued by their employing organization

### Employee Empowerment- Theoretical Construct

The concept of empowerment is not new rather it existed in various forms viz. human relations theories, motivational and sensitivity needs and employee involvement schemes in modern management literature. Organizations are now operating in highly competitive and dynamic environment as reflected in ever developing global market, technological shift, quality challenge, shifting workforce and organizational changes such as business process restructuring. In recent years to face these challenges employee empowerment is getting more popularity and it has become buzzword among business arena.

Over thirty years ago Kenter (1977) propounded the concept of employee empowerment. Conger and Kanungo (1988) defined the empowerment as process of inculcating feeling of self-efficacy and self-control among the participants. There exists two distinct dimensions of employee empowerment one is situational perspective and another is psychological perspective (Conger and Kanungo, 1988; Bowen and Lawler, 1992; 1995; Thomas and Velthouse, 1990). The situational (relational or management practice) approach elucidates how power and authority is shared down the hierarchy line by those who are vested with power. (Conger and Kanungo, 1988; Bowen and Lawler, 1992; 1995).

The psychological perspective reflects internal cognitive state of enhance feeling of motivation and self-efficacy (Thomas and Velthouse, 1990). This view coincides with the view of Conger

and Kanungo (1988) who suggested psychological approach takes into account various factors that leads to enhanced feeling of intrinsic motivation.

Thomas and Vethouse (1990) extended Conger and Kanungo (1988) model and identified four components of psychological dimension of empowerment: impact, competence, meaningfulness and choice. Later on Spreitzer (1995) using Thomas and Velthouse (1990) and Bowen and Lawler (1992) proposed following four dimensions psychological empowerment as mentioned below:

- **Meaning** involves a matching between the demands and requirements of a work role and values and beliefs of employees.
- **Competence** (self-efficacy) is an individual's belief in his or her capacity to perform the job.
- **Self-determination** involves freedom in decisions relating to work procedures, speed of work, and the way resources and efforts are put to perform the job.
- **Impact** is degree to which an individual can influence strategic, administrative and operating outcomes at work.

Top management of any organization cannot achieve organizational goals on its own. Rather it needs to empower employee sufficiently so that employee at middle and lower level are motivated to work towards the achievement of organizational goals. Further Seven dimensions of empowerment were identified by Petter et al. (2002): power, decision making, information, autonomy, initiative, creativity, knowledge, skills and responsibility. Yang and Choi (2009) influenced from Petter et al. (2002) observed that there is an connexion between decision making and autonomy and suggested four dimensions; decision making, autonomy, responsibility, information and creativity.

## REVIEW OF LITERATURE

Caudron (1995) observed the preeminent way to empower team members is steadily and methodically forward responsibilities for self-management and decision making. And then provide employees with control of required resources needed to make improvements. Caudron (1995) clarified that reasons for failures of empowerment programs could be attributed to implementation in wrong way by HR people. Caudron (1995) explained that empowerment involves creating an empowering environment in which given defined goals to achieve, necessary information, training, feedback and lastly positive reinforcement.

With empowerment employees benefits by enhance motivation and increased confidence, organizations benefits by increased efficiency and effectiveness and customer benefits from empowered employees as their problem is resolved at one point of contact only (Sitterly, 1998).

Wyer and Mason (1999) suggested that empowering management practices are significant to the sustainable development of the growth oriented small business. Employees must choose to be empowered (Spreitzer, 1996). This choice needs them to consider themselves as having discretion and autonomy, and to feel connected to the organisation. As employees take a proactive initiative, it is their perceptions of work environment that makes them feel empowered. So management practices that promote an organisational climate which is full of trust, support, and encouragement, are more likely to assist in empowerment of employees (Philamon, 2003). Kemel (2010) studied employee empowerment and employee performance relationship. His findings revealed that when employees are empowered they exhibit positive performance

behaviour. Direct and positive effect of empowerment on employee performance was found (Kemel, 2010).

### **Objectives of the Study**

To analyze the level of Employee empowerment among Banking sector employees.

To study the difference between the length of service and Employee empowerment score.

### **Hypotheses of the Study**

On the basis of above objectives, the following null hypothesis (H0) was formulated:

- ◆ H01 – There is no significant difference in respondents Employee empowerment score and their length of service.

### **RESEARCH METHODOLOGY**

In the present study, Empowerment scale developed by Spreitzer (1995) has been used. The scale has 12 items, with three items for each of the four factors - meaning, self determination, competence, and impact. The respondents were asked to answer the self –perceived employee empowerment practices in the context of their organization as described in the questionnaire, using a five-point likert scale (1=strongly disagree; 2=disagree; 3=neutral; 4=Agree; 5=Strongly agree, if not always). Meaning dimension (MD) is measured by adding the scores of items 1,2, and 3. Competence dimension (CD) is measured by adding the scores of items 4,5, and 6. Self Determination (SD) is measured by adding the scores of items 7, 8, and 9. Impact dimension (ID) is measured by adding the scores of items 10, 11 and 12. The mean of the four factors was taken as the score for Employee Empowerment. The standardized Cronbach coefficient alpha for the instrument used in the study is 0.69.

### **Data Collection**

The purpose of this study was to assess self-perceived employee empowerment level in a sample of employees working in corporate sector in Delhi-NCR region. To collect data online questionnaire was created using Google drive. In total 107 respondents participated in the survey employed at different level in their respective organization participated in the survey. 75 male respondents and 32 female respondents participated in our survey. On the basis of length of service 48 respondents had tenure below 5 years, 28 had tenure 5-10 years and 16 respondents had tenure above 10 years. The method of sampling was based on non – probability convenience sampling.

### **LIMITATIONS OF THE STUDY**

The results of this study should be interpreted keeping in mind the limitations, primarily the small sample size. Also the study was limited to employees working in Delhi NCR region. Future studies may broaden the area of study for better results. To measure empowerment level the study considers only the self-perceived employee empowerment level, thus ignoring perspective from supervisor point of view. Future studies may give due consideration to the view point of supervisor. Another limitation is related with method of data collection as it may result in chance error or biasness.

### Statistical Analysis

Statistical analysis has been done using SPSS. Meaning dimension (MD) is measured by summation of the scores of items 1,2, and 3. Competence dimension (CD) is measured by summation of the scores of items 4,5, and 6. Self Determination (SD) is measured by summation of the scores of items 7, 8, and 9. Impact dimension (ID) is measured by summation of the scores of items 10, 11 and 12. The mean of the four factors was taken as the score for Employee Empowerment. The standardized Cronbach coefficient alpha for the instrument used in the study is 0.69.

The table 1 below shows the mean score, standard deviation and ranks of four employee empowerment components for the given sample. It shows that Competence dimension ranked the first position, followed by meaning dimension and self determination dimension whereas Impact dimension scored the lowest position. Competence dimension involves individual belief in his /her capability and it has been found to be at its highest in the context of banking sector employees.

**TABLE 1: DESCRIPTIVE STATISTICS OF EMPLOYEE EMPOWERMENT COMPONENTS**

Employee Empowerment Components	Mean Score	S.D.	Rank
MD	4.100	0.9726	2
CD	4.218	0.6525	1
SD	3.860	0.7123	3
ID	3.436	0.7883	4
EE	3.903	0.5688	

**H01 – There is no significant difference in respondent's Employee Empowerment score and their length of service.**

It can be observe from table 2 that significant differences exist across short, medium and long tenure groups because the probability- value in all cases is less than our significance level i.e. 5% except for ID. So, we reject the null hypothesis and accept the alternate hypothesis that there is significant difference in respondents' employee empowerment score and their length of service. From the table 3, it can be concluded that mean score for employee empowerment is maximum for employees with long tenure i.e. 10 years and above except for Impact dimension whereas overall mean score for employee empowerment is minimum for employees with medium tenure i.e. 5-10 years in comparison to employees with short tenure.

**TABLE 2: EMPLOYEE EMPOWERMENT BASED ON LENGTH OF SERVICE**

EmployeeEmpowerment Components	Below 5yrs	5-10 yrs	10 yrs and above	F-Values	Significance
MD	4.111	3.762	4.387	3.170	0.046
CD	3.944	4.286	4.581	10.859	0.000
SD	3.806	3.571	4.204	6.712	0.002
ID	3.382	3.524	3.441	0.283	0.754

EE	3.811	3.786	4.153	4.506	0.013
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## RESULTS & SUMMARY FINDINGS:

The aim of the study was measuring employee perceptions of level of empowerment experienced by them in the banking sector. Empirical analysis of the data reveals the following observations:

- CD is the most prominent employee empowerment component while ID has least score among all employee empowerment components.
- Comparison on the basis of time period served in current organization reveals there exists significant difference in respondents' employee empowerment score.
- Further analysis on the basis of number of years served in the organization reveals that employee empowerment score is maximum in long tenure as compared with medium and short tenure. However employees with short tenure had high empowerment score in comparison to employees with medium tenure.

## CONCLUSION AND RECOMMENDATIONS

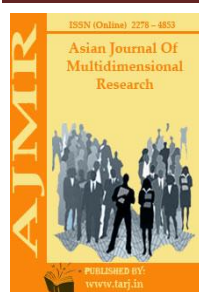
Employee empowerment will likely remain an important issue for banking sector as the competition continues to increase. Employee empowerment practices can be used as a tool to provide competitive edge to the organization. Freedom to take decisions related to the work roles of employees make them feel more committed to the organization. An effort was also made to do the comparison of employee empowerment in the organization on the basis years served in their organizations. It is observed that there is statistically significant relationship between length of service and employee empowerment. Also it's a matter of serious concern that employees with medium tenure feel less empowered as compared to employees with long tenure and short tenure. Efforts must be made to make employees with medium tenure more empowered by giving them due freedom to use resources and take decisions related to their work roles.

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## ROLE OF TECHNOLOGY IN INDIAN TOURISM SUPPLY CHAIN

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### ABSTRACT

*The association of computers, Internet and e-commerce has grasped the tourism industry to an indispensable extent. The tourism supply chain experience large investments in development of database, electronic media, publicity and web pages. Information and communication technology (ICT) brought sea change in the tourism industry, all over the world. The implications brought the inherent challenges and opportunities for Indian tourism. The use of modern technologies gradually became the competitive advantage and subsequently the strategic option. This paper studies various technology applications in the tourism industry. The study explores technology implications in decision making of various stakeholders in tourism industry at various stages of travel. The discussions in the paper include the preference aspects of tourists driven by the novelty and familiarity dimensions through travel services, destination choices, and the tourism market structure in this paper. The study relies on the website based information as a secondary source and analyzes thereof the ICT penetration in tourism. Result areas indicate the means of communications, the electronic database, the computer applications and information systems meeting the seasonal demands and preferences towards the destinations. The paper also includes some national and international comparisons to lay the directions of diffusion for implementing various technologies in tourism. Overall, the discussions refer to Indian tourism industry, where the authors try to do a technology forecasting and explore the future dimensions of technologies in tourism from the current literature review and research analysis.*

**KEYWORDS:** India, Service, Supply Chain, Technology, Tourism.



## INTRODUCTION

The taste of tourism is no more constrained to the test of awareness and affordability. Different forms of tourism evolved and transformed the scenario from an expensive and luxury affair to a very common hobby. The association of computers, Internet and e-commerce made it easy to know about new places, their habitats, the access and almost all relevant information. The planned and organized way of tourism started giving controlled results leading to such an extent that the ICT became indispensable for tourism industry.

Tourism industry connects to large and dispersed stakeholders. Retaining the links in tact rather satisfying and benefiting all has become possible with the advent of newer applications of technologies. A huge, but economic investment into tourism technologies makes it sustainable through the development of database, electronic media, publicity and web pages.

ICT brought a sea change in the tourism industry all over the world. The nature of the industry is all about facilitating pleasant movements, safe and fair exposure of experience. The increasing trend of smooth, accurate and efficient communication; higher degree of connectivity; availability of relevant and reliable information and its ease of access together act as the sources of growth and success for the tourism industry. The indirect benefits come from the inherent natural resources, environment, traditional customs and cultural values of India by attracting the international and domestic tourists. Though India entered late into the tourism market, the growth of industry realizes the direct contribution from the increased tourists' arrival. The major players to provide tourism products and services are the hotels, transport, travel agencies, tourism and culture departments of state and central governments. India has a huge scope of eco-tourism, facility tourism, ethnic tourism, business tourism, adventure tourism, health tourism, lakes, sea-beaches, wildlife sanctuaries, old-civilizations, historical monuments and pilgrims. Tourism business exploits this scope in India (Annual Activities Report – 2015-16; WTTC, 2016). Every millions of rupees invested in tourism sector create around 89 jobs; as against 45 jobs in agriculture; 13 jobs in manufacturing. The ratio of indirect to direct jobs in tourism sector is approximately 1:3. There is a multiplier effect in creation of indirect jobs due to the spread of the industry. The direct benefit goes to the product and service providers of local economy and the indirect benefits to many due to both forward and backward integration of the hospitality sector with other sectors. Tourism industry ranks three, next to agriculture and manufacturing in Indian in providing employment. India ranks as the seventh largest tourism economy (Annual Activities Report – 2016-17). Indian tourism contributes to GDP by 6.9% (direct), 6.7% (total) growth (WTTC, 2017). It shows the tourism potential for the growth of the economy and then creating the need to ponder over the following:

- India needs the formulation and implementation of more friendly policies in tourism
- India needs more international airports
- Provision for more seats for travel, tourism business in national carriers
- Renovation of existing airports for passenger-friendliness and tourist information
- Producing more industry-ready human resource for the tourism sector
- States, rich in forests, wildlife need to exploit scientifically for the benefit of tourism
- Infrastructure development in tourism industry

- Developing national/ international networks to connect places of tourism interest

Michael C., James, M. and Mehdi, (2018). What AI can and can't do (yet) for your business. McKinsey Quarterly, January 2018, Available at: <https://operations-extranet.mckinsey.com/article/> [accessed on 11 April 2018].

The implications have the inherent challenges and opportunities for Indian tourism business to draw tourists-friendly policies, infrastructure and technologies. Technology plays a dominant role on developing and providing a platform for business operations. It connects various stakeholders with varying roles, applications and usage. It helps in developing, launching a tourism product and related services making it available to the travelers, duly promoted to acquire the market share too. It handles both short and long-term demands with a dynamic and appropriate allocation of resources. Finally, technology helps the business to do quick analysis and draw the inference to change, continue or diversify. There is a greater need of the hour for the industry to operate strategically by identification, development and promotion of tourism spots with due care for culture, communications, information etc. High priority goes to development and promotion of tourism in India by using technology enabled services for strategic operations and decisions to remain competitive and sustainable.

This paper studies and explores the extent to which technology applications address the concerns of all stakeholders of the supply chain in tourism. Different links of the supply chain has different needs with various types of preferences by novelty and familiarity dimensions through travel services, destination choices, and the tourism market structures. The study relies purely on the information available through authentic literatures and publicly declared websites. The analyses of the websites examines the intensity of ICT in tourism by indicating the means of communications, the type of database, computer applications and information systems to meet the seasonality aspect of demand and preference aspect of the destinations. The paper finds some directions of diffusion and implementation of technologies through national and international comparisons in tourism. Majority of the discussions relate to the Indian tourism industry, whereas, an attempt is done to forecast the future scope of technology in tourism.

## SCOPE FOR GAINING COMPETITIVE ADVANTAGE

Competitive advantage provides a strategic dimension to a business by virtue of which it creates a competency lead in the industry. Industry, in its operational context, used to have multiple strategic options to adopt in single or in combination. Current study focuses on the combined applications of ICT and internet technologies in the tourism supply chain and marketing of technology-aided services to the travelers. In a recent McKinsey article (Michael et al., 2018) it is discussed that an emerging technology like 'artificial intelligence (AI)' is absorbed most in telecom sector and least in travel and tourism sector worldwide, indicating a scope in tourism.

The Government of India (GoI) took many technology-based initiatives like – launching of international advertisement campaign in television channels of CNN, BBC, Discovery, Euro News, CNBC, Travel Channel, CBS (USA), RMC (France), Google; and opening new social media accounts on Periscope, Vimeo, Pinterest and LinkedIn, in addition to the existing accounts on Google+, YouTube, Facebook, Instagram and Twitter. The ministry of tourism also sets a paperless web-based public delivery system for tourism operators and service providers. GoI started E-payment gateways for approvals of travel and trade services. The ministry of tourism provided pre-loaded sim cards to foreign tourists arriving in India on e-Visa for 24x7hrs connectivity and toll free help lines for any assistance and guidance (Annual Report, 2016-17).

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## GOVERNMENT INITIATIVES IN INDIAN TOURISM INDUSTRY

According to *Tourism & Hospitality* (IBEF, 2017), India ranked 3rd among 184 countries in terms of travel and tourism's total contribution to GDP in 2016. GoI took some technological initiatives to tap the opportunities while addressing the issues of the tourism sector. The channel players like *Thomas Cook*, *Yatra.com*, *cleartrip.com*, and *makemytrip.com* adopted web-portals and mobile apps for sales and services often providing a comprehensive basket of offerings that include outbound and inbound travel for leisure and business trips, hotels and car booking, holiday packages within India or abroad in the tourism supply chain.

The ministry of tourism developed the marketing strategy of one-stop-solution and multiple-channels branding with campaigns like *Incredible India*, *Athiti Devo Bhava*, and releasing fresh visa (i.e. M- visa for medical tourism) in India. As a result, in 2016, the E-visa (E-business visa and E-medical visa) regime drew more foreign tourists from 161 countries. The Ministry of Tourism, in consultation with state/UT administrations, has proposed to employ tourist police at prominent tourist spots. A National Tourism Policy came up in 1982, subsequently bringing amendments in 2002, 2005 and 2015 to promote tourism. During 1990 to 2000, various states in India realized the importance and declared tourism as an industry. The revised policy in 2002 focused on tourism infrastructure, online travel portals, and low-cost carrier airlines. From 2005 onwards, GoI started undertaking various marketing initiatives to attract tourists by opening tourist offices abroad. Based on specific themes, government had identified five circuits that includes Krishna Circuit, Buddhist Circuit, Himalayan Circuit, North East Circuit and Coastal Circuit under the scheme of *Swadesh Darshan* in 2015. The diverse portfolio of niche tourism products – cruises, adventure, medical, wellness, sports, MICE, ecotourism, film, rural and religious tourism recorded a growth in foreign tourist arrivals in 2015 by 8.1% over the previous year; and similarly, 10.7% in 2016 (Annual Report, 2016-17).

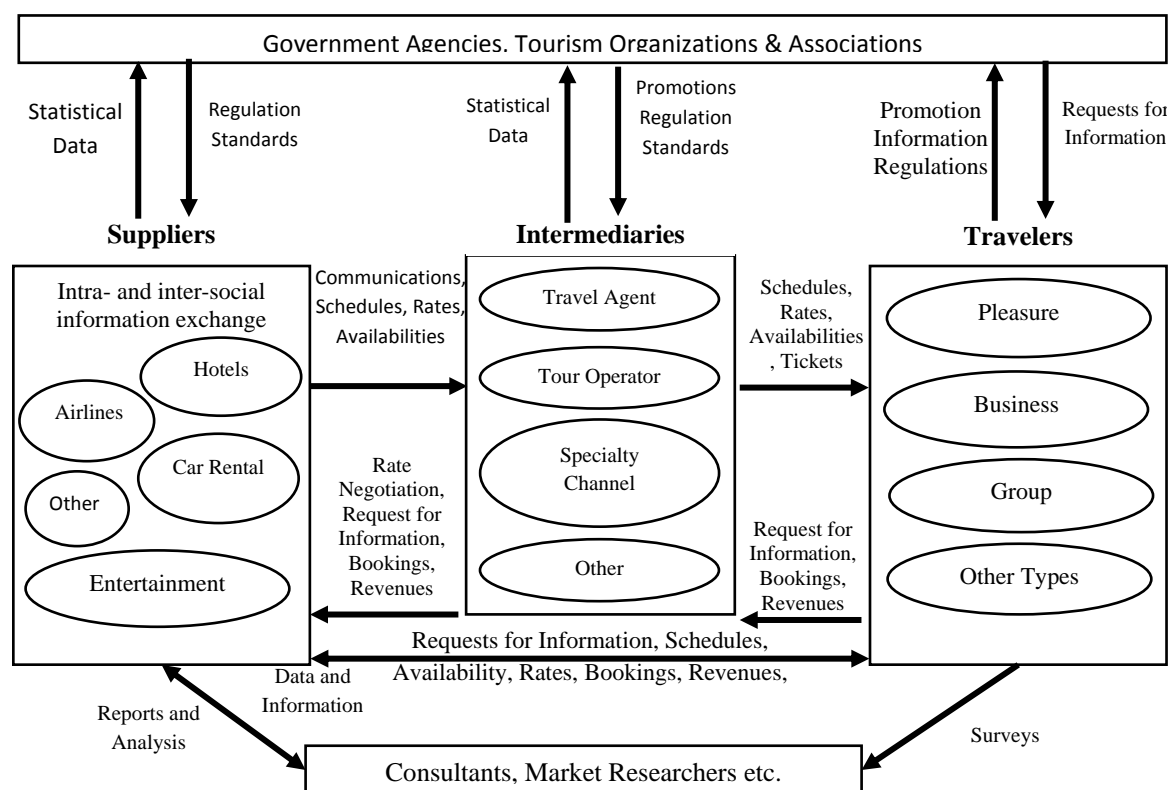
Technology of the tourism sector produce more informed customers and provide them a high bargaining power at low switching costs towards various products and services. After evolution of e-commerce, Indian tourism sector is gradually moving from an unorganized to an organized state. Over 70 per cent of air tickets are now being booked online in the country.

## TECHNOLOGY STRATEGY FOR COMPETITIVE ADVANTAGE

Technology is as an imperative resource for most of the business value chains (Porter, 1985). ICT enabled web-technologies build strategic strength for the tourism industry by supporting every stage of its supply chain. As tourism businesses link by communications, transportations, information and internet services, it optimizes cost, quality, flexibility and reliability. The interrelationship of tourism departments examines carefully the new technologies for various applications and platforms. Thus, it is evident that the change agents of the tourism sector bring higher competitiveness by using appropriate technologies.

The adapted form (Figure 1) of the Sheldon's model (Sheldon, 1997) helps in visualizing the information flow in the tourism network of the industry. The players of tourism industry set their business objectives using the accessible data from various government departments and research reports. The service providers for transportation, accommodation, food, pleasure and entertainment represent the suppliers of the industry. The intermediaries comprises of tour operators, travel agents, channel partners; and the travelers include individuals, groups and special tourists. There is a great need of information exchange between the stakeholders related to ticketing, booking, reservation, schedule, rate negotiation, confirmation. Secured technologies

and proper channels or platforms ensure the availability, accessibility, accuracy, timeliness, and reliability of the above information in the industry.



**Figure 1: Information Flow in the Tourism Industry**

Source: Adapted from (Sheldon, 1997)

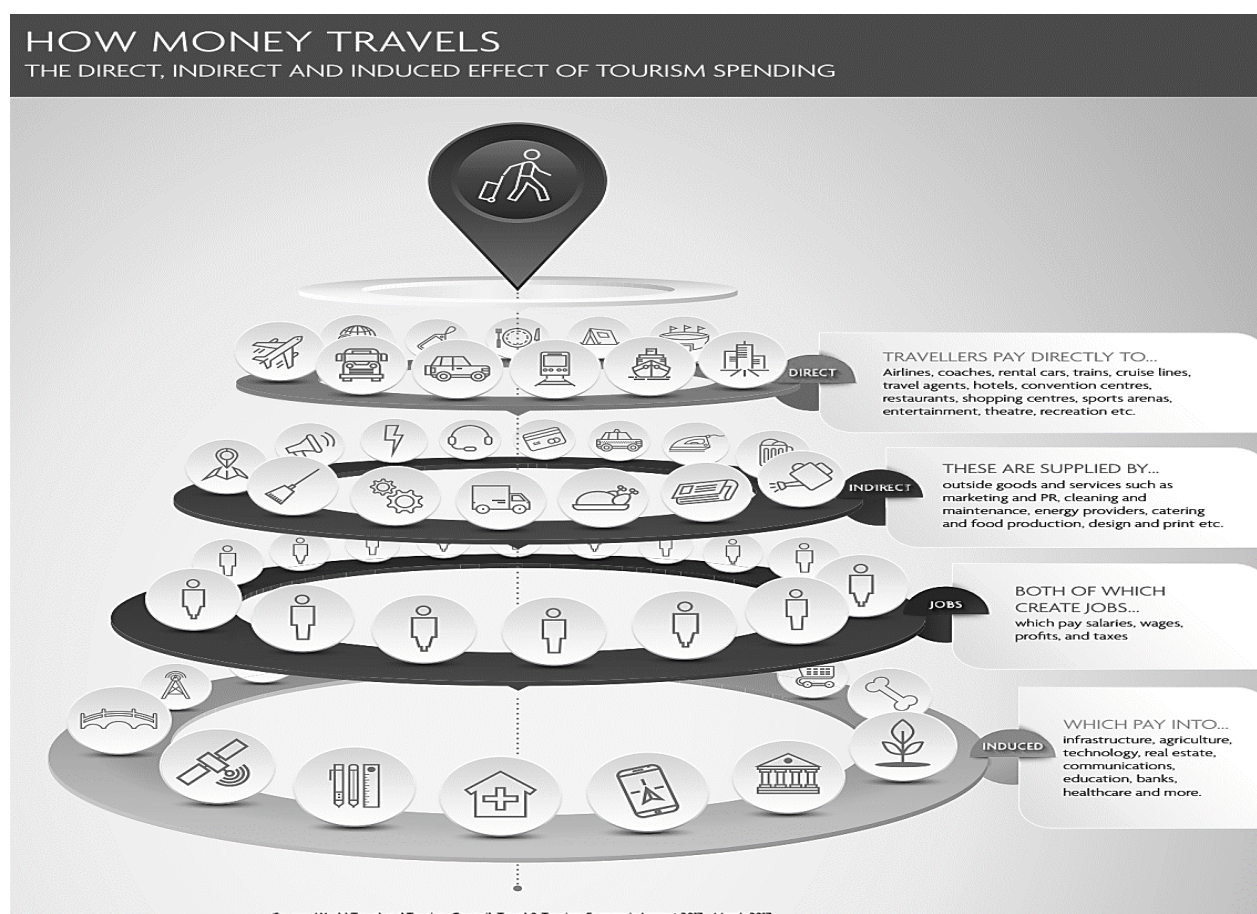
## ANALYSIS OF INDIAN TOURISM BUSINESS

The growing business over internet demanded the tourism suppliers to invest in e-commerce. The technology demand assessment indicated the need for a valid measurement tool in tourism industry (Lee and Crompton, 1992; Jianget al., 2000) like a novelty-seeking measurement scale. International Tourism Role (ITR) Scale (Mo, 1991; Jiang, 1995) is another checklist developed for measuring internet applications. As tourism business started hosting webpages since 1990s (Slevin, 2000), their integration with computerized and electronic database management systems were found relevant. The degree of adoption and exploitation of technology-aided platforms became the main source of analysis in the current study. The authors of this article conducted a website analysis of the online information. The category of tourists and tour frequency has relevance with communication, transportation, information, electronic database and internet technologies. The high novelty seeking and familiarity performance for various destinations earn different ratings in the analysis. A website appeals to a wide variety of tourists and segments. Sudden influx of customers may bring over-booking, environmental degradation, insufficient supplier and related challenges which may create inconvenience to suppliers, intermediaries as well as the travelers, which happens with a physical supply chain too. Rather there is a fair chance of resolving the issues faster on a web-enabled scenario.



The analysis in the current study refers to some of the states as benchmark such as Tamil Nadu, Maharashtra, Uttar Pradesh that lead in tourism earning and attraction. Here the special attention goes to their use of technologies and the related benefits. The authors developed an analytic framework by comparing 20-25 popular websites. This paper studies the secondary data furnished by different agencies and departments of tourism industry operating for the whole country and for different states. The chief sources are the Activities Report, 20016-17; WTTC Impact Report, 2017; IBEF Report for Tourism & Hospitality, 2017; Research Papers; Websites and White Papers.

Though the scenario has improved, still a flight to India from UK or US is costlier than a flight to Thailand, Indonesia or China even after the introduction of low-cost carrier airline operations. Till 1960s, Taj Mahal and golden triangle of Delhi-Agra-Jaipur remained the preferred destination for western tourists. Until the early 2000s, the Indian regime towards tourism was not very organized as compared to the neighboring countries like Thailand, China and Singapore. But, subsequently it improved and in 2003, India's tourist inflow jumped 15% and foreign exchange earnings through tourist arrivals surged to 20% from the previous year's figure (Neelakantan, 2004). India was among the top ten countries in the British edition of Conde Nast Traveler's annual Readers' Travel Awards 2003. The magazine's readers preferred India to Singapore, Thailand, and Malaysia in Asia and even Greece and Switzerland of the west due to the travel facilities and services.



**Figure 2: Supply Chain of Tourism – Flow of Products, Services and Money**  
Source: World Travel and Tourism Council: Travel & Tourism Economic Impact 2017.

Figure 2(WTTC (2017) shows how the products, services and money flows in the supply chain facilities of the tourism industry. A large numbers of players having differing degrees of efficiencies and operating procedures are associated with this supply chain. The challenge lies there in optimally collaborating and synchronizing the total efforts of the supply chain to enjoy the surplus through direct, indirect, induced and other forms of earnings. ICT and web technologies with their integrating and collaborative features, exhibit promising hopes to harness all the efforts in mobilizing maximum surplus while passing the respective benefits to all the stakeholders. As example, over 70 per cent of air tickets are now being booked online in the country (Jiang, 1995); almost all other tourism business operations are going web-enabled to the possible extent. It is happening more and more in true sense in India as the country is going ahead with a digital wave.

### Technological Innovations in Tourism

Innovations triggered in tourism business with the evolution of new business models for the suppliers and tourists using Internet. Most of these models are developed by profiling with the demography (Walle, 1996). The incorporation of supply and demand into one model has few precedents within tourism studies and even less in the technology and innovation literature. Klein and Sorra(1996) evaluated models by examining innovation implementation and found differing substantially from those focused on supplier industries (source-based models). However, researching both supply and demand of various players in the tourism industry has become more prevalent (Goeldner et al., 2000), in the absence of a widely accepted holistic model adopting the concurrent approach and enabling a real-time visibility. Some of the early uses of Internet in tourism sector are shown below (Table 1).

**TABLE 1: LIST OF INTERNET USES FOR TOURISM SUPPLIERS**

Sl. No.	Uses and/or Applications
1	Chartrooms and discussion groups, which provide online correspondence between parties, interested in a particular topic. Advertisers can post listing in related groups, or set up their group.
2	File transfer and software distribution (FTD) allows users to download file and software for evaluating.
3	E-mail provides instant communication for customer inquiries, feedback and technical support.
4	World Wide Web allows users to view, save and print product information.
5	Hyperlinks will link users to a related websites.

Source: Tourism Marketing & Computer Reservation Systems in the Pacific (Milne, 1996)

ICT applications spurred the tourism industry all over the world with no exception to Indian tourism business. Appropriate technologies were successfully absorbed and realized the benefits in tourism industry like other sectors. Technologies push and pull influenced the tourism supply chain. Postmodernists emphasize the media and communication to current day society (Kumar, 1997), the electronic media, information or internet technology for communication and transportation. Suppliers of tourism use the media and reach their customers faster and closer. Images, symbols and communications are emphasized for sound information exchange (Kitchin and Tate, 2000). Tourism industry started gaining competitiveness by dissolving boundaries of



market and increasingly segmenting into ‘niche markets’. The tourism suppliers adopted ICT and web-enabled technologies due to ease of operation and the scope for managing agility in spite of an unsure market. Working through internet became an integral part of tourism enterprises. Tourism itself contributes to an ever-changing dynamic relationship between people and places, and the internet is a constantly evolving technology employed within this realm. Suppliers are receiving more information via the internet, indirectly engaging more computer-trained people to furnish higher comfort levels, increased usage, highly informative web pages. The threads vital to this successful harnessing of technology are – *first*, the demand side, the World Wide Web providing inexpensive, high quality information about travel, destination and tour product alternatives; *second*, the supply side, using advanced information systems, reducing transactions costs, and significantly changing the dynamics of competition. A strategic fit is developed and established between tourism and information technology.

### Parameters of the Study

The industry portrays the network of suppliers where ‘tourism’ is defined as a ‘confidence good’ because product choice is generally made prior to its consumption, resembling what (Shapiro and Varian, 1999) refer to as an ‘experience good’. Thus, geographical distance between decision point and consumption period can be reduced, if not eliminated by using effective information systems for travelers. In addition, bundling of services e.g., air travel, accommodation, ground transportation, in a tour package is dependent on inter-organizational information flows. The core functions revolve around information aggregation, matching buyers and sellers, and transaction facilitation. Supplier use Internet to highlight their objectives and project the determinants of success in different forms (Table 2 and Table 3).

**TABLE 2: STAGES OF TRAVEL AND THE RELATED INFORMATION**

Different Stages of Travel	Important Travel Related Information
When you have no intention to take a trip. When you are pre-planning for a trip. When you are making final travel plan. When you are on a trip.	General information about a place. Accommodation information. Attraction information. Transportation information. Events. Cultural information. Information about other related services. Categories/ types of travel.

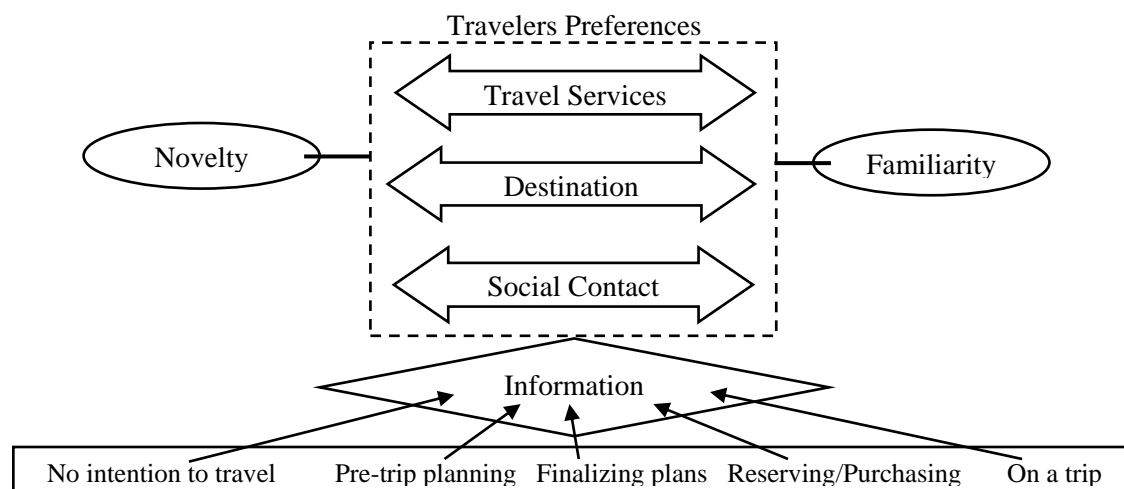
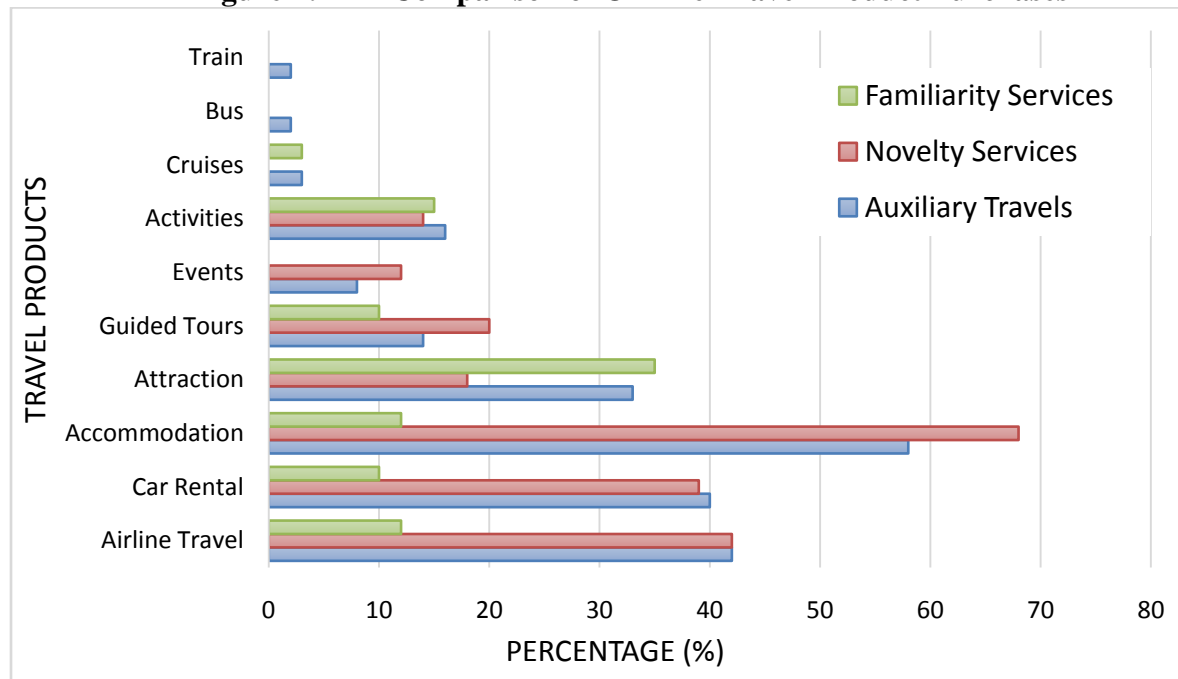
**TABLE 3: SUPPLIER’S INTERNET OBJECTIVES/SUCCESS DETERMINANTS**

Supplier Type	Objectives		Success Determinants				
	Unsure	As an Information Source	Receive Bookings On-line	Number of hits	Get phone calls	E-mail load is reduced	Unsure
Accommodation	17		12	2	2		1
Transportation	2		2				
General Information	4	1		4		1	
Events	3			3			

Cultural	1			1			
Attractions	2			2			
<b>Total</b>	29	1	14	12	2	1	1

The study focuses on the use of technology-enabled practices in tourism. Test-beds are chosen on computer-internet users per capita and primary destinations for international travels. In terms of a single destination, multi-nation destinations or circular trips, international visitors during summer and winter are classified. Tourist places like lakes, resorts, beaches and parks as destination has listed package and itineraries for domestic and foreign tourists. Primarily the websites include all local business information and visitor information. Figure 2 and 3 shows the percentage of IT inclusion in various travel products of familiarity, novelty or auxiliary type.

**Figure 2: ITR Comparison of On-line Travel Product Purchases**



**Figure 3: Conceptual Framework**

Among seventy different information, eleven were found repeating the features in the websites under analysis. However, the maximum permissible frequency is twenty five. Eleven of them are found to be the key information, their occurrence being above 35% of the range, are listed below.

**TABLE 4: INFORMATIONAL LOADING OF WEBSITES**

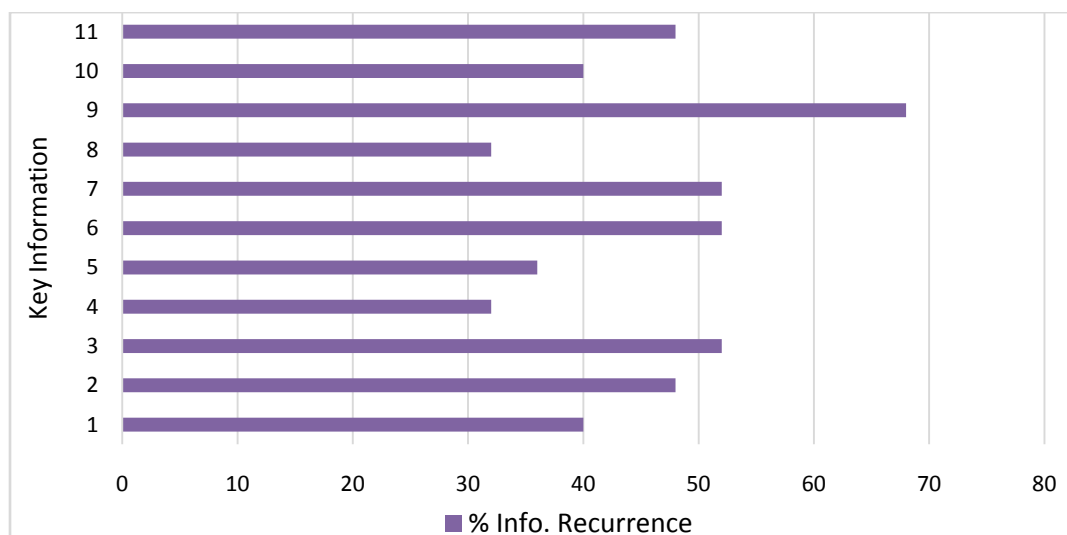
Websites	No. of travel information (of total 70 nos.)	Information loading (% of total)
www.prd.kerala.gov.in	23	32.86
www.makemytrip.com	4	05.71
www.aptourism.com	23	32.86
www.asiaexperience.com	8	11.42
www.journeymart.com	32	45.71
www.tourismindia.com	15	21.43
www.ksrindia.com	14	20.00
www.tourismindia.com/Goa	14	20.00
www.trainenquiry.com	7	10.00
www.indiatravelogue.com	17	24.28
www.sunshineindiatravelers.com	11	15.71
www.sharaglobal.in	7	10.00
www.karnataka.com	10	14.29
www.holidaymakers.in	12	17.14
www.keralatourism.org	11	15.71
www.orissatourism.com	19	27.14
www.northindiatours.co.in	20	28.58
www.sandpebblestours.com	11	15.71
www.bookmytrip.in	11	15.71
www.travelmasti.com	10	14.29
www.ekm.kerala.gov.in	7	10.00
www.southgoa.nic.in/tourism.htm	6	08.57
www.indiaholidaystours.com	14	20.00
www.applauseindia.com	9	12.86
www.yatra.com	16	22.86

The websites are populated with some key recurring information. Their frequency and density are clearly visible in the summary of analysis given in Table 5 and Figure 5.

**TABLE 5: KEY INFORMATION APPEARING IN MOST WEBSITES**

Sl. No.	Key Information	No. of Appearance/ Occurrences (of total 25 nos.)	Information Recurrence (% of total)
1	About culture, heritage and social life	10	40
2	About temples, churches, mosques, and other pilgrims of spiritual interest	12	48
3	Sea beaches	13	52
4	About hills, valleys, resorts, and hill-stations	8	32
5	About the fair and festivals	9	36
6	About various tour packages	13	52

7	About hotels, accommodation, guesthouse etc.	13	52
8	About booking, reserving and ticketing	8	32
9	About the contact address and persons	17	68
10	About travel information	10	40
11	About the wildlife sanctuary	12	48



**Figure 5: Percentage Information Recurrence**

### *Data Analysis and Interpretation*

This is a descriptive analysis of the websites hosted by various tourism agencies and departments of state and central governments. Twenty-five such popular sites are undertaken for the study of seventy features of tourism. From this analysis, it can be concluded about the degree of satisfaction generated in the tourism industry with the corresponding level of absorption of technologies like communication, transportation, computerization, information and electronic services. It is assumed here that the high-ranked or awarded agency/departments of tourism industry use above technologies to a large and fuller extent. Setting them as the benchmark, others are analyzed comparatively. A content analysis of these internet websites were performed to determine what resources were available on-line for potential and actual tourists. Standard questions were posed in the checklist for different types of service providers taking into account their specialties and expertise. Based on the competitiveness ranking, they are gauged against the use of technologies. A heterogeneous sampling of response is done from various websites to avoid any bias. Internet search elicited many more suppliers than were later incorporated in studies but, as the objective was to examine the supply and use of data and particular information by tourists compared for primary activities of the research sample. The target market, their on-line/ off-line features, stage-wise tourism services acts as economic rider and business revenue generator.

From the website analysis, it is seen that <http://journeymart.com> contain 32 vital travel information (45.71%); whereas [www.prd.kerala.gov.in](http://www.prd.kerala.gov.in) and [www.aptourism.gov.in](http://www.aptourism.gov.in) contain 23 vital information (32.86%) each. Also the website [www.northindiatours.org](http://www.northindiatours.org) contains 20 vital

travel information (28.85%). By seeing the % of information loading, the above websites can be put in the higher order of ranks. From the information analysis, it is seen that the information about the contact addresses and persons appears 17 times out of 25 (68%), whereas the information about sea beaches, tour packages, hotel accommodation appear 13 times each (52%). Also, the information about the wildlife sanctuary appears 12 times (48%). A matrix (Table 6) of four popular websites and five important travel information, as absorbed in the secondary survey of websites.

**TABLE 6: MATRIX OF WEBSITES VS. INFORMATION**

www.journeymart.com	X (8)	X (16)	-- (8)	X (8)	X (12)
www.keralatourism.org	-- (2)	X (4)	-- (2)	-- (2)	-- (3)
www.aptourism.gov.in	X (10)	<b>X (20)</b>	X (10)	X (10)	X (15)
www.northindiatours.co.in	-- (6)	X (12)	X (6)	-- (6)	X (9)

This matrix indicates www.aptourism.gov.in containing all information, whereas www.journeymart.com contains 80% (4 out of 5) important information. Similarly, the matrix indicates the information on beaches and wildlife 4 times (100%) and 3 times (75%) out of 4 popular websites, evaluating each position (by position value of information cell multiplied by the position value of website cell), found www.aptourism.gov.in and www.journeymart.com are in 1<sup>st</sup> and 2<sup>nd</sup> ranks of competitiveness for travel related information services.

*Role of Technology towards the Travel-Information* is interpreted from website analysis and mentioned in the following list. The technological back-ups are discussed for information on:

- (i) Location/Geography/Flora and Fauna/ Climate/ nearest city or market/ nearby state and countries/ local games and sports.
- (ii) Historical/ Travel history/ Forest/Places/Other importance.
- (iii) Religion/ Temple/ Church/Mosque/ Pilgrims/Spirituality/Mythological importance.
- (iv) Culture/Heritage/ Social life/ Local hospitality/Local dance and music/Fairs and festivals/ Arts and Crafts/ Cuisine.
- (v) River/Lake/Backwater/Waterfall/Hotspring/Desert/Sea beach.
- (vi) Hills/ Mountains/ Valleys/ Adventure/Mountaineering/ Trekking/ Climbing/ Resorts.
- (vii) Local/ Other language.
- (viii) Tour package/Holiday package/Honeymoon package/Theme tour/Tour Plan/Itinerary/ Eco-tourism/Health tourism/ Sight Seeing/ Leisure.
- (ix) Travel information/ Flight and Train time/ Photo gallery/ News and Events/ Destination explore/ Website/Map/ Publicity/ Articles and Archives.
- (x) Hotel Accommodation/Guest house/YatriNivas.
- (xi) Business scope/ Special offer/ booking and ticketing/ shopping/ tourism attraction/ advertisement/ partnership and promotion.

- (xii) Travel services/ about service provider/ contact/ on-line help 24 hrs/ Opinion poll/ feedback/ Travel guidance and advices/ car rental/ city guide/ passport and visa/ currency exchange on-line marketing/ supporting links.
- (xiii) Museum.
- (xiv) Wildlife Sanctuary
- (xv) Event management/ entertainment

The responses were tabulated using a checklist (Table 7) of keywords compiled from pre-test results. The websites are randomly chosen for gaining some insights to the role of tourism supplier's.

**TABLE 7: CHECKLIST-1**

**Checklist-1**

1. Is there the evidence of technologies used in the tourism industry?
2. Is there a demand/need of technologies for the tourism industry?
3. Can the existing technologies help the tourism industry?
4. Do we need to improve the technologies used in tourism industry?
5. Do we need to improve the application/ utility of technologies available in the tourism industry?
6. Is there the trace of using internet in tourism?
7. Is there easy access to the technological means?
8. Are the technological services up to mark?

While trying to address the questions in the above checklist it is clear from the websites that around 50% of the service providers, tour operators of the tourism industry support their business with technological implications. The common areas of technologically enabled tourism are related to: GIS, Location, Climate, Tour/Holiday package, Flight and Train Times, Accommodation, booking and ticketing, travel information, Opinion poll, Feedback, Destination explore, City guide map, Passport and Visa, Supporting links, Publication of articles and archives, on-line marketing etc. and most of other answers are positive. Hence, it is evident that there is a greater need of technology in the industry that addresses the expectations of tourists.

The opportunities and scope also accompanies with some challenging pressure for the tourism business in India, which are as follows:

- Limited marketing and financial support for tourism overseas.
- Civil aviation controls, aviation policy, administration of airports, controls in the visa regime, taxation and allocation of fund for investment in tourism.
- Gulf war, Bombay bomb blasts, Plague Scare, Kargil war, Tsunami, Earthquakes, Cyclones, Religious conflicts, Communal riots negate the flow of tourists.
- Roadways, Railways, Waterways and Air-routes are yet to have connections between the tourist destinations.



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## CONCLUSION

This paper is based on the concept of absorbing IT, electronics, computer, communication and internet technologies in tourism. The absorption is prominent for tourism suppliers, travel intermediaries and tourists. A common feature that received emphasis throughout the paper is the role of the internet as an information source, a marketing tool and as a means of making transactions. Suppliers exhibit the increasing adoption of internet in their businesses as a marketing tool, information, checkpoint, reservation, booking and performing monetary transactions. Some suppliers are found incorporating instructions on their webpages for tourists and virtually for everyone in the tourism industry for an overall improved scene of business.

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## NATIONAL SERVICE SCHEME IN HEIS AND INCLUSION OF YOGA & MEDITATION

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### ABSTRACT:

*'NOT ME BUT YOU' is the motto of NSS. This expresses the essence of democratic living and upholds the need for selfless service and appreciation of the other man's point of view and also to show consideration for fellow human beings. The main objective of the national Service Scheme in Higher Educational institutions(HEIs) are: understand the community in which they work, Understand themselves in relation to their community, indentify the needs and problems in the community in the solution of which they can be involved, apply their education in finding practical solutions to individual and community problems, develop competence required for group living and sharing responsibilities, gain skills in mobilizing community participation, Acquire leadership qualities and democratic attitude, develop capacity to meet emergencies and natural disasters, **practice of Yoga and meditation for national integration** Special thanks to the Ministry of Youth Affairs & Sports, Govt. of India, for conducting such programmes by giving financial assistance to the HEIs. Thanks to University Grants Commission as well as other state governments and concerned Universities and colleges providing opportunity to the youths to serve the nation through National Service Scheme (N.S.S.).*

**KEYWORDS:** *Yoga and Meditation, N.S.S., Heis, National Integration Etc.*

## INTRODUCTION:

The National Service Scheme (NSS) was started in 1969-70 with a view to promoting social consciousness and a sense of responsibility as well as a sense of discipline and dignity of labour among the School, College and University students <sup>1</sup>. The scheme utilizes the leisure time of students for two years of their studies in various items of social service which not only help the community but also provides an opportunity to the students to appreciate the conditions prevalent in the community. The ultimate aim has been to develop the personality of students through community service and bring national harmony and integrity.

Pundit **Jawaharlal Nehru** had once rightly pointed out that, *“The greatest danger for this country is from communalism and not so much from external aggression, because when there is external aggression the people of India tend to get united, but when communalism is rampant the people of India get divided”* <sup>2</sup>. Because anyone who loves India would hate communalism and anyone who hates India would love Communalism. With this word we may conclude our observation that there is a big gap between the Elite and Mass in our country and our nation is facing a lot of problems for continuing the process of National Integration. In this article I just want to highlight the role of N.S.S. in providing the National Integration in a lucid manner.

## National Service Scheme (N.S.S.):

It's a programme or project familiar in the students' community in the Educational Institutions throughout the nation. Under this scheme, the student volunteers came in direct contact with the community problems and needs and also development processes. Activities undertaken under NSS have included environment enrichment and conservation, health, family welfare and nutrition programmes, programmes aimed at creating an awareness for improvement in the status of women, work in hospitals and welfare institutions, production oriented work life, soil testing and soil health care, promotion of cooperative societies, non-formal education and assistance to local authorities in relief and rehabilitation work during natural calamities and national emergencies. Other activities have also been undertaken keeping in view the local needs and priorities. Special camping programmes organised under NSS during vacations have resulted in creation of many durable community assets. Where sufficiently, NSS has helped to make the academic programmes more relevant and linked with community and national goals and social and economic processes.

## Aims and Objectives of NSS:

The overall objective of the National Service Scheme, as envisaged originally was service to the community, offered undergoing instruction, in an educational institution. It was sought to arouse the social consciousness of students and provide them the opportunity to work with the people around the educational campuses creatively and constructively, and to put the education they received to concrete social use. It has been felt that the primary aim of the scheme is to enable the students to upgrade their personality and experience through community service. Its end is the improvement of personality while service to the community is a means through which such improvement is sought to be achieved. The objective of the scheme is therefore, development of the personality of students through community service. This objective is sought to be achieved by enabling the students to:

- Understand the community in which they work

- Understand themselves in relation to their community
- Identify the needs and problems in the community in the solution of which they can be involved
- Apply their education in finding practical solutions to individual and community problems
- Develop competence required for group living and sharing responsibilities
- Gain skills in mobilizing community participation
- Acquire leadership qualities and democratic attitude
- Develop capacity to meet emergencies and natural disasters
- **Practice national integration** <sup>3</sup>

**The Motto:**

The motto or watchword of the national services scheme is '**NOT ME BUT YOU**'. This expresses the essence of democratic living and upholds the need for selfless service and appreciation of the other man's point of view and also to show consideration for fellow human beings. It undermines that the welfare of an individual is ultimately dependent on the welfare of society as a whole. Therefore, it should be the aim of the NSS to demonstrate this motto in its day-to-day programme.

**NSS Symbol:**

The symbol of the National Service Scheme, as appearing on the cover is based on the 'Rath' wheel of the Konark Sun Temple of Odisha. These giant wheels of the Sun Temple portray the cycle of creation, preservation and release and signify the movement in life across time and space. The design of the symbol, a simplified form of the Sun-Chariot wheel, primarily depicts movement. The wheel signifies the progressive cycle of life. It stands for continuity as well as change and implies on the part of the NSS for continuous striving forward for social transformation and upliftment.

The Konark wheel has eight (08) bars which represent 24 hours of the day. Hence the badge reminds the wearer to be in readiness for service of the nation round the clock i.e. for 24 hours. The red colour in the badge indicates that the NSS volunteers are full of blood, i.e. lively, active and spirited. The Navy blue colour indicates the cosmos of which the NSS is a tiny part ready to contribute its share for the welfare of the mankind <sup>4</sup>.

As discussed earlier the aims and objectives, Motto, and the symbol of the NSS indicating a major role to serve the nation and to preserve the principle of national integration.

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**Inclusion of Yoga & Meditation in the curriculum of N.S.S.:**

**With the direction given by Ministry of Youth Affairs and Sports, Government of India dated: 02.09.2004 the practice of Yoga and Meditation has been included in the curriculum of N.S.S. in all over India.**

**The main objective** was to create a healthy Yoga works on the level of one's body, mind, emotion and energy. This has given rise to four broad classifications of Yoga:

- (i) **karma yoga**, where we utilize the body;
- (ii) **bhakti yoga**, where we utilize the emotions;
- (iii) **gyana yoga**, where we utilize the mind and intellect; and
- (iv) **kriya yoga**, where we utilize the energy.

Then, Question here arises, how can Yoga and meditation help in the process of Nation Building or National Integration?

Before going to discuss on the question, we have to know- what is National Integration?

**Meaning of National Integration:**

**Simply, National Integration involves a social revolution of the most profound character the subordination of all traditional social loyalties, arrangements and power hierarchies to one overriding loyalty(the motherland) and one authority(the state).** It also involves the capacity of a system to take collective decisions, to manage the process of social change and economic development, and to set and achieve the goals. A nation is integrated when its citizens, whichever part they may happen to be born in, feel that the whole country is theirs and they are at home in every part of it.

**National Integration is a Painful and Prolonged Process <sup>6</sup>:**

The success of Nation-building largely depends on the weakening of all traditional forms of authority, whether based on customs and usages or on religious scriptures, and their subordination in secular realm to the agencies of the state which enforce laws and regulations that state legislates. Nation-building is thus a complex, hard and painful process.

**Impediments to National Integration in India <sup>7</sup>:**

The National Integration Council, in its first conference held in 1961, identified three forces which continue to cut at the roots of national integration. These are: regionalism, communalism and Casteism. There are however, some other factors which too, have inhibited the development of an integrated society in India. These are as follows: Unabated growth of Population, Unhealthy role of Political Parties, Poverty of the masses, Political Federalism, Slow and uneven economic development, Communalism, Alienation, Cancer of Corruption, Decline of Institution, Elite-mass Gap, Ethnic problems, Emergence of Two Indians, Growing political Violence, Illiteracy, Inadequacy of Indian Bureaucracy & Politician, Lack of Protestant Ethics etc.

**Aids and Instruments to National Integration:**

Territorial boundaries, population statistics, tabulation of raw materials, productivity figures, these may be regarded as building blocks in the making of a state, but they do not create a nation; nor do they provide a blue print on how a nation state is built. It is the human element and sense



of community that play a decisive role in nation building. The main aids and instruments of nation building are: National Leadership, National Goals, National Symbols, Massive Public Education, Mass Communication, Role of Academic community, Role of Press, Role of Managerial Class, Development of national Political Culture, Dedicated and Selfish Ruling Class, Continuing National Support, Economic Growth with social justice, Specific Techniques etc.

### **Role of Youths in National Integration:**

The world has changed in the last decade at a pace unparalleled in the history of mankind. Vast expanses of time and space are being encapsulated in the emerging global village, shrinking space, shrinking time and disappearing borders and linking people's lives more deeply, more intensely, more immediately than ever before. All the country have their distinctive features, all of them have still more the distinguishing mark. The future generation can do a lot in national integration. It means combining or bringing together all the people in the country into a single whole. It is a sentiment that makes us proud of our heritage and binds all people in one common bond, no matter, what their caste, religion, language and social custom may be. The massive manpower can do wonders provided the enthusiasm is harnessed for development work. The strength, power, and capability of youth are able to meet any challenge. The youth, who are the future leaders, have a pivotal role to play in the national integration.

Spirited young men of the new generation can play a great role in the socio-economic regeneration of the society. If the youth is associated in a drive against these practices, the results may be much more satisfactory. If the engines, enthusiasm and idealism of the youth are channelized in the proper way, it will make the task of national integration easy and the face and future will become brighter. The aim of youth should be, to put the country on the road to progress and prosperity, to eradicate the ills that afflict the society. And in this stupendous task of ushering in a new era of hope and happiness, everyone has to adopt Yoga and Meditation which play a distinct and clear cut role, like a clog in a machine.

The youth must recall and remember what **Douglas Malloch** says:

**"If you can't be a highway, then just be a trail,**

**If you can't be the sun, be a star**

**It isn't by size that you win or you fail, Be the best of whatever you are"**

**If so, the country will be in safer hands.**

**Swami Vivekananda said," young persons are like steel or stone, they can break the rock. So youths should rise, awake and never sleep before achieve their target".**

Every year, we celebrate youth day on 12<sup>th</sup> January which is also celebrated as Vivekananda's birthday.

### **CONCLUDING OBSERVATION:**

As we discussed earlier, there is a greater role of N.S.S. by the students' volunteers in every higher educational institutions through which the society is benefitted in a large scale. As the students particularly the youths are considered as the backbone of the society, if they devote themselves for doing such voluntary works efficiently, the country as a whole will be benefitted and National Integration will prevail irrespective of all differences. Special thanks to the

Ministry of Youth Affairs & Sports, Govt. of India, for conducting such programmes by giving financial assistance to the HEIs. Thanks to University Grants Commission as well as other state governments and concerned Universities and colleges providing opportunity to the youths to serve the nation through National Service Scheme (N.S.S.).

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3. National Service Scheme Manual, Published by: Govt. of India, Ministry of Human Resource Development, Department of Youth Affairs and Sports, New Delhi, 1987 P. 9
4. Ibid. p.11
5. Sikri S.L., *Indian Government and Politics*, Kalyani Publishers, New Delhi, 2004 p.255
6. Ibid. p.353
7. Ibid. p.364



## THE LIFE AND EXISTENCE OF THE ISHAKHON IBRAT'S AND IMPLEMENTATION OF HIS LIFE ON YOUNGSTERS OF UZBEKISTAN

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### ABSTRACT

#### ANNOTATSIYA:

*Isakhan Ibrat plays an important role as one of the prominent figures of the Uzbek literature of the national renaissance period, which is considered to be the independence of Uzbekistan. The simplest aspects of her life and her creative work are a real challenge for today's youth. Our President Shavkat Mirziyoev said: "Our great ancestor did not choose the Ibrat pseudonym. His dedication to the Homeland and the advancement of our country is not only in his time but also in our day, serving as an example for all of us." In 1908 he purchased a lithograph from Orenburg and for the first time he founded a printing house. In it, the books will be printed and spread to the nation. He is not satisfied with his printing industry and becomes an active correspondent in newspapers and magazines in Turkestan. At the same time, he sits in the judge's place for 20 years. The book's pages devoted to the events of the second half of the 19th century, not to join the Russians, but to the defeat of the Russians, were the main reason for the weakening of the people's power due to the killing of the kings. In our country, the books published in the pre-independence period find that the phrase "Turkestan's annexation to Russia" is compulsory.*

**KEYWORDS:** *Homeland, Culture, Folk, Spirituality*

**INTRODUCTION:**

Therefore, we realize that our special attention to the study of the life and creative heritage of our educator, who is in the educational system, has become a pressing issue. We acknowledge that this has not been sacked in the past, and we are eager to present scientific and practical conclusions that will lead to the need for consistent. Despite the fact that a lot of information about cadet writers such as Mahmudhuzha Behbudiy, Abdurauf Fitrat, Abdulhamid Chulpan, Abdulla Avloniy and Muhammadsharif Sophizoda were distributed to school, lyceum and colleges, some of them were not reserved for Isakhan Ibrat. It is noteworthy that only Uzbek language and literature students study in the Uzbek Literature of the National Renaissance. It would be desirable, if Ibrat's work and creative heritage were to be taught more effectively than in school, at secondary special education, and then institutionalized at universities and universities, there would be continuous interruption. As a result, the enrichment of young people's minds with the knowledge of their own independence was somewhat improved. In order to help meet the good motives in this area, we first need to provide the necessary information, and then make a concise statement of our suggestions and suggestions.

**Main part**

Ishakhan Ibrat was born in 1862 in Turakurgan village in a well-educated family. After writing his first letter at home and in a mahalla school, he was educated in the madrassah of Muhammad Siddiq Tunqator in Kokand in 1878-1886. In 1887, her mother, Huribibini, took her to the Hajj. Fortunately, the respected volunteer in Jeddah, a strong wind, drowned in the world. When he is alone, he is traveling around the world. Europe's major cultural centers, such as Istanbul, Rome, Athens, and Sofia. Then it goes to Kabul, Afghanistan. Between 1892 and 1896 he lived in Bombay and Calcutta, India. Most of all, he did not miss the time traveling and traveling. She has got acquainted with the lifestyle, traditions, language and culture of the people of the country. She studies Arabic, Persian, Hindi and English and collects valuable materials for her works. After returning to his home country, he opened a new "way shopping" school. In 1908 he purchased a lithograph from Orenburg and for the first time he founded a printing house. In it, the books will be printed and spread to the nation. He is not satisfied with his printing industry and becomes an active correspondent in newspapers and magazines in Turkestan. At the same time, he sits in the judge's place for 20 years. As a fair lawyer he gains a great reputation. His love for the people creates a park in his own yard, as he has seen in foreign countries. He is called "Gulbog" and he invites his countrymen for a tour. He has a great potential that combines creative work with his creative work. He has abundant literary and scientific heritage left to us. Thus, the dictionary of the dictionary "Sithtati al-Sina" is a six-language dictionary, which is based on the Arabic-Persian-Hindi-Turkish-Russian-Sartcha (Uzbek) words. The book was published in 1901 in Tashkent. According to the doctor of pedagogical sciences Ulugbek Dolimov, "Iskhakhan is the creator of this orga, first of all, he is interested in Russian language. This is the first book of the book. The author also provides Russian alphabetic writing for those who do not know the Russian writing system. As it is known, it is difficult to describe the Russian and European words in Arabic, but Ibrat success fully solved this problem" His second lexicon of linguistics is the "Jome' ul-khutut" (The Writings Complex). The evolutionary evolution of the forty-one articles in the world is described with great accuracy. It is noteworthy that this 132-page scientific work was published in a very beautiful and exquisite form at the "Matbaai Isokiya" printing house. In his introduction, "When you get a pharmacy, Latin is necessary. When sent to India, it can not be English. French to Iran. We do not deny that the first

requirement for the Turks is the Russian Khanate, the Mujahideen and the Mundari. Shavkat Mirziyoev, the President of the Republic of Uzbekistan, signed a Memorandum of Understanding on "The History of Fergana", dated July 7-7, 2017, when he visited the Ibrat Alley, built in Turakurgan, in Namangan, "It is one of the rarest sources in the history of our country." It is not surprising that the maser himself who read this book, An seen and researched the race. Addressing the sources of information from Fergana's ancient past, it was as accurately as possible to reflect the history of the valley, a valley of Turkestan, a valley of Turkestan. The book's pages devoted to the events of the second half of the 19th century, not to join the Russians, but to the defeat of the Russians, were the main reason for the weakening of the people's power due to the killing of the kings. In our country, the books published in the pre-independence period find that the phrase "Turkestan's annexation to Russia" is compulsory.

So, in the last quarter of the nineteenth century and the twentieth century, the White King, in the common sense, the so-called "socialists" of the two-faced Stalinists who tried to portray the Russians as a benevolent nation, in the complex conditions under which the Uzbek people are masked with their ideas and in the difficult conditions that our nation can not understand, to write to the Uzbeks who are being forgotten, as Ibrat asks people to remember the past unspoken movement, the state government can not fail to feel like the author of the particles. As a result, we cannot but admit that it is inappropriate to admit that the manuscript was fraught with the prospect of surviving on paper. Another book, Mezon ul-Zamy, was presented to the fans during the time of independence. In other words, the nine dimensions of the present-day brochure have been summed up in the form of a call to harmonize the changes in the universe to man's change, to be quicker to avoid the news, to be quicker than the illusions. He describes the picture of the life of the Uzbek people in the first quarter of the last century impartially and accurately, and gives some insights about what are the characteristics of the Uzbek people. People's lifestyle, traditions are clearly shown. Particularly, the attitude of the religious to the state affairs, to the development of society, to the people of the country is taken to an open mind. He is striving to convey to people that both religious and secular ones can only benefit from the development of the nation only with the right and honesty. Isakhan, who has been trained in the Turkic literary and rare examples of Uzbek classical vocabulary, has a penchant for the narrow genre of literary life. , left a specific heritage of artStudying poetry, Ulugbek Dolimov highly appreciated his poetical thinking, especially his poetic poems. "Ibrat lives in two centuries, has seen two centuries of life, has tasted the two systems, has seriously reacted to the era and society," writes poet and publicist Sodiq Sayhun. - The poets of the 19th century - Muqimiy, Furkat, Shavqi, Nodim, Hayrat and many others joined the age-old and peer-to-peer group of contemporary writers. He learned from them and worshiped the truth. Especially in the twentieth century, he was intensifying his comrades. It was not enough to mobilize the word in the propaganda of a new life; the sampling of the person - he knew that the team had the power to change, had the power to change, and in his chosen way, he did not know how to handle the pen. "A person with so much capacity and abilities is a rare phenomenon. The exemplary life and activity of the exemplary creatures are exemplary in every respect for modern youths. It was time to strengthen the practical work in this direction. In order to systematically pursue a metaphor, it is desirable to behave as follows. First and foremost, we recommend six various features of educational thematic to higher educational institutions curriculum:

- a) Ibrat-linguist;
- b) Ibrat-poet;
- c) Ibrat-ancient academician
- d) Ibrat - sociologist;
- d) Ibrat-publisher and journalist;
- e) Ibrat Lawyer.

According to the above topics, teachers of the Uzbek language and literature, history, sociology and jurisprudence must organize round-the-clock classes and training sessions on the books of Iskhankon Ibrat, each of which is taught by them;

Secondly, it is necessary to introduce students and students to the study of Isakhan Ibrat's extensive work and spiritual-enlightenment heritage within the scope of independent work; Thirdly, taking into account that our compatriot was born on the eve of Navruz, March is the tradition of holding "Ibratkhani" evenings in all educational institutions; Fourthly, Encouraging gifted children with a collection of dictionary books by announcing "Ibrat followers" contest among talented children. Fifthly, by organizing a competition for essays on the subject "Ibrat - Uzbek Enlightener" in educational institutions throughout the country, the students are encouraged to learn about the patriot and pupils of Isakhan Ibrat's life pages in the remote regions of the country, thus ensuring that they are aware of the invaluable work of their independence. Sixth, it is planned to organize a roundtable on the theme "Enlightenment Hour", which will be held among the youth of educational institutions annually, "Let's be worthy followers of Isakhan Ibrat!"

## CONCLUSION.

In conclusion, we can say that the suggestions and remarks we have made will not be disappointing. It is obvious that any of the young people who love the country and who love the country's inheritance will be exemplary in any aspect of the Ibrat's contribution to the development of our independent Motherland.

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## A CRITICAL REVIEW OF LITERATURE ON E- BANKING SERVICES OF COMMERCIAL BANKS

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### **ABSTRACT**

*Changes in Technology and lifestyles have changed the structure of banking. Now-a-days, banks are seeking alternative ways to provide their various services. The banking industry, being very competitive, not only focuses on providing wide product lines to create competitive advantages, but also emphasizes the importance of its services particularly in maintaining service quality. Information Technology has enabled banks to perform more effectively. **E-banking** also termed as internet banking or online banking, facilitates an effective payment and accounting system thereby enhancing the speed and delivery of banking services considerably. While e-banking has improved banks efficiency and convenience, it has also posed several new challenges. These challenges are particularly more apparent in areas of regulation and supervision of banks. The present study offers meaningful insights by focusing on the past studies conducted by various academicians and researchers to know about E-banking services provided by banks.*

**KEYWORDS:** E-Banking, Internet Banking, Online Banking, Banks Technology

## 1.1 INTRODUCTION

Banking in India originated in the last decades of the 18th century. The first banks were The General Bank of India which started in 1786, and the Bank of Hindustan, both of which are now defunct. Banks accept deposits from the general public as well as from the business community. Anyone who saves money for future can deposit his savings in a bank. Businessmen have income from sales out of which they have to make payment for expenses. They can keep their earnings from sales safely deposited in banks to meet their expenses from time to time. 'Banking in traditional sense is the business of accepting deposits of money from public for the purpose of lending and investment.' As per Section 5(c) of Banking Regulation Act, 1949 a "Banking Company" means any company which transacts the business of banking in India. Any company which is engaged in the manufacture of goods or carries on any trade and which accepts the deposits of money from public merely for the purpose of financing its business as such manufacturer or trader shall not be deemed to transact the business of banking within the meaning of this clause."

The banking sector is an example in which information-technology infrastructures have had implications on the macro-economic development of many nations in the developing world. It is important to note that the banking industry was one of the very first to utilize information technology back in the 1960s, and has thus a record of influencing the development process through the technology. There are many examples of information-technology applications in the banking sector that have helped build new markets and fuel the economy. For example ATM, Internet banking and mobile banking etc.

After 1980s the rest of world followed similar changes that affected the American and British banking system and India has been one of these countries. Indian Banking and Financial Sector have also several critical stages of transformations over the last decade. The operating environment of banks has changed significantly in terms of liberalisation of regulations, increasing competition for both domestic and foreign players. This study pertains to analysis electronic banking in general and electronic banking in India in particular. Electronic banking as it has demonstrated the velocity of its growth is incredibly fast and efficient. It has allowed individuals including companies to perform their banking businesses from their homes or offices in a very cost-effective way. Studies have shown that with this new technology, it has become possible for both the banks and customers to have an immediate insight about the status and operation of their accounts. These are banks where majority stake is held by the GOI or RBI. These banks come under public sector banks. Public Nationalized banks comprise 19 banks and SBI its 7 associate banks. In case of private banks majority of share capital of the bank is held by private individuals. These banks are registered as companies with limited liability.

## 1.2 STATEMENT OF PROBLEM:

There are several major challenges and issues facing the e-banking industry today. First, and perhaps most important is the security concern. Customers are certainly concerned of giving their bank account number online or paying an invoice through internet.. Currently there are two different approaches in the e-banking industry: a separate (from its traditional office) internet e-bank (i.e., virtual bank) with all transactions being done online, or to add an online banking section to the services already being offered by its major bank office. Both approaches have advantages and issues to be addressed in practice.

With the advancement of science and technology, the modern market has gone a buyer's market; it also called as customer oriented market. Banking institutions are one of the most important service industries, which have special importance in the economy. Advancement in the technology and concomitant developments in communication channels has resulted in innovation of alternative delivery channels. These have changed the way in to interface the customers. In the traditional banking customer has to visit the branches to carryout banking transaction, but now they have the choice of electronics delivery channels i.e. ATMs, Credit cards, Debit cards, internet banking, mobile banking, core banking etc.

### 1.3 IMPORTANCE OF THE STUDY:

It is obvious that under the different financial and human resources conditions, the stages of e-banking application and development are varying for different banks across the land. To summarise, the lack of finance resource and weakness in technical expertise have been cited currently as two major obstacles in developing and maintaining e-banking services for many local smaller banks located in small towns and rural areas. Currently all banks in India are in the process of building world-class Information Technology infrastructure. When banks invest heavily on technology, they must ensure that the facilities they provide match with the needs of the clients. Without understanding the preferences of the customers, Measuring customer satisfaction has a great potential to provide the managers of retail banks with information about their actual performance of the bank and the expectations of their customers (Al-Eisa and Alhemoud, 2009). For a service provider customer satisfaction is important issue. There may not be an ultimate goal in itself rather; it is a means for yielding greater profits; even satisfied customer is also as another type of profit. Therefore, this study is significance to bridge this gap.

### 1.4 OBJECTIVES OF THE STUDY

To study the available literature relating to E-banking services in the banking sector.

### 1.5 RESEARCH METHODOLOGY

The study is based on secondary data. The secondary data is collected from various journals, magazine, newspapers and through various search engines, The annual reports of different banks, Reserve Bank of India, Ministry of Finance and other trusted publications will be studied.

### 1.6 REVIEW OF LITERATURE

#### REVIEW OF LITERATURE UPTO 2000

1. **Chaudhary H.C. (1988)<sup>1</sup>** in his article entitled "Marketing Information System in Banks" presented the importance of marketing in banking services, different marketing decision areas in banks and information needs for making marketing decisions in banks, The author, on the basis of survey of nationalized commercial banks in India, suggested usefulness of a systematic marketing information system to commercial banks and various factors which can make the informational base of the bank strong and authentic.
2. **Sathye (1997)<sup>2</sup>** surveyed the status of Internet banking in Australia. The study found that only two of the 52 banks started Internet banking services at that time. However still there was a lot of room for Internet banking to expand in Australia.
3. **Booz Allen Hamilton (1997)<sup>3</sup>** conducted a global survey covering 386 retail and corporate banking institutions in 42 countries to assess the strategic impact of Internet banking on the financial service industry. According to the study, there is a huge perception gap between

North American/European banks and Japanese banks regarding the future of Internet banking. North American and European banks expect Internet banking to become the most important retail channel within 10 years, but Japanese banks expect traditional branches to remain the most important channel. The study also indicates the rapid growth potential of Internet banking. Many of the banks that responded have plans to upgrade the functionality of their Internet service offerings.

4. **Furst et. al. (1998)**<sup>4</sup> a U.S. based study found out a significant shift by consumers and businesses to electronic payments. In response to developments in electronic payments and remote banking, banks have greatly increased their investment in technology, particularly in retail banking. The gains from technological advancements in banking and payments are likely to be substantial, both from the point of view of individual financial institutions and economy-wide. In this environment, banks should review and, if necessary, adjust their risk management practices in tandem with upgrading their technology activities.
5. **Joseph et al.(1999)**<sup>5</sup> stated that one among the important dimensions of e-banking service quality is queue management.
6. **Guru et. al. (2000)**<sup>6</sup> examined the various electronic channels utilized by the local Malaysian banks and also accessed the consumers' reactions to these delivery channels. It was found that Internet banking was nearly absent in Malaysian banks due to lack of adequate legal framework and security concerns. However over 60 percent of the respondents were having Internet access at home and thus represented a positive indication for PC based and Internet banking in future.

## REVIEW OF LITERATURE 2000-2010

7. **Suganthi et. al. (2001)**<sup>7</sup> conducted the review of Malaysian banking sites and revealed that all domestic banks were having a web presence. Only 4 of the ten major banks were with transactional sites. The remaining sites were at informational level. There are various psychological and behavioural issues as trust, security of Internet transactions, reluctance to change and preference for human interface which appear to impede the growth of Internet banking.
8. **V.K.Chopra (2001)**<sup>8</sup> in his research article entitled "Emerging challenges, strategies and solutions in Indian public sector banks" highlighted Post VRS Scenario, shrinking of profitability, new products like tele-banking, mobile banking, Internet banking, e-commerce related products & non-performing assets. He pointed out the synergy of Mergers & Acquisitions and some of the challenges before the Indian Public Sector Banks.
9. **Jun and cai (2001)**<sup>9</sup> identified one of the very important service quality dimensions of banking service quality is reliability. The online banking environment has grown tremendously over the past several years and will continue to grow as financial institutions continue to strive to allow customers to complete money transfers, pay bills, and access critical information online. During this same time, online banking has been plagued by Internet criminals and fraudsters attempting to steal customer information. Phishing, pharming, and other types of attacks have become well known and are widely used as a means for fraudsters to obtain information from customers and access online banking accounts.
10. **Corrocher (2002)**<sup>10</sup> investigated the determinants of the adoption of Internet technology for the provision of banking services in the Italian context and also studied the relationship between the Internet banking and the traditional banking activity, in order to understand if

these two systems of financial services delivery are perceived as substitutes or complements by the banks. From the results of the empirical analysis, banks seem to perceive Internet banking as a substitute for the existing branching structure, although there is also some evidence that banks providing innovative financial services are more inclined to adopt the innovation than traditional banks.

11. **Lustsik (2003)**<sup>11</sup> based on the survey of experts of e-banking in Estonian banks found that Estonia has achieved significant success in implementation of e-banking and also on the top of the list in emerging countries. All the major banks are developing e-business as one of the core strategies for future development.
12. **Sohail and Shanmugham (2003)**<sup>12</sup> document accessibility of internet, awareness of e-banking and resistance to change are found to be influencing Malaysian's use of internet banking. Another factor that promotes clients usage of internet banking is seller support.
13. **Rao et. al. (2003)**<sup>13</sup> provided a theoretical analysis of Internet banking in India and found that as compared to banks abroad, Indian banks offering online services still have a long way to go. For online banking to reach a critical mass, there has to be sufficient number of users and the sufficient infrastructure in place.
14. **Agarwal et. al. (2003)**<sup>14</sup> explored the role of e-banking in e-democracy. With the development of asynchronous technologies and secured electronic transaction technologies, more banks and departments were using Internet for transactional and information medium. Initiatives such as E-SEVA and FSC's are the milestones towards achieving comprehensive e-governance.
15. **S.Syamali (2004)**<sup>15</sup> in her article entitled "Customize, compete and conquer through technology" highlighted that, "As the degree of uncertainty is more in banking sector they have to depend more on building "Customer Relationship", which is a permanent asset bringing regular income rather than mere hardware which have obsolescence as a critical factor. "Technology shall be prudently used more as a means to achieve the end result".
16. **K. N. C. Nair (2005)**<sup>16</sup> in his research paper entitled "E-Banking: Growing Big" discussed the recent trends in E-banking, and he focused on federal bank – IT initiatives, our recent IT initiatives, Achievements of IT in banks and problems of E-banking. The author concluded that banking being highly information-intensive, it is only logical to use IT as an effective enabler and facilitator for meeting the requirement of banks and their customers. With the changing lifestyle of customers, they need new products and convenient delivery channels, which can be provided only by enabling technology.
17. According to **Christopher et al (2006)**<sup>17</sup>, E banking has become an important channel to sell the products and services and is perceived to be necessity in order to stay profitable in successful.
18. **Williamson, (2006)**<sup>18</sup> Convenience way of operating banking transactions: Online banking is a highly profitable channel for financial institutions. It provides customers convenience and flexibility and can be provided at a lower cost than traditional branch banking
19. The Woolwich Bank case study conducted by **Shah and Siddiqui (2006)**<sup>19</sup> reveals that understanding clients, organizational flexibility, availability of resources, systems security, established brand name, having multiple integrated channels, e-channel specific marketing, systems integration, systematic change management, support from top management, and good client services are the factors critical to success in e-banking.
20. **Kuismaet al. (2007)**<sup>20</sup> identified the reasons for consumer resistance to internet banking by interviewing 30 Finnish bank customers using the means-end approach and the laddering



method of interviewing. The findings indicate both functional and psychological barriers arising from service-, channel-, consumer- and communication-related means-end chains inhibiting internet banking adoption.

21. As per prediction of **Broadie et al (2007)**<sup>21</sup> the e- banking is leading to a paradigm shift in marketing practices resulting in high performance in the banking industry. Delivery of service in banking can be provided efficiently only when the back ground operations are efficient. An efficient back ground operation can be conducted only when it is integrated by an electronic system. The components like data, hardware, software, network and people are the essential elements of the system. Banking customers get satisfied with the system when it provides them maximum convenience and comfort while transacting with the bank.
22. **D.Ramani (2007)**<sup>22</sup> studied the Innovative Internet Banking – emerging issues and challenges. He has started on the concept of Internet banking. Internet banking enables a customer to perform banking transactions through the bank's website. He further discusses the Internet Banking services, features and Introduction & adoption of Internet banking in India. The author also covered the drawbacks and Emerging Issues and Challenges of Internet banking in his study.
23. **Berger (2007)**<sup>23</sup> argues that a sound understanding of client is required for improvement of e-banking. Thus, all relevant information about the clients should be taken into account and a client-centric strategy should be developed
24. **Calisir and Gumussoy (2008)**<sup>24</sup> compare the consumer perception of internet banking and other banking channels and report that internet banking, ATM and phone banking substitute each other.
25. **Bill Gates (2008)**<sup>25</sup> announced that « *banking is essential, banks are not* ». This quotation means that the traditional bank branch is going to vanish in order to be surrogated by electronic banking which continues to attract new users.
26. **Nadin Jehangir and NoorJahan Begum (2008)**<sup>26</sup> in their study on “The Role of Perceived Usefulness, Perceived Ease of Use, Security and Privacy and Customer attitude to Engender Customer Adaptation in the Context of E-banking” aimed to propose a conceptual framework that will investigate the effects of perceived usefulness to test the theoretical model to measure whether perceived usefulness, ease of use, security and privacy and customer attitude can poster customer adaptation and found that these are significantly and positively related to customer adaptation.
27. **Uppal R. K. (2008)**<sup>27</sup> described in his study on “Customer Perception of E-Banking Services of Indian Banks” that in the post LPG (Liberalisation, Privatisation and Globalisation) era and information technology era, transformation in Indian Bank is taking place with different parameters and the curve of banking services are dynamically altering the face of banking from traditional banking to e-banking. The study empirically analysed the quality of e-banking services in the changing environment. It concluded that most of the customers of e-banks are satisfied with the different e-channels and their services, but the lack of awareness is a major obstacle in the spread of e-banking services.
28. **Kaleem and Ahmad (2008)**<sup>28</sup> collected bank employees' perceptions regarding the potential benefits and risks associated with e-banking in Pakistan. The results suggest that bankers in Pakistan perceive electronic banking as a tool for minimizing inconvenience, reducing transaction costs and saving time. Similarly, they believe that e-banking increases the chances of government's access to public data, increases the chances of fraud, and that



there is a lack of information security. The study also analyzed bank personnel profiles in relation to their perceptions to identify different segments among the respondent.

- 29. Pooja Malhotra & Balwinder Singh (2009)**<sup>29</sup> The paper describes the current status of internet banking in India and its implication for the Indian banking industry. The attempt was made to see if there is any association between adoption of Internet banking and the banks' performance and risk. The internet banking has a negative and significant impact on risk, which shows that, the adoption of Internet banking has not increased the risk profile of banks.
- 30. Agarwal R., Rastogi S., Mehrotra A., (2009)**<sup>30</sup> Determining factors affecting customer perception and attitude towards and satisfaction with e-banking is an essential part of a bank's strategy formulation process in an emerging economy like India. To gain this understanding in respect of Indian customers, the study was conducted on respondents taken from the northern part of India. The major findings depict that customers are influenced in their usage of e-banking services by the kind of account they hold, their age and profession, attach highest degree of usefulness to balance enquiry service among e-banking services, consider security & trust most important in affecting their satisfaction level and find slow transaction speed the most frequently faced problem while using e-banking.
- 31. Haque et al (2009)**<sup>31</sup> Internet banking uses the internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing checking and savings account balances, paying mortgages and purchasing financial instruments and certificates of deposits
- 32. Gartner (June 2009)**<sup>32</sup> found from the same survey that in both countries, e-banking is more popular among higher-income households.
- 33. Mishra A.K. (2009)**<sup>33</sup> Digital signature for security: In a survey conducted by the Online Banking Association, member institutions rated security as the most important issue of online banking. There is a dual requirement to protect customers' privacy and protect against fraud
- 34. Ahasanul Haque, Arun Kumar Tarofder, Sabbir Rahman and Md Abdur Raquib (2009)**<sup>34</sup> carried out a research entitled "Electronic transaction of internet banking and its perception of Malaysian online customers". The purpose of this research is to find out significant factors of consumers' perception on e-banking transaction by Malaysian bank consumers. The study utilized a combination of theoretical frameworks and quantitative techniques to testify the statistical relationships between consumer perceptions on e-banking transaction. Meanwhile factor analysis was performed to extraction and make initial decision on the number of factors underlying asset of measured variables of interest. Thereafter, Structural Equation Mode (SEM) was estimated to anticipate the effects of the explanatory variables. This study showed that only protected transaction, have significant impact on consumers' perception about ebanking security, followed by service quality and regulatory frame work issues.
- 35. Dube Theilani, Chitura Tofora and Runyowa (2009)**<sup>35</sup> in their article on "Adoption and Use of Internet Banking in Zimbabwe" sought to explore the extent of adoption and usage of internet banking by commercial banks in Zimbabwe and also investigated the challenges they face in the adoption of their technology. The result showed that while majority of the banks in Zimbabwe are adopted internet banking, usage levels have remained relatively low, as not many customers are using this innovation in Zimbabwe. It also revealed that compatibility with the existing legacy system, cost of implementation and security concerns ranked high.

Hence, the study recommended that the banks in Zimbabwe should vigorously promote the usage of internet banking among customers and also the policy makers such as government, Reserve Bank of Zimbabwe should increase investment targeting infrastructure development so as to encourage the banks and individuals alike to adopt the innovation.

- 36. J. Swaminathan and A. Ananth (2010)<sup>36</sup>** in their study on “Customer Satisfaction on E-Banking: A Study with Special Reference to Mayiladuturai” analysed the level of customer satisfaction on e-banking. It observed that a particular age group have only used those services effectively and their satisfaction is mainly influenced by the convenience, awareness and responsiveness. The study suggested to create awareness among others and to concentrate on the factors contributing customer satisfaction to ensure loyalty among the customers.
- 37. Kambiz Heider Zadeh Hanzace and Tooraj Sadeghi (2010)<sup>37</sup>** in their research work on “Measuring Banks’ Automated Service Quality: An Re-examination and Extension in an Islamic country” seek to answer What factors determine consumer satisfaction of electronic banking services in Iran?. By using service quality models and theories such as Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB) as basis, they constructed a model with 7 factors on the dimension of convenience, accessibility, accuracy, security, usefulness, banking image and web site design. The study concluded that these dimensions are the determinants of consumer’s quality perception in e-banking services. Lo Liang Kheng, Osaman Mahamad, T.
- 38. Neha Dixit, Dr. Saroj K. Datta (2010)<sup>38</sup>** in their study on “Acceptance of E- Banking among Adult Customer: An Empirical Investigation in India” investigated the factors affecting the acceptance of e-banking services among adult customers and the level of concern regarding the security and privacy issues. The study found that adult customers are willing to adopt online banking if banks provide them necessary guidance and it recommended that the bank should segment the market on the basis of age group and provide them necessary guidance regarding the use of online banking.

## REVIEW OF LITERATURE 2011 ONWARDS

- 39. Dr.N.B.Jadhav, Mrs.Poonam R. Lohana and Mr. Rupesh Dargad (2011)<sup>39</sup>** in their research article on “Customer perception and attitude towards e-banking” determined the consumers perspective on the adoption of E-banking. The study revealed that electronic revolution has made it possible to provide ease and flexibility in banking operations which benefit the customers.
- 40. K.T. Geetha & V.Malarvizhi (2011)<sup>40</sup>** in their research paper on “Acceptance of E-Banking Among Customers” investigated the factors which are affecting the acceptance of e-banking services among the customers and also indicate the level of concern regarding security and privacy issues in Indian context. The finding depicted many factors like security and privacy and awareness level increased the acceptance of e-banking services among Indian customers. The finding also showed that if banks provide them necessary guidance and ensure safety of their accounts, customers are willing to adopt e-banking.
- 41. M. Mohammed Siddik and Dr. M. Selva Chandra (2011)<sup>41</sup>** in their study on “Customer Satisfaction Towards E-Banking Services of ICICI Bank in Chennai” explored the consumer satisfaction at multidimensional level by assessing the service delivery. The study revealed that majority of the respondents preferred their branch because of Quality of service.

Convenience, proximity and popularity of branch were main reasons to prefer the particular branch by the customers.

42. A study was undertaken by **R. Karruppusamy and Dr. N. Venkatesa Palanichamy (2011)**<sup>42</sup> to understand the customer preference towards e-banking services with a view to improve the operational efficiency of the e-banking facilities. The results of the study revealed that majority of the E- banking users are males, belonging to young age group with high educational status and higher income compared to non E-banking users. Most of the non E-banking users were aware of E-banking and showed willingness to use E-banking facilities. The main purpose of using E-banking facilities is for getting credit and debit alert; time saving was the most important factor which influenced the adoption of E-banking facilities. Educational status, age, frequency of the visit to bank were the major factors which discriminating the user and non- user of E-banking. The customer had a positive perception regarding quickness, energy and time saving, advantages, security and dependability of E-banking facilities but Lack of adequate knowledge on E-banking facilities and technological complexity were major constraint faced by the customer while using e- banking services.
43. **Shamsher Sing, (2011)**<sup>43</sup> in his study on “Customer Satisfaction Analysis of Information and Communication Technology Channels in Banking Sector” examined the customer satisfaction of banking services related to Information and Communication Technological (ICT) channels like ATM, Tele-banking and internet banking in Delhi and the impact of ICT channels on satisfaction. It indicated that the ICT channels have positive impact on the customer satisfaction. It also revealed that some characteristics such as availability of cash and location / proximity of ATM and time to process have very high influence on satisfaction in both private and public sector banks.
44. **V.M. Kumbhar (2011)**<sup>44</sup> in his research article on “Factors Affecting the Customer Satisfaction in E-Banking: Some Evidences from Indian Banks” evaluated the major factors affecting customers’ satisfaction in e-banking service settings. It also assessed the influence of service quality on brand performance, perceived value and satisfaction in e-banking. It indicated that perceived value, brand performance cost effectiveness, easy to use, convenience, problem handling, security and assurance and responsiveness are important factors in customer satisfaction in e-banking.
45. **Malika Rani (2012)**<sup>45</sup> in a “Study on the Customer Perception Towards E-Banking in Ferozpur District” made an attempt to identify and measure the customer perception towards the usefulness and willingness to use e-banking. The study revealed that Consumers are using various services provided by their respective banks and the highest used services are the ATM & bill payment across various income groups followed by viewing of the account history.
46. **Ranjit Kumar Sahoo and Sukanta Chandra Swain (2012)**<sup>46</sup> in their study on “Perceived Value and Perception Offered by E-banking Services with special Reference to Punjab National Bank” made an attempt to find out whether e- banking is performing as per the perception of the customers and employees and whether there is any gap existing between the perceived value and the perception. It concluded by insisting on the initiatives to create awareness to trust the banking services.
47. **Ravichandran.S and Dr.A.Murugarathinam (2012)**<sup>47</sup> in their study on “Factors influencing the Customer Preference towards E-Banking Services in Cuddalore District” investigated the level of awareness among the customers on the use of e-banking and their expectations from e-banking. The findings of the study revealed that the customers are

satisfied with the quality of e-banking services. But, they face technical as well as administrative and procedural problems. In spite of the problems, e-banking is preferred as the efficiency of the employees working through e-channels is better. They suggested that a correct system architecture and design will help in managing operational and security risks to a greater extent, to retain competitive advantage, the banking institutions have to improve services at the branches and employees of e-banks should be given training to match their skill with the requirements of changing environment.

**48. Gupta & Mishra (2012)<sup>48</sup>** examined the new emerging trends of E-banking in Indian banking industry. The study found that there are many challenges faced by banks in E-banking and there are many opportunities available with the banks. It concluded that banking sector will need to develop a new business model by building management and customer services. It also suggested that banks should contribute intensive efforts to render better services to their customers.

**49. Chavan (2013)<sup>49</sup>** described the benefits and challenges of Internet banking in an emerging economy. It observed that online banking is now replacing the traditional banking practice. It showed that online banking has a lot of benefits which add value to customers' satisfaction in terms of better quality of service offerings and at the same time enable the banks gain advantage over the competitors. It also discussed some challenges in an emerging economy.

**50. S. Praveen (2014)<sup>50</sup>** has reviewed the overview of Modern banking services in Indian. The study purely based on secondary data. The researcher has discussed the current services in Indian banking industry, like Cards, Insurance, Demat Services, Online Services, NRI Banking, Money Transfer, Corporate Banking, Corporate Net Banking, Cash Management, SME Services, E-Payment Services, RTGS, EFT, POS, ECS, EDI, etc.

**51. Jitendra K. Sharma (2017)<sup>51</sup>** has study the innovation in banking sector and its impact on customer satisfaction. The researcher has selected SBI and ICICI bank of Bhopal city for the study purpose. The objective of the study is to know the customer satisfaction after computerization of operation of largest branches of SBI and ICICI bank in Bhopal. Using structured questionnaire containing 28 closed ended statements the researcher has collected the data from 200 respondents who have been visiting banks for at least five years. The researcher has used Z-test for the testing hypothesis and concluded that private sector banks have been performing better than the public sector banks. The researcher also suggested that the public sector banks have to focus more on creating better marketing mix, expansion of various activities and reducing cost.

## 1.7 RESEARCH GAP

After a thorough study of above literature it was found that a lot of attention have been focused E-banking practices of banks. However not much studies have been conducted on the detailed practices, procedures and policies followed by commercial banks in Odisha.

## 1.8 CONCLUSION

In the recent era almost banks are trying to attract new customers by providing modern looking services and convenient e-service. Satisfied customers are central to optimal performance and greater financial returns. Customers are viewed as a group whose satisfaction helps in

incorporating strategic planning efforts. With better understanding of customers' perceptions, banks can determine the actions required to meet the customers' needs. Measuring customer satisfaction helps to focus on customer outcomes and stimulate improvements in the work practices and processes used within the banks. It is expected that e-banking service may reduce the errors in banking services but actual data of the complaints shows that e-banking services failed to reduce errors in banking services.

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## TEACHERS ACADEMIC INVOLVEMENT AND CURRICULAR CHALLENGES IN STUDENT CENTRIC LEARNING IN HIGHER EDUCATION

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### ABSTRACT

*This paper focuses on the challenges that modern teachers face, along with suggestions on how you can conquer them to make a bigger impact on your students. The role of the educator has always been extremely challenging, but it has become even more so now because newer factors have entered into the mix. A widespread use of technology, an overexposure to varied forms of content, and shortened attention spans, are among a few of them. There are also many ways of learning available to students now. The study intends to motivate and encourage teachers of higher education, organizations, students and ministries of education for student-centred learning. Lawton (1983) maintains that the concept of curriculum can be placed on a continuum. One end would comprise a narrow definition in terms of specific taught content while the other would encompass a broader interpretation which includes the whole of the educational experience. This latter interpretation includes not only what is taught but how and why and in what socio-cultural and ideological contexts. The sample of the study consists of 200 teachers of higher education selected from both urban and rural areas. A self constructed scale, validated by experts in the field has been used with NAAC criterion as the base and teaching learning, research and student support as components.. To generalize the results the 't' test was used. The analysis shows that there is no significant difference in the Academic Involvement of Urban and Rural area teachers of Higher Education.*

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**KEYWORDS:** *Student-Centred Learning, Academic Involvement, Higher Education, Curriculum, Challenges.*

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## **1. INTRODUCTION:**

In the educational context, ideas and concepts of constructivism led to the development of a student-cantered approach to learning. The learner is not a passive receiver of knowledge but, rather, an active participant. The learner has the responsibility to accommodate the learning process to his/ her own unique learning style in order to structure his/her own learning. The teacher's role is that of a guide who assists the learner in the difficult process of constructing his/her individual system of knowledge.

The curriculum is the heart of a student's college experience. The curriculum is a college's or university's primary means of changing students in directions valued by the faculty. Curricula should be reviewed and, if necessary, revised on a regular basis, better to serve the changing needs of both students and society broadly. Faculties are responding to this challenge by turning their attention to what are in many cases long neglected curricular matters.

The National Curriculum Framework has visualized a change in the teacher's role, from that of a mere transmitter of information to that of a facilitator of learning. It has been visualized that teaching learning strategies may assume a variety of modes and may involve a variety of activities on the part of learners and teacher, viz., observation, collection of materials and information, demonstration and experimentation, project, assignments, play way, dramatization, group discussion, inductive-deductive teaching, problem solving, discovery learning, etc. The use of these strategies will go a long way in making the transaction of curriculum, child-cantered.

Education plays vital role in the development of a country so the quality of the education must be monitored. To understand the quality of the education National Assessment and Accreditation Council (NAAC) plays great role by accreditation process. The accreditation indicates the particular institute or University meets the standards of the quality in terms of performance, infrastructure, teaching, learning resources, faculty, research organisation, governance, financial well being and student services.

## **NEED FOR THE STUDY:**

What we need today is quality in Higher Education. In the preset context to enhance the quality NAAC has been established and has given parameters of quality.

The study has made an attempt to focus on few of the parameters given by NAAC to study the parameters of teachers in the present context. The main purpose of the study is to study the Academic Involvement of Higher Education teachers and to find out difference in their Academic Involvement in respect to locale and to suggest measures for student centric learning as a part of hidden curriculum.

## **Five Characteristics of Learner- cantered Teaching:**

- Learner- centred teaching engages students in the hard, messy work of learning.
- Learner- centred teaching includes explicit skill instruction.
- Learner- centred red teaching encourages students to reflect on what they are learning and how they are learning it.

- Learner- centred teaching motivates students by giving them some control over learning processes.
- Learner centred teaching encourages collaboration.

### **Trends in Higher Education:**

Educators are no longer thinking about how they want to teach students — instead, they're focusing on how students want to learn, and on creating the multidisciplinary, multi-generational learning communities needed to solve the complicated issues facing the world today. Higher Education in India is undergoing rapid changes. The challenges ahead are multifaceted and multidimensional.

Though the data show a massive growth in the number of students' enrolment in colleges/universities, holistic view reveals that still only a meagre of the total population has access to Higher Education. Globalization and privatization are imposing new challenges but the nations are still entangled in solving the basic problems of accessibility to higher education for all.

In the wake of the transition from elitist to mass education, universities worldwide are under pressure to enhance access and equity, on the one hand, and to maintain high standards of quality and excellence, on the other. Today the notion of equity not only implies greater access.

### **Academic Involvement AND student centric learning:**

The National Curriculum Framework has visualized a change in the teacher's role, from that of a mere transmitter of information to that of a facilitator of learning. It has been visualized that teaching learning strategies may assume a variety of modes and may involve a variety of activities on the part of learners and teacher, viz., observation, collection of materials and information, demonstration and experimentation, project, assignments, play way, dramatization, group discussion, inductive-detective teaching, problem solving, discovery learning, etc. The use of these strategies will go a long way in making the transaction of curriculum, child-centred.. Therefore, a teacher not only needs heavy degrees but should have a vision, capacity and involvement to impart meaningful knowledge and inspire students for achieving creative ends in life.

### **Study Related to Academic Involvement:**

Usha and Sasikumar (2007) conducted a study on teacher commitment as predictors of job satisfaction. The result showed that there was significant relationship between teacher commitment and job satisfaction of secondary school teaches. Among the selected variables the best predictor of job satisfaction of secondary school teachers is teacher commitment. Teacher education is no longer a training process but an education strategy for enabling teachers to teach and concern for their well-being. NCTE (1998)

### **OBJECTIVES OF THE STUDY:**

To study the difference in the Academic involvement among teachers of Higher Education with respect to locale.

### **HYPOTHESES:**

There is no significant difference in the Academic involvement among teachers of Higher Education with respect to locale.

**METHODOLOGY:**

The sample of the study consist of 200 teachers of Higher Education, selected from both Urban and Rural areas. A self constructed scale, validated by experts in the field has been used with NAAC criterion as the base and teaching learning, research and student support as components. To generalize the result the 't' test was used. The analysis shows that there is no significant difference in the Academic Involvement of Urban and Rural area teachers of Higher Education.

**TABLE 1 : 'T' TEST RELATED TO ACADEMIC INVOLVEMENT**

Locality	N	Mean	S.D.	't' Value	Result
Urban	100	67.91	11.09	0.76	Not significant at 0.05 level
Rural	100	66.74	10.88		

**Curricular Challenges, Suggestions and Teachers Role in meeting these Challenges:**

A shift from teacher to Student-centred learning makes teachers job more challenging and stressful especially when the teacher is academically involved. The teacher needs to be equipped with, to combat these.

Planning, globalisation, discipline, technology, student background, individual differences and peer relation are some of the challenges which the teacher may encounter in his/her Academic Involvement.

With the change in the education paradigm where the focus is put on the students' independent learning, a special emphasis should be put not just on the teacher's pedagogical and scientific activities but also on their self-development.

One of the problem that students are suffering from in student-centred learning is that they have to work in teams. In fact some students find it difficult to work in teams because it requires team skill and they have not been taught team skills. So, they may complain about being in teams. In addition to the above stated

- It takes more time
- Not suitable for large classes
- Not enough learning materials
- Student Feels nervous, embarrassed, or tongue-tied

Students should be given few sessions on the team work skills at the beginning of the semester to overcome such problem.

The students might find the problem of misconception, when they prepare themselves for the class. They sometimes read some ideas or concepts and construct the wrong knowledge in their minds.

So, it would be better if the teacher explain the materials on the CD, or give the students the material in a clear and easy way.

The student centred learning can be really an opportunity for those students who love to be fully involved in the learning and teaching processes in the class.

- Teachers academic Involvement can be improved by inducting quality oriented objectivity in merit promotions of teaching faculty.
- Specification of weightages for teaching, research publications/supervision would help in making this transparent and credible;.
- Examination reforms, gradually shifting from the terminal, annual and semester examinations to regular and continuous assessment of student's performance in learning should be implemented.
- Quality of higher education can improve considerably through an extensive and optimal use of audio-visual technologies and Internet. The curriculum should be so designed to make good use of these modern developments;
- Setting up of NAAC has sent the right and positive signals for generating and promoting awareness of the urgent need of quality up gradation of Colleges and Universities.
- Students should be involved in curriculum design; students' assessments should be done with the view to encourage improvement rather than competition among the students.
- Parents/families also have a role to play in encouraging their wards to socialize and take active part in classroom activities. Academic socialization should not be seen as a taboo. It should rather be encouraged as it is geared toward academic excellence.
- There is need for proper understanding and synthesizing of the course content by the students. Teachers therefore need to go beyond power point teaching style and introduce students to additional course resources. This will broaden their understanding of the subject matter.
- Curriculum Planning and Management should be studied in the perspective of knowledge management.
- Integrated approach by involving experts from different fields with major focus on sharing of experiences in a holistic framework and Students should be involved in curriculum design; students' assessments should be done with the view to encourage improvement rather than competition among the students.
- . Teachers should therefore ensure, no matter the circumstances, that teaching pedagogy strongly encourages students' participation in the class.
- Multidisciplinary curriculum must be developed with a view to cater to the needs and fulfilment of expectations of learners, teachers parents, employers and society in general.
- Context, specificity and inquiry oriented experience must be reflected in the curriculum. Learners' participation in the generation of knowledge must be the focus of constructivist curriculum. Problem solving abilities must be developed through experimentation life-like situations.
- Curriculum transaction should involve social negotiation and mediation. Encourage group activities and make optimum use of peer as resources of higher learning.
- Learner's involvement must be encouraged to link previous experience with present learning. The learner should have full opportunity to scrutinize the learning experiences.



- The principles of self regulation, self mediation and self awareness on the part of learners must be reflected in curriculum transaction.
- During curriculum transaction learners should be assessed formatively on a continuous basis to create the basis for acquiring new experiences.

**CONCLUSION:**

With dedication towards the profession and with well planned short term and term planning of classroom activities both urban and rural area teachers can face the curricular challenges in student centric learning.

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## TOTAL QUALITY MANAGEMENT VIS-A-VIS PUBLIC SERVICE DELIVERY

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### ABSTRACT

*In the present era of Good Governance it has become necessary for democratic governments to be responsive to citizen's needs and provide them services courteously, fairly and effectively at a reasonable cost. In this context Total Quality Management aims to fulfil the objectives of good governance by making public service delivery 'SMART' i.e. Simple, Morale, Accountable, Responsive and Transparent. Quality management system helps an organisation to build systems which enable it to provide quality service consistently. It may be clarified that characteristics of services and their standards are defined in the respective service standards, and not in the quality management standards. Concept of public service is based on a contract between state and its citizens that, all citizens will bestow their powers to state and in return state will provide them certain services, without any discrimination. Keeping this thing in mind democratic governments are granting 'Right to Public Services' to their citizens, through legislative provisions. Due to transition in these countries some structures are developed while some are to be developed. These under developed structures create grey areas especially in administration. Poor public service delivery is the most deserving issue in this context to be discussed. Because the system responsible for delivery of public services has many loopholes which deny the citizens the public services which they are entitled to get as a right.*

**KEYWORDS:** Good Governance, Citizens, 'Right To Public Services', Discrimination

## INTRODUCTION

### Total Quality Management: Conceptual Framework

Total Quality Management is the way of managing for the future and is wider in its application than just assuring product or service quality – it is a way of management to ensure complete customer satisfaction at every stage, internally and externally<sup>1</sup>. TQM is based on the concept that all organizational functions should be optimized and integrated for continuous improvement of quality in products and services provided by the organization<sup>2</sup>.

The core of TQM is the customer supplier interface, both externally and internally, and at each interface lie a number of processes. This core must be surmounted by commitment to quality, communication and recognition of the need to change the culture of the organization to create total quality. These are the foundations of TQM and they are supported by the key management functions of people, processes and system in the organization<sup>3</sup>.

The TQM concept is based on a number of quality dimensions. For instance, four common TQM dimensions are (i) Do it right the first time to eliminate expensive rework; (ii) Listen to and learn from citizens and employees; (iii) Make continuous improvement on everyday matter; and (iv) Build teamwork, trust and mutual respect.

Experiences shows that continuous attention for TQM results in qualitatively better products and services, more customer focused organizational culture, reduced variability in processes, improved customer satisfaction and improved competitive advantage. It benefits customers of the organization and its members and society in general<sup>4</sup>. So far as public administration is concerned the synonymous of customer is citizen.

### Total Quality Management: Principles

Total Quality Management is a common method to improve the whole organization stepwise, structured and systematically according to hard work, discipline, intensive training and consistent implementation of techniques and resources. The quality principles form the foundation of TQM and have the strength based on (a) Problem solving discipline, (b) Interpersonal skills, (c) Teamwork and (d) Quality improvement process. The TQM concept is based on a number of general principles, which can be shown as under:

- **Process based:** This aspect relates to the fact that process is more improvement than results, effectiveness of the process is measurable, output is standardized with slandered working process and TQM culture is expended at input, output and feedback level also.
- **Citizen Focus and Citizen Involvement:** It includes employees regularly interact with citizens, citizens are known and understood, citizens needs are integrated in the activity, more is being done than the citizen expects, satisfied citizens are priority number one, changing citizen's needs are systematically collected leading to improvement and preventing complaints instead of reacting to complaints.
- **Fact Orientations:** Fact orientations are based on work according to facts and not values, consequences or problems are analyzed according to measurable aspects, goal oriented data is collected and interpreted, measurements are based on verifiable figures and quality costs are analyzed leading to cost benefit analysis.
- **Consistency of Purpose:** Consistency of purpose focuses on an inspiring mission and vision is developed and communicated to all organizational levels, goals are formulated and

preserved on the basis of SMART principles, administrators are consistent in their behaviour regarding these goals, guidance is given to the quality improvement process and there is commitment at every level of administration.

- **Continuous Improvement:** The concept of continuous improvement focuses on employees improve themselves and their work and chain reaction is generated, problems are welcomed, problem prevention are emphasised than correction, improvements based on continuously documented, multidisciplinary improvement leading to work culture and focus on whole not on parts.
- **Employees Involvement:** The strategy of involvement of all employees concentrates on voluntary involvement of each and every employee, teamwork leading to synergy, open-communication, respect and trust, skill development is ensured on the basis of *learning by doing*, consensual decisions and knowledge economy leading to empowered employee coupled with entrepreneurial approach and leadership skills.

### **Total Quality Management: Methods**

TQM encompasses many basic principles which can be put into practice by using suitable TQM methods. However, adopting the right kind of method is one of the most important jobs of the senior administrations and politicians and the degree of its success largely depends upon their knowledge and understanding of these TQM methods. Some of the important TQM methods are as follows:

- Continuous improvement
- Quality circles on the basis of proper quality parameters
- Six sigma approach of private sector for maximum results
- Citizens satisfaction from within
- Team work on the basis of principle of  $1+1 = 11$
- Design of experiments in the form of case studies
- Re-engineering of human and material resources
- Just-in-Time management i.e. quick delivery of services
- Zero defects leading to zero tolerance
- Proper benchmarking for coordination

All organisations large or small have an established way of system of doing business. A quality management system is about how an organisation manages its activities which are associated with quality of service. Quality management system helps an organisation to build systems which enable it to provide quality service consistently. It may be clarified that characteristics of services and their standards are defined in the respective service standards, and not in the quality management standards. In fact, they are complementary to each other<sup>5</sup>. The use of service standards together with quality management system standards help in not only maintaining but also continually improving quality of services, which may result in enhancing citizen's satisfaction and competitiveness.

**Total Quality Management: Advantages**

TQM approach, if adopted and practiced effectively in an organization, it will definitely improve standard of public service delivery. It will strengthen the organizational performance and optimize citizen's satisfaction in public sector also. The successful implementation of TQM will result in-

- **Better Employee Participation:** TQM emphasis the fact that everyone within the organization should be aware of what is required and how he can contribute towards fulfilment of these requirements, TQM encourages team work while motivating individuals to fulfil their responsibility properly. This thing enables every employee of a team to an optimum extent.
- **Enhanced Productivity:** As TQM changes the organizational culture and creates a co-operative environment, it enhances productivity. Due to effective delegation, empowerment and total staff involvement, problems are identified and solved at lower levels. Thus working process will become more and consequently will be increased.
- **Improved Communication:** A better communication can be established through the effective implementation of TQM principles in any organization. More open and frequent communication will be helpful for officers to recognize the customer's requirements.
- **Improved Customer Satisfaction:** As open communication among employees and customers will highlight customer's problems more clearly when employees will be aware of their problems and demands they can work in this direction to tackle them. TQM focuses that if every employee understands his responsibility and performs his duty well, then it will improve service quality and ultimately it will lead to customer satisfaction.
- **Improved Quality and Less Rework:** In TQM implementation there is a focus on continuous improvement. Continuous improvement leads to eliminate loopholes in working procedure. This will enable employees to focus on their objective rather than rectifying errors. Through TQM problems are identified at lower levels, by the people who are entitled to deal with the problems. As a result the quality of the products and services will be improved and rework will be reduced.
- **The Reduction of Expenses:** By eliminating errors and problems at lower level TQM helps in avoiding rework and trial error every time. It minimizes the repetition of mistakes once recognized, thus it reduces the expenses.
- **The Outcome Increase:** The customers who are satisfied will tend to use more the service or product they are offered. In context of public sector service, there may be improvement in tax payments.<sup>6</sup>

**Understanding Service: Conceptual Framework**

Services are playing major role in economic development of a country because their share in economy has been increased after technological advancements and growth of middle class societies in developing countries. Over the years several attempts have been made to understand services as distance from products so that they can be standardized and controlled with the objective of fulfilling the customers requirements and improving quality. The combined work of several researches found out that there are fundamental differences between products and services and therefore, they have to be treated differently. However, the overall product is

generally a combination of goods and services, where their respective content keeps varying with the nature of services<sup>7</sup>.

### Understanding Public Services

A public service is a service which is provided by government to its citizens, and it may be rendered directly through public sector or indirectly i.e. financing provision of services. On providing services government can play role of distributor or facilitator as per its contribution in making accessible services to citizens. Concept of public service is based on a contract between state and its citizens that, all citizens will bestow their powers to state and in return state will provide them certain services, without any discrimination. Keeping this thing in mind democratic governments are granting 'Right to Public Services' to their citizens, through legislative provisions. Right to Service legislations are meant to reduce corruption among government officials and to increase transparency and accountability<sup>8</sup>. Madhya Pradesh became the first state in India to enact Right to Service Act on 18<sup>th</sup> August 2010 and Bihar was the second to enact this bill on 25<sup>th</sup> July 2011<sup>9</sup>. Some states have made legislative provisions<sup>10</sup> in this regard, which are shown as below:-

#### Legislative Provisions by the State Governments for Right to Service

State	Act Title	Status
Punjab	Right to Public Service Act, 2014	Notified
Uttarakhand	The Uttarakhand Right to Service Act, 2011	Notified
Madhya Pradesh	Madhya Pradesh Lok Sewaon Ke Pradan Ki Guarantee Adhiniyam, 2010	Notified
Bihar	Bihar Right to Public Service Act, 2011	Notified
Delhi	Delhi (Right of Citizen to Time Bound Delivery of Service) Act, 2011	Notified
Jharkhand	Right to Service Act, 2011	Notified
Himachal Pradesh	Himachal Pradesh Public Service Guarantee Act, 2011	Notified
Rajasthan	Rajasthan Public Service Guarantee Act, 2011	Notified
Uttar Pradesh	Uttar Pradesh Right to Service Act, 2011	Notified
Kerala	The Kerala State Right to Service Act, 2012	Notified
Karnataka	The Karnataka (Right of Citizens to Time Bound Delivery of Services) Bill, 2011	Notified
Chhattisgarh	Chhattisgarh Lok Seva Guarantee Bill, 2011	Notified
Jammu and Kashmir	The Jammu and Kashmir Public Services Guarantee Act, 2011	Notified
Odisha	Odisha Right to Public Services Act, 2012	Notified
Assam	Assam Right to Public Services Act, 2012	Notified
Gujarat	Gujarat (Right of Citizens to Public Services) Bill, 2013	Enacted
West Bengal	West Bengal Right to Public Services Bill, 2013	Notified
Central Government	Citizen's Charter And Grievance Redressal Bill, 2011	Propose



In this regard, it is pertinent to mention that the Haryana Government has taken many steps in this direction. Initially 36 services have been identified to simplify the procedure and to ensure the effective delivery of services in a transparent and time bound manner. The notification in this regard was issued by the Administrative Reforms department vide No. 7/8/2011-3AR dated 07<sup>th</sup> June, 2011. It is pertinent to mention that Government of Haryana has enacted Right to Service Act, 2014 notified on 26<sup>th</sup> March 2014.

### **Public Service: Some Principles**

Every public service should follow below mentioned principles<sup>11</sup> in practice:

- **Set Standards of Service:** Appropriate standards should be mentioned and these should be as per citizen's expectations about the service. Performance reviewing and monitoring measures should be developed.
- **Be Open and Provide Full Information:** Public service should be open and communicated clearly in effective language, enabling people to use public services.
- **Consult and Involve:** Present and potential use of public services as well as all employees involved in public service should be consulted and involved.
- **Treat all Fairly:** All people should be treated fairly, their privacy and dignity should be respected. Public service providers should be helpful and courteous towards them.
- **Encourage Access and Promotion of Choice:** Efforts should be done to make services available to everyone, who needs them. For this purpose technological innovations should be used.
- **Put Things Right When They Go Wrong:** Errors should be pointed out and rectified quickly and effectively. There should be clear, well publicized and easy to use complaints procedure, because complaints are best feedback and thus helpful in improving quality of services.
- **Use Resources Effectively:** Available resources should be utilised effectively to provide best value for taxpayers and users.
- **Innovate and Improve:** Always there should be quest of new ways and innovations to improve the service quality.
- **Work with Other Providers:** In order to make services simple to use, effective, co-ordinated and for better delivery service provider should co-ordinate with other service providers also.

### **Public Service: Quality Parameters leading to Total Quality Management**

When considering dimensions of public service quality, it should be realized that citizen's perception is the only valid perspective. While administration and employees should be anxious to understand the quality requirements, their own beliefs or judgement of quality dimensions cannot over-ride the citizens' expectations, neither should they attempt at measuring quality achievements only thorough internal means, as these would invariably leave major gaps. Citizens' expectations of quality are varied and encompass a whole lot of considerations or dimensions. Several attempts have been made to standardize the dimensions. A general consensus has emerged in standardizing five basic dimensions of service quality which

incorporate five additional dimensions within them. The following<sup>12</sup> are the five dimensions of public service quality:-

- **Tangibles** i.e. associated with the services that bear on the quality of services being delivered. These relate to **appearance** of physical facilities, equipments, personnel and communication aids.
- **Reliability** i.e. ability to perform the promised service dependably and accurately (including **security**, that is freedom from danger, risk or doubt).
- **Assurance**, which includes **credibility** of service provider (trustworthiness, believability, honesty), knowledge and **competence** of personnel.
- **Responsiveness** i.e. willingness to help customers and provide prompt service.
- **Accessibility** of relevant personnel and methods of **communicating** with the customers.

### Total Quality Management vis-a-vis Public Service Delivery

Concept of Total Quality Management was originated in private sector to achieve excellent results in business through integral monitoring and estimation of all relevant activities in the organization on the other hand quality has become an administrative concept with the evolution of modern administrative state, when it was associated with the observance of regulation and procedures, with formal correctness viability and absence of arbitrary decisions<sup>13</sup>.

In the eighties, the idea of Total Quality Management has become popular in United States, as American industry was trying to assert itself in the global market. Near about after one decade some governments began to realize the importance of quality management as a means to provide acceptable services. During the nineties, because of reduced budget for public services and citizens growing expectations for services, governments have to adopt Total Quality Management, without any another alternate<sup>14</sup>. Stupaek and Garrity considers three administrative changes responsible for introduction of TQM in public service delivery<sup>15</sup>. Among them first is concerned with improvement of services. In past, public sector was not much panicked about providing effective services to the public. But in recent decades public sector has been forced to ensure effectiveness and efficiency in public services due to increasing competition, availability of reliable alternative service and rising economic problems. Secondly, now these are consumers who are decider of quality of services. They may be divided into two external groups, the public in general and group of interests in particular. The third change indicates decentralization in administration which enables civil servants to make decisions. Through this power they can respond more aptly to environmental changes. Now they can mould policies according to citizens' requirements. Thus above three changes ensures TQM in public service delivery.

Total Quality Management holds a number of features which can improve our poor public service delivery system. TQM can be defined as the management of initiatives and procedures that are aimed at achieving the delivery of quality products and services. A number of key principles<sup>16</sup> can be identified in defining characteristics of TQM, including:

- Top management should act as the main driver for TQM and create an environment that ensures its success.
- Employees should receive regular training on the methods and concepts of quality.
- Improvements in quality should improve customer satisfaction.

- Quality decisions should be made based on measurements.
- Use of appropriate methodology and tools ensures that non-conformances are identified, measured and responded to consistently.
- Companies should continuously work towards improving manufacturing and quality procedures.
- The culture of the company should aim at developing employees ability to work together to improve quality.
- Employees should be encouraged to be pro-active in identifying and addressing quality related problems.

On the basis of above it is pertinent to mention that if the above principles are implemented in public services than customers are considered as citizens and these principles become the sound base for effective public delivery system. Some others have identified six common TQM principles<sup>17</sup> that capture common characteristics in the field. These are Customer Focus; Employee Involvement; Continuous Improvement; Defect Prevention; Performance Measurement and Continuous Learning.

### **Public Service Delivery: Critical Assessment**

After seventy years of independence in India there is a dire necessity of second freedom i.e. freedom from officialism. Today India is in a transitional phase on the account of economic, social, administrative, political and cultural development. As F.W. Riggs in his prismatic model have discussed this transitional phase in developing countries like India. He has differentiated these developed and under developed countries on the basis of functions performed by various structures in these countries. As per his model in developed societies there is a specific structure for every function, while in less developed countries a simple structure performs many functions. In developing countries there is a mixture of both of these societies, because in developing countries there are specific structures for some functions, on the other hand many functions are performed by single structure also. Due to transition in these countries some structures are developed while some are to be developed. These under developed structures create grey areas especially in administration. Poor public service delivery is the most deserving issue in this context to be discussed. Because the system responsible for delivery of public services has many loopholes which deny the citizens the public services which they are entitled to get as a right. One of the reasons for this is the negative mindset of government servants who still suffer from colonial attitude of being the *mai-baap* of public<sup>18</sup>. It is a tradition in government offices to fudge and midge works for some pretext or the other. This tradition has been a bone for delivery of public services to the people. Common people have become habitual to run from pillar to post even for simple and routine works in government offices as officials are master in to beat around the bush. For citizens, any encounter with the government is a harrowing experience. Be it a visit to the police station for registering an FIR, a visit to the respective authorities for obtaining a permission/license/certificate, or a visit to the government hospitals or government educational institutions the procedures are so and the number of officials and their attitudes so complicated that the citizen remains a dissatisfied and frustrated customer<sup>19</sup>.

The Sixth Central Pay Commission's comments in this connection are worth noting: "For the common man, bureaucracy denotes routine and repetitive procedures, paper work and delays.

Thus, despite the fact that the Government and bureaucracy exist to facilitate the citizens in the rightful pursuit of their legal activities, rigidities of the system, over centralization of powers, highly hierarchical and top down method of functioning with a large number of intermediary levels delaying finalization of any decision, divorce of authority from accountability and the tendency towards micromanagement, have led to a structure in which form is more important than substance and procedures are valued over end results and outcomes. Non-performance of the administrative structures, poor service quality and lack of responsiveness and the subjective and negative abuse of authority has eroded trust in governance systems which needs to be restored urgently.”<sup>20</sup>

The Fifth Central Pay Commission had the following to say on the public impression about civil servants: “However, if one speaks to any enlightened member of the public he has several complaints against the public services. These relate to their size, productivity, accountability, transparency and integrity. There is a general impression that the absolute size of the bureaucracy is overgrown beyond what is fundamentally necessary. It is often referred to as being “bloated”. It is also felt that the numbers are increasing at a rapid pace, with scant regard for the work-load. People also speak of the bureaucracy being top-heavy. Not only are public servants perceived to be too many in number it is also believed that they do not contribute to the gross domestic product. Public servants are alleged to invariably come late to office, spend a large part of the day in sipping tea, smoking and indulging in gossip, and leave office early. Consequently, productivity is said to be abysmally low, estimates of their actual working hours ranging from one to two-and-a-half hours in a day.

It is felt that bureaucrats are a law unto themselves. They hide behind mountains of paper, maintain uncalled - for secrecy in their dealings with public issues, take surreptitious decisions for considerations that are not always spelt out on paper, and are accountable to no one. They have life-time contracts of service which cannot be cut short on any ground, defended as they are by the safeguards under Article 311 of the Constitution. Their misdeeds are never found out. If exposed, they take refuge behind the protective wall of collective decision making in committees, which cannot be brought to book. The most serious charge levelled against them is that they lack integrity and honesty. Thus they are alleged to lack not merely in the sense that they accept money or rewards for the decisions they take as public servants in the exercise of their sovereign powers, but also in the larger sense of not maintaining a harmony between their thoughts, words and deeds. Many scams are being uncovered every day and evidence unearthed of public servants not only conniving at corruption but being the beneficiaries of the system themselves.”<sup>21</sup>

In our administrative system on the one hand such complex bureaucracy prevails and on the other hand people’s expectations are rising, they do not want to devote much time standing in long queues and running from table to table for routine tasks. They don’t get services easily and in a time bound manner, they think against government and administrative system. This frustration results in movements like Anna Hazare’s India Against Corruption movement.

In our country structures are being developed for betterment of public service delivery but our administrative system is paralyzed to make these structures functional. To improve public service delivery excellent provisions and policies have been made. A lot has been invested to build ICT enabled infrastructures, yet we are unable to yield productive results. Reason behind these failures are lack of public awareness, bureaucratic efforts for less transparency and more secrecy, their resistance for changes, lack of administrative and political will etc.

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### Implementation of Total Quality Management in Public Service Delivery

TQM has been an imported field of study for the last two to three decades. However, in the Indian contexts the TQM initiative was first set up by the Confederation of Indian Industries (CII) in the early 1980s. G.J. Gyani has discussed in his book about small groups bring big results regarding implementation of TQM in Indian Oil, wherein all the workers were involved through small group activities at the shop floor level. The special thing about this attempt was that the TQM project began at the shop floor level involving workers and then moved on to the middle management levels<sup>22</sup>.

To improve the quality of public services, TQM concept have been used in Lal Bahadur Shastri National Academy of Administration since 1997. It is an effort to use the principles of TQM which are widely used in industries could be applied in a training environment in administrative training institutes<sup>23</sup>. It is useful to improve both the quality of training programmes and attitudes of civil servants towards their work.

The Citizen's Charter is a written declaration by a Government department that highlights the standards of services for consumers, provisions to redress their grievances and other related information. In Brief it is a set of commitments made by a department regarding standard of service which it delivers. Though Citizen's Charters is not enforceable in a court of law, but it empower citizens of service and redress their grievance in case of non-compliance by the service provider<sup>24</sup>. Citizen's Charter ensures Total Quality Management in public service in following ways:

- **Customer Satisfaction:** Total Quality Management focuses on customer satisfaction through Citizen's Charter. Through Citizen's Charter people can know for which standard of service they are entitled for if they are not satisfied with the standard of the service, they can approach to grievance redressal mechanism. Thus by resolving their complaints, Citizen's Charter can ensure TQM in public service delivery.
- **Continuous Improvement:** Total Quality Management focuses on continuous improvement of service delivery. Citizen's Charters make it possible because through Citizen's Charter a feedback mechanism is established in the form of grievance redressal mechanism. When people will complaint about standard of public service delivery, government departments will be able to trace loopholes within the system and remove them. This kind of feedback will enable them to eliminate repetition of errors and rectify them in prior stages.
- **Employee Involvement:** Total Quality Management emphasizes on employee involvement and Citizen's Charter clearly displays who will be responsible for which service. It means Citizen's Charter designate particular employee for particular kind of service. It will inform citizens also to whom they should approach for a specific service. So the principle of pin pointed responsibility prevails.
- **Transparency:** Total Quality Management involves transparency in the organization. Citizen's Charter in public domain displays every possible information about the service to be provided. Thus, it makes public aware about what they are entitled for, to whom they should approach, what they have to pay, what is the procedure for a service and what is the duration of a work getting done etc. By providing all these informations Citizen's Charter plays an important role to minimize the corruption in public services through the instrument of transparency.



- **Active Participation:** Total Quality Management talks about active participation of employees for better quality of services. Citizen's Charter enforces them to be more conscious about their duties and responsibilities. Citizen's Charter focuses on performing duties in a time bound manner, if customers will not get the services on time, they can question them for delay. Citizen's Charter makes it necessary for them to be active at every stage and don't allow them to surpass the time limit.
- **Equal Treatment:** Citizen's Charter will reduce negative implications of Indian socio-cultural values e.g. special treatment for powerful, preference to nears and dears, discrimination with poor, implementation of social stratification in service delivery also because it works as a tool to provide 'right to service to all' without any dispute or discrimination.

## CONCLUSION:

Second Administrative Reforms Commission in its Twelfth Report, "Citizen Centric Administration the Heart of Governance" has given a 'Seven Step Modal for Citizen Centricity', which explains how Total Quality Management in public service delivery is ensured. This modal is a combination of the principles of IS15700:2005, the Sevottam model and the Customer Service Excellence Model of the UK. These seven steps<sup>25</sup> are: Define Services; Set Standards; Develop Capacity; Perform; Monitor; Evaluate and Continuous Improvement.

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## CURRENT SCENARIO OF HARYANA ECONOMY IN THE CONTEXT OF GROSS DOMESTIC PRODUCT, PER CAPITA INCOME, PUBLIC FINANCE AND TAXATION

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### ABSTRACT

*Haryana is a prosperous and progressive state of India. It is formed from past 51 years on 1 November, 1966 by carved from Punjab. Geographically the Haryana is bordered by Punjab and Himachal Pradesh in the north, by Rajasthan in the west and south. The national capital Delhi is just near the Haryana. Haryana surrounds Delhi on three sides forming the Northern, Western and Southern. The capital of Haryana is Chandigarh shared with the Punjab. The state enjoys the unique distinction of being among the first to provide electricity, drinking water to all the villages. Haryana is developed in all three activities like Agriculture, Industry and Service. More than 60% population is depends directly and indirectly on agriculture in Haryana. It is primary activity. Haryana is the leading industrialized state of India and is the largest producer to tractors, scientific instruments, sanitary wares, bicycles, motorcycles, food processors. Gurugram an emerging metropolis is the house of major information technology units of India. The purpose of this paper is to highlight the financial position of Haryana through Gross Domestic Product (GDP), Per Capita Income, Public Finance and Taxation because all these factors are indicators of financial position.*

**KEYWORDS:** *Haryana, Economy, Gross Domestic Product, Per Capita Income, Public Finance, Taxation.*

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**INTRODUCTION:****Haryana:**

Haryana is a progressive state of India. It is formed on 1 November, 1966 by the carved from Punjab. Haryana has achieved a place of distinction for itself in the past 51 years. With just 44212 sq. km. geographical area that is the 1.34% of total geographical area of India, Haryana has 6 Divisions, 22 Districts, 73 Sub-Divisions, 93 Tehsils, 49 Sub Tehsils and 140 Blocks, 154 Towns and 6841 Villages. Geographically the Haryana is bordered by Punjab and Himachal Pradesh in the north, by Rajasthan in the west and south. The national capital Delhi is just near the Haryana. Haryana surrounds Delhi on three sides forming the Northern, Western and Southern. The capital of Haryana is Chandigarh shared with the Punjab. The state enjoys the unique distinction of being among the first to provide electricity, drinking water to all the villages. Haryana is developed in all three activities like Agriculture, Industry and Service. More than 60% population is depends directly and indirectly on agriculture in Haryana. It is primary activity. Metalled roads, electricity, development of markets, higher quality seeds and fertilizers are provided to develop the agriculture sector by Haryana Govt. Haryana State Agricultural Marketing Board (HSAMB) was set up on 1 August, 1969 to control over the market committees in the Haryana state. Haryana is the leading industrialized state of India and is the largest producer to tractors, scientific instruments, sanitary wares, bicycles, motorcycles, food processors. Gurugram an emerging metropolis is the house of major information technology units of India. Information Technology Enabled Services (ITES) units and Business Process Outsourcings (BPO) units are quite developed in the region. Major projects like kundli - Manesar – Palwal Expressway, Delhi-Mumbai Industrial Corridor are set up to promote the industrialization.

Gross Domestic Product (GDP) of Haryana is Rs. 545323 crore which is the 3.58% of total Indian GDP. Per Capita Income of Haryana is Rs. 178890 which is higher than the Indian Per Capita Income. According to the census 2011, total population of Haryana is 2.535 crore out of which 1.185 crore is female population. 65.12% population of Haryana resides in rural area. Literacy rate of Haryana is 75.6%. Female literacy rate of Haryana is 65.9% and male literacy rate of Haryana is 84.1%. So all the projects and activities proven that Haryana economy is a progressive economy.

**OBJECTIVES:**

- To study the GDP of Haryana Economy.
- To study the Per Capita Income of Haryana Economy.
- To study the Revenue Receipts and Expenditure of Haryana Economy.
- To study the Capital Receipts and Expenditure of Haryana Economy.
- To study the Tax position of Haryana Economy.
- To study the Goods and Service Tax (GST) position of Haryana Economy.

**RESEARCH METHODOLOGY:**

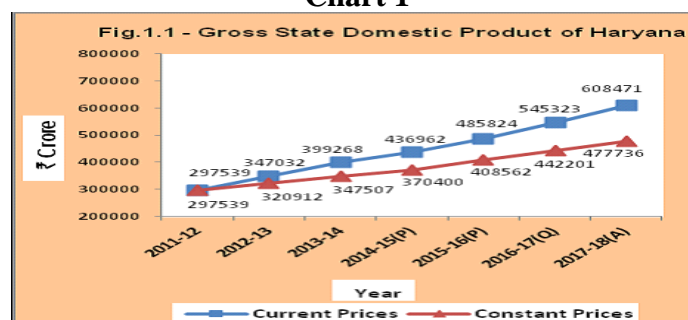
Data for this study is secondary in nature. Data is collected from different published sources like books, magazines, journals, articles and websites. Table and chart is used to represent the data.

**Data Analysis and Interpretation:****Gross State Domestic Product of Haryana:****Table 1 (Rs. In Crore)**

Years	At Current Prices	At Constant Prices (2011-12)
2011-12	297538.52	297538.52
2012-13	347032.01	320911.91
2013-14	399268.12	347506.61
2014-15(P)	436961.53	370399.76
2015-16(P)	485824.16	408561.87
2016-17(Q)	545322.52	442200.56
2017-18(A)	608470.73	477736.26

P: Provisional Estimates, Q: Quick Estimates A: Advance Estimates

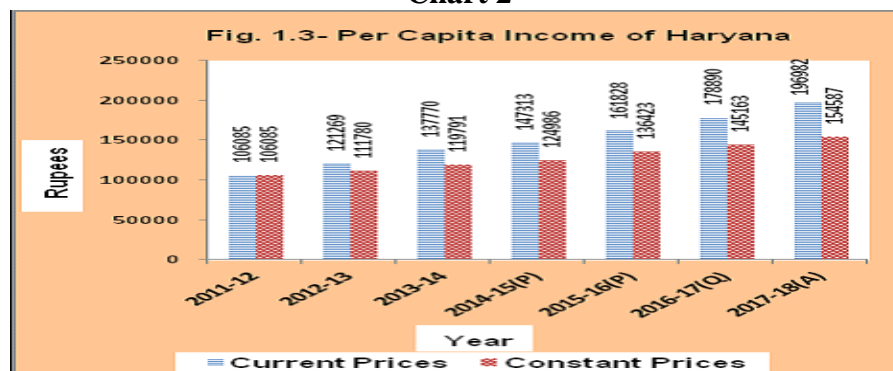
Source: Department of Economic & Statistical Analysis, Haryana, E-Survey of Haryana 2017-18

**Chart 1****Per Capita Income of Haryana:****Table 2**

Years	At Current Prices	At Constant Prices (2011-12)
2011-12	106085	106085
2012-13	121269	111780
2013-14	137770	119791
2014-15(P)	147313	124986
2015-16(P)	161828	136423
2016-17(Q)	178890	145163
2017-18(A)	196982	154587

P: Provisional Estimates, Q: Quick Estimates A: Advance Estimates

Source: Department of Economic & Statistical Analysis, Haryana, E-Survey 2017-18.

**Chart 2****Revenue Receipts and Expenditure of Haryana:****Table 3 (Rs. In Crore)**

Years	Revenue Receipts	Revenue Expenditure
2014-15	40798.66	49117.87
2015-16	47556.55	59235.70
2016-17(RE)	60327.09	72548.77
2017-18(BE)	68810.88	79935.84

RE: Revised Estimates, BE: Budget Estimates Source: E-Survey 2017-18.

**Chart 3****Capital Receipts and Expenditure of Haryana:****Table 4 (Rs. In Crore)**

Years	Capital Receipts	Capital Expenditure
2014-15	10922.90	4558.40
2015-16	31142.01	20158.62
2016-17(RE)	23683.03	11583.38
2017-18(BE)	22920.69	12448.54

RE: Revised Estimates, BE: Budget Estimates Source: E-Survey 2017-18.

**Chart 4****Tax Position of Haryana:****Table 5 (Rs. In Crore)**

Years	State's Own Tax Revenue	Share in Central Taxes	Total Tax
2014-15	27634.57	3548.09	31182.66
2015-16	30929.09	5496.22	36425.31
2016-17(RE)	37841.91	7245.72	45087.63

2017-18(BE)	43339.74	8371.78	51711.52
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RE: Revised Estimates, BE: Budget Estimates Source: E-Survey 2017-18, State Budget Documents.

### Month Wise Net Collections of GST in Haryana:

**Table 6 (Rs. In Crore)**

Month	SGST Collection	Net IGST Settlement	Net Collection
July, 2017	0.23	0	0.23
August , 2017	1272.59	-286.67	985.92
September, 2017	1149.54	113.76	1263.30
October, 2017	1142.20	232.71	1374.91
November, 2017	1063.71	152.64	1216.35
December, 2017	967.92	380.45	1348.37
<b>Total</b>	<b>5596.19</b>	<b>592.89</b>	<b>6189.08</b>

Source: E-Survey 2017-18, Excise and Taxation Department, Haryana.

### CONCLUSION:

In this paper Haryana Economy is studied in the context of GDP, Per Capita Income, Financing System like Revenue Receipts and Expenditure, Capital Receipts and Expenditure, Tax position of Haryana, GST in Haryana. All these factors show the financial position and economic growth of Haryana. As per the table no. 1 GDP of Haryana in 2011-12 is Rs. 297538.52 crore at current prices and Rs. 297538.52 crore at constant prices based on 2011-12 prices and it is estimates that Rs. 608470.73 crore at current prices and Rs. 477736.26 crore on constant prices for the 2017-18 which is approximately 2 times greater than 2011-12 and shows constant progress in GDP. Table no. 2 also represent the data of Per Capita Income from 2011-12 to 2017-18, it shows a constant progress in the Per Capita Income. In 2011-12 Per Capita Income is Rs. 106085 and Rs. 106085 at current prices and constant prices respectively and in 2017-18 Rs. 196982 and Rs.154587 at current prices and constant prices respectively. It also shows an increase of 10% percent during 2017-18 as compared to 2016-17. Haryana is the one of the best state of India which is carrying out fiscal reforms and fiscal management, resources generation and allocation and expenditure management system which is showed by the table no.3, that Revenue receipts and expenditure. In 2014-15 the Revenue receipts are Rs. 40798.66 crore and Revenue expenditure are Rs. 49117.87 crore. In 2017-18 revenue receipts are Rs. 68810.88 crore and revenue expenditure are Rs. 79935.84 crore which are based on budget estimates. It showed that government revenues are less than the expenditure. In 2014-15, Capital receipts and capital expenditure are Rs. 10922.90 crore and Rs. 4558.40 crore respectively. In 2017-18 on the bases of budget estimates the capital revenues and capital expenditures are Rs. 22920.69 crore and Rs. 12448.54 crore respectively. The capital expenditure of the state is expected to increase from Rs. 4558.40 crore in 2014-15 to Rs 12448.54 crore in 2017-18 on the bases of budget estimated. All these expenditure are incurred on administrative services, fiscal services, payment of pension, interest and miscellaneous general services, education, medical public health, water supply, social security and welfare of labour and employment etc. all the expenditure are classified into developmental expenditure and non-



developmental expenditure. One major aspect is also studied in the paper is GST. GST has been rolled out in the country on 1 July, 2017 as one of the biggest tax reforms. Haryana has actively participated in the implementation process of GST and ranks among the top revenue collectors in the country. GST collected in July 2017 is Rs. 23 crore and in December, 2017 Rs. 1348.57 crore which shows the progress in the tax collection total tax collected in 2017 is Rs. 6189.08 crore. All these factors show that Haryana is a prosperous and progressing state of India. Haryana contributed a lot in development of India.

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## PUBLIC HEALTH CARE OF INDIA: AN OVERVIEW

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### ABSTRACT

*Health and human development form integral components of overall socio-economic development of a nation. Public Health is concerned with threats to the overall health of a community based on population health analysis. Health is defined and promoted differently by many organizations. "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic and social condition". Gender need to be added to this list. Health is man's greatest possession, for it lays a foundation for his happiness. Charaka, the renowned Ayurvedic physician is known to have said: "Health is vital for ethical, artistic, material and spiritual development of man". According to her, the post-colonial public health, unfortunately, reflected not only major continuities from the past, but also attempted to reestablished those in the spheres of planning, development of organisation, delivery of services and choices of technology. Thus, the promotion of health cannot be achieved by measures that derive from any single health discipline, nor can health measures be considered a dependency of the broader educational, social, economic and administrative factors that are crucial to human development. Tina: is why, Inter-Sectoral coordination is essential.*

**KEYWORDS:** *Inter-Sectoral, Post-Colonial, Socio-Economic, Acquisitiveness,*

## INTRODUCTION

The human race entered the 21<sup>st</sup> century with the fundamental challenge of ensuring improved standard of living, a better quality of environment, proper health care facility and better education for improving the quality of life. Before the World War II, there were only two models of development; the capitalistic and socialist. The countries like Asia, Africa and Latin America avoided the acquisitiveness of capitalism and regimentalism of socialism and adopted a mid way path. Thus, the world was divided into three blocks. The economically advanced capitalist countries came to be known as the 'First World'. The 'Second World' included the communist countries. The Asian, African and Latin American countries were called the Third World'.

The entire human economy is currently under the sway of liberal economic reforms for establishing a market - friendly environment. The world has changed and tripartite chiron of the world no more exists. The world had shrunked down to a global township. Globalisation has divided the world into rich and poor.

Globalisation had serious implications because it led to reduced government involvement in social sector like health.<sup>1</sup> In 1978, in a landmark global conference organized by WHO and UNICEF at Alma Alta (USSR), a revolutionary strategy based on primary health care was put forward to reach the goal of health for all by 2000. After 20 years, the target is far from being fulfilled anywhere in the world. It was in the fitness of things that people's charter for health was adopted at People's Health Assembly (PHA) at Savar in Bangladesh (December, 2000) in which 1450 health participants from 93 countries and another 500 from the host country participated. It was, indeed, a mini United Nations General Assembly in which more than 500 health activists of India also participated.

The PHA was an assertion of the solidarity of the people and a rewet against vested interests reflected in some of the policies and programmes of the World Bank, IMF, WTO and transnational corporations (TNCs), particularly, the powerful pharmaceutical companies who have made a business of sickness and reduced to a force the cheerful slogan of 'Health for All by 2000'.

It is disturbing to note that the totality of the health situation has worsened in spite of the 'fall in mortality rates and a rise in the expectation of life'. PHA noted with the concern mat "despite unprecedented levels of wealth in the world, poverty and hunger are increasing. The gap between rich and poor nations has widened in the same way as inequalities exist within countries among social classes, among men and women and young and old."<sup>2</sup>

Health and human development form integral components of overall socio-economic development of a nation. There is a proverb in English, "Health is Wealth". In Indian scriptures also, the importance of health has been highlighted. Amartya Sen in his keynote address to the Fifty Second World Health Assembly, Geneva held on 18<sup>th</sup> May, 1999 made strong plea for promoting health to ensure development. Good health is essential component for individual happiness and progress.

1. The first point to note is that the enhancement of health is a constitutive part of development.
2. Secondly, good health and economic property tend to support each other. Health services have been given an important place in the fundamental rights. According to Amartya Sen, illiteracy, malnutrition and lack of adequate healthcare are three deadly enemies of a first society.

3. Thirdly enhancement of good health can be helped by a variety of actions including public policies by providing epidemiological services and medical care.
4. Fourth, when an economy is poor, major health improvements can be achieved through using the available resources in a socially productive way. It is important to pay to the economic considerations involving the relative costs of medical treatment and the delivery of health care.
5. Fifth, the issue of social allocation of economic resources cannot be separated from the role of participatory politics and the reach of informed public discussion.

Poverty is direct cause for diseases and ailments. These people do not have even means to meet basic necessities like food, education, healthcare, housing etc. India is producing food more than its need. There are lacunae in public distribution system (PDS) because of which food is not reaching to needy. There are many priorities before the state but providing basic education and healthcare to everybody occupies primary place in the list of priorities. If basic education and health care are taken care of, the rest of development would automatically follow.<sup>3</sup>

Health is one of the vital indicators reflecting quality of Human life. Article 25 of the Universal Declaration of Human Rights states that healthcare for the preservation and promotion of health is one of the most basic human rights in India being a signatory to the Alma Ata declaration (1978), aimed at “health for all” by 2000. But the target could not be achieved due to lack of funds for inability to execute or fulfill the declaration is to the public health sector which constitute less than 1 percent of the GDP. A number of concessions in the form of reduced excise, customs, or income tax exemptions were announced for the healthcare industry.

## MEANING AND DEFINITION OF HEALTH

People’s charter for Health, adopted on the last day of the Assembly, asserted, “Health for all means that powerful interests have to be challenged, that globalisation has to be opposed, and that political and economic priorities have to be drastically changed.”<sup>4</sup>

Public Health is concerned with threats to the overall health of a community based on population health analysis. Health is defined and promoted differently by many organizations. The World Health Organization, the United Nations body that sets standards and provides global surveillance of disease, defines health as: “A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”

C.E.A. Winslow, one of the leading figures in the history of health, characterized public health practice as the science and art of disease prevention, prolonging life, and promoting health and well-being through organized community effort for the sanitation of the environment, the control of communicable infections, the organization of medical and nursing services for the early diagnosis and prevention of disease, the education of the individual in personal health and the development of the social machinery to assure everyone a standard of living adequate for the maintenance or improvement of health.<sup>5</sup>

## Historical Experience

The Institute of Development Studies, Kolkata, and Department of History, Calcutta University jointly organised a seminar on 'Public Health in India: Colonial and Post-Colonial Experience' on October 15-16 in which the issue of public health in context at serial reality and human condition was examined. Scholars focused on deprivation, malnutrition, food insecurity, impact

of globalization on pharmaceutical companies and its implications health care. To study public health historical approach was a dependable method.

Social scientists and public health practitioners made presentations in the six sessions, which were chaired by renowned social scientists from various disciplines. While renowned historical approach as a dependable method to study public health, Imrana Qadeer of Jawaharlal Nehru University asked pointedly, “Who sets the priorities in research in this country of scarce resources where funding in arms and ammunitions eight times more than that in the health sector?” In her presentation she mentioned that public health interventions in the colonial period were marked by ‘control’ and ‘centralisation’, which together pushed technology, used class and caste divides and exploited local cultures to maintain the power and hegemony of the imperial state. According to her, the post-colonial public health, unfortunately, reflected not only major continuities from the past, but also attempted to reestablished those in the spheres of planning, development of organisation, delivery of services and choices of technology.

Discussants and other participants raised several important during the two day seminar. Almost all the papers arguments and counter-arguments ranging from issues in methodology to the presentation of constructs like ‘medical orientalism’.<sup>6</sup>

### **World Health Organization (WHO)**

The United Nations agency responsible for international health is the World Health Organization (WHO), which was founded in 1948 and now has more than 170 member countries. The WHO constitution defines health as “a state of physical, mental and social well-being and not merely the absence of disease or infirmity”. Many organizations are now adding to this definition a fourth dimensions of health - spiritual well being. The next challenge for WHO is to recognize that a major obstacle to enjoying the right to health is being torn female. The WHO constitution states: “The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic and social condition”. Gender need to be added to this list.

Improving health throughout the world is a gigantic task requiring global cooperation. To facilitate this cooperation, WHO established an annual two-week meeting in Geneva, this. World Health Assembly, representatives of member countries tries meet to exchange information, share experiences, msu about health issues, and devise global strategies. Due in part to these yearly consultations, WHO’s understating of best to promote health throughout the world has continued to evolve.

During the first three decades, WHO made little progress mard its goal of a healthier world. In 1977, the Director meral of WHO called for a new strategy, acknowledgement mat although the health care strategies of the industrialized world - that of big hospitals, drug and curative medicine - had been exported to the developing countries for thirty years, the wealth of the world had not improved. In fact, it has worsened.

That year the World Health Assembly resolved that by the mi of this century people everywhere should have access to wealth services enabling them to lead socially and economically productive lives. This goal is known as “Health for all by the year 2000”<sup>7</sup>

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**World Bank**

State Health System Development Projects were being implemented in the following States with World Bank Assistance:

- (i) Andhra Pradesh (from 1995 - 2001) with the financial assistance of 608 crore from World Bank;
- (ii) Karnataka (1996 - 2001) 546 crore;
- (iii) West Bengal (1996 - 2001) 698 crore;
- (iv) Punjab (1996 - 2001) 425 crore;
- (v) Orissa (1998 - 2001) 415.58 crore

The state of Maharashtra has also been cleared by the Bank Board on 8<sup>th</sup> December, 1998. Besides, small help is ordered by many countries.<sup>8</sup>

**Factors Influencing Health**

A variety of factors influence human development both favorably and unfavorably. Some of these factors are: environmental- natural or manmade; physical, chemical, magical and social; economic, cultural factors: education, genetic factors; pre-natal health development factors and genetic factors. Thus, the promotion of health cannot be achieved by measures that derive from any single health discipline, nor can health measures be considered a dependency of the broader educational, social, economic and administrative factors that are crucial to human development. This is why, Inter-Sectoral coordination is essential.

Obviously relationship between socio-economic of health is of extreme importance. In fact, every aspect of economy has a health component which has an important bearing on the overall socio-economic development. Thus, as stated in a WHO paper on public health: "The health component and other components of the total system surely interact. Health not only affects the socio-economic complex but is also affected by it, sometimes unfavorably."

Because of this intimate relationship, it has been mentioned in the First Five Year Plan, "If this subject is regarded in the proper light as one which is concerned with everything affecting the health of the community, it must be rated to be the biggest and the most important problem of India."<sup>3</sup>

Socio-economic development consists of various components related to the productive shares of activities. Health programmes cannot be related unilaterally to either the economic or the social spheres as they influence both and are influenced by both.

There is a need for a unified and integrated approach to public health, i.e., to combine services for nutritionist, communicable disease-control, better maternal health and family-welfare. Thus, conventional linear planning and the execution of separate programmes cannot meet the needs of human development. In general, the factors affecting health could be classified into three broad categories: hereditary, environmental and personal. Similarly, the various conditions which play a vital role in determining one's health status can be put under four major areas, viz., "mental health, social health, spiritual health and physical health."

The health care administrations need to be aware of certain basic factors responsible for formulation of health policies. Following are the factors:



- (a) Health opportunities need not be related to the purchasing power of the people.
- (b) While planning Public Health programmes for the benefit of the whole community, care should be taken to see that medical facilities are accessible to the poor people inhabiting the rural areas, urban slums and tribal areas.
- (c) Investment on preventive as well as curative health programmes and activities should be considered as entire health care, i.e., changing life styles of the 7 pie as we know that prevention is better than cure.
- (d) Doctors should be trained to act as social physicians as well as promote healthy and happier life.
- (e) Health should not be considered in isolation from other socio-economic factors.
- (f) Health consciousness should be fostered through health education and by providing opportunities for the participation of the individuals in the health programmes.
- (g) Sound Health Administrative structures may be designed for the implementation of the health policy.
- (h) All the systems of medicine must be encouraged to provide decent health to the people in a coordinate fashion.
- (i) Utilize community resources optimally and encourage local participation to promote self-help programmes at the village level.
- (j) Ensure that basic health services are available, accessible and acceptable to the people.<sup>9</sup>

### **Importance of Health**

In the new millennium, the people are realising and proving their health not only through government machinery but by their own efforts. It is being realised globally that health is one's own responsibility and depends to a substantial extent on the life style of the people and not entirely only on health intervention by hospitals. Therefore, in the new millennium, have to find out ways and means of promoting people's health through other methods as well.

Diroshi Nakajima, Director General, World Health Organization in his message in the World Health Report 1998, "Life in the 21<sup>st</sup> Century: A Vision for All" rightly says that "The Progress and achievement of the past 50 years are solid foundations for a healthier and better world. It is already time to build on them. We can pass no greater gift to the next generation than a healthier future. That is our vision. Together, the people of the world can make a reality".

It is a recognised fact from the time immemorial that Good health is a prerequisite to human productivity and the development process. It is essential to economic and technological development. A healthy community is the infrastructure upon which to build an economically viable society. The progress of society greatly depends on the quality of its people. Unhealthy people can hardly be expected to make any valid contribution towards development programmes. Health is man's greatest possession, for it lays a foundation for his happiness. Charaka, the renowned Ayurvedic physician is known to have said: "Health is vital for ethical, artistic, material and spiritual development of man".

Buddha has said that of all the gains, the gains of health are the highest and the best. Health is not only basic to leading a happy life for an individual but it is also necessary for all productive

activities in the society. No industry can expect the optimum output if it does not employ healthy workers or does not make and provide adequate facilities for proper maintenance of their health. Undoubtedly, professional efficiency, good health and development are interrelated.

The Planning Commission has stressed the vital importance of public health in the enrichment of community life. It has been stated:

“Health is fundamental to the national progress in any spheres. In terms of resources for economic development, nothing can be considered of higher importance than the health of the people which is a measure of their energy and capacity as well as of the potential man-hours for productive work in relation to the total number of persons maintained by the nation. For the efficiency of industry and of agriculture, the health of the worker is an essential consideration.”

A disease-stricken society afflicted with disease can rarely hope to extricate itself from the clutches poverty and ignorance that keep it backward and underdeveloped in many areas of life. A nation can become truly healthy only when it succeeds in overcoming all these deficiencies stemming from cultural, social, economic and other causes. A nation that is ill-fed can hardly afford to exhibit efficiency in any field. Herpohilas C., 300 B.C. quoted:

*“When health is absent  
Wisdom cannot reveal itself  
Art cannot manifest, Strength cannot fight,  
Wealth becomes useless  
And Intelligence cannot be applied. ”*

As such, good health must be a primary objective of national development programmes. It is precursor to improving the quality of life for a major portion of mankind.

The purpose of public health administration is to enrich the quality of life leading to ethical, artistic, material and spiritual development of man.<sup>10</sup>

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## URBANIZATION AND ENVIRONMENT: LESSONS FROM THEORY AND PRACTICE FOR URBAN POLICY

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### ABSTRACT

*Cities are complex. They create agglomeration and scale economies and are termed 'engines' of growth. Cities also continuously face new challenges every day, exacerbated by unchecked urbanization and growing population, an increasing cause of concern for the environment. Underlying the problems of urbanization are the unplanned expansion of city areas, lack of congestion and pollution fighting measures, and feeble pace of progress and seriousness towards sustainable goals. Focusing on the urban environmental problems, this paper offers insights into the challenges associated with overcoming the problems as well as the investment requirements for providing basic infrastructure and services to the urban population. The adoption of a bottom-up approach and removal of the governance bottlenecks of ULBs is the best approach to achieve urban sustainability. Furthermore, implementing policies relating to green tax, congestion pricing, transit-oriented development (TOD), inclusionary zoning as well as promotion of solar energy are also desirable. The purpose of this paper is to identify and investigate the environmental impacts of rapid urbanization and develop preventative policy measures from theory and practice using a conceptual framework. The policy measures suggested in this paper are constructed against the backdrop of 'sustainable development goals' formulated by United Nations. JEL Code: R11, R51, Q53*

**KEYWORDS:** Urbanization, Environment, Urban Sustainability

## 1. INTRODUCTION

The growth of cities in urban spaces is materializing through massive rural-urban migration coupled with a natural increase in the population, heightened by growing concentration of new opportunities and amenities available in urban areas. The higher employment opportunities, sophisticated educational facilities, lower transport costs, superior communication facilities and an overall ambient standard of living makes cities and towns attractive to rural residents. In particular, people flock to town and cities in the hope of exploiting available employment opportunities and thereby uplifting their standard of living. But the process of urbanization no longer implies a mere shift of habitat from rural to urban, rather its implications have altered for social and political relations at every level, marked by a transformation of the urban spaces in the global arena (United Nations, 2012). However, most cities face urban environmental problems due to the uncontrolled population growth and underinvestment in urban infrastructure and services. The frequent migration from rural to urban areas, inadequate housing and infrastructure, absence of urban master plans, uncoordinated spatial urban growth, decay of inner cities, inefficient waste management, emissions from automobiles, indiscriminate destruction of vegetation for individual and societal use as well as construction and agricultural and mining activities - contributes to the urban environmental problems. At the grass-root level, the urban local bodies (ULBs) are entrusted with the matters of providing basic infrastructure and services to a municipal area. The losses from the ill-conceived urban planning far outweigh the gains, when the costs (real and monetary) of urban environmental degradation are taken into account.

The world is embarking on a fast rural to urban shift. In 2016, urban dwellers accounted for 54.5 percent of the world population. Projections are that the urban population will surge to 60 percent in 2030. In 2016, there were 512 cities globally having at least 1 million population, which is projected to increase to 662 in 2030. In contrast, the rural areas were home to more than 45 percent of the world population, which is expected to fall to 40 percent by the year 2030 (United Nations, 2016). As per the Census of India (2011), urban and rural population comprised of 31.15 percent and 68.85 percent respectively of the total population with Delhi (97.50 percent) having the highest share of the population living in urban areas.

World urban issues pertaining to environmental problems are multi-faceted and find its genesis in the industrial revolution, the development of science and technology, changing patterns of consumption and production at the global level. These factors are identified with serious manifestations for the present world as well as for those gearing up for tomorrow. The anthropogenic and natural activities in the urban settings pose noticeably threatening environmental, economic and social challenges, standing as the biggest obstacle to achieving sustainable development. Three groups of cities namely emerging cities, global megacities and mature cities have been recognized that might create future environmental setbacks (Floater et al., 2015).

This paper endeavors to illuminate on the process of urbanization in India with the emphasis on environmental problems related to urban areas. Our assessment will try to trace the pattern of urbanization, provide an overview of the environmental and ecological implications of urbanization in India, and various challenges as well as opportunities for future sustainability. This paper will also equally focus on urban governance and planning and municipal financing - key challenges and the way forward. The present study is exploratory in nature. It has made extensive use of data made available by various governmental and non-governmental organizations, institutions, think tanks and newspapers through their publications.

## 2. State of Urban Environment in India and Issues

India's urban situation is a grim challenge that must be acknowledged, confronted and for which we must debate solutions. Indian environmental problems enveloping the urban areas are multi-faceted and are not amenable to an easy solution. The Indian cities are grappling with a number of serious environmental problems, including urban sprawl, overcrowding, and mushrooming of slums, water and sewerage problems, solid waste and urban pollution. Mercer Quality of Living Index (2018)<sup>3</sup> has rated New Delhi at 162<sup>nd</sup> position, Mumbai at 154<sup>th</sup> position, Bengaluru at 149<sup>th</sup> position and Hyderabad and Pune jointly at 142<sup>th</sup> position, in terms of their global living conditions. Taking environmental health (40%) and ecosystem vitality (60%) as variables, the Environmental Performance Index (EPI)<sup>4</sup> in 2018 has placed India at 177 out of 180 countries, which amply documents the need for improvement on environmental grounds.

### 2.1 Traffic Congestion

The unnatural growth in motor vehicle use and ownership coupled with expansion of national highways in India are major cause of traffic congestion and air pollution (Badami, 2009). Reportedly, the total number of personal vehicles was 230 million in 2016, of which 51 million-plus cities accounted for 70.93 million of registered motor vehicles (MORTH, 2016). National highways in India grew at the annual growth rate of 7.3 percent during 2010-11 to 2015-16. The overburdening of urban transport system precipitates "high external costs of transport" mainly network congestion, pollution, accidents, noise, vibration and dirt, poor water and air quality. Not to mention congestion also leads to phenomenal loss of productivity, elevated air pollution level and massive fuel wastage, because of idle timing and stalling of vehicles at signals and traffic jams. In fact, congestion has cost New Delhi whooping 54,000 crores of rupees in 2013, which will increase to 14658 million US\$ per year (Davis et al., 2017).

**Table 1: Registered vehicles in million plus cities (in thousands)**

Cities	2012	2013	2014	2015
Bengaluru	4156	4591	5050	5560
Ahmedabad	1682	1796	3196	3420
Chennai	3767	4072	4354	4934
Greater Mumbai	2029	2187	2333	2571
Hyderabad	3387	2040	2203	2369
Kolkata	496	1278	1339	1402
Delhi	7350	7785	8293	8851
Jaipur	1871	1962	2121	2249
Kanpur	1067	1143	1227	1462
Varanasi	588	633	695	769
Pune	2267	2347	2185	2337
Vishakhapatnam	683	643	690	731
Surat	1145	1241	2244	2459
Lucknow	1315	1424	1553	1710
Patna	743	829	941	1019

Source: Ministry of road transport and highway



## 2.2 Urban Sprawl

In the absence of rigorous town planning, demand for urban land has risen dramatically along with an unprecedented level of population growth and migration, resulting in the conversion of non-urban and agricultural land at the city edges to unplanned urban sprawl. This has resulted in environmental degradation, culminating in high carbon footprint, loss of open space and destruction of ecologically sensitive habitats (McKinsey 2010; HPEC, 2011). A sprawled city exhibits a segregated pattern of land use, low residential density with a dispersed population, lack of well-defined activity centers, poorly connected network of roads and over-use of private transportation modes (Camagni et al, 2002; Wright, 2005). In India, urban sprawl has mainly cropped up because of two factors. Firstly, Indian cities are constrained by urban planning regulations to construct building with low floor space index (FSI). Restricted floor space index (FSI) and density norms have led to sprawling cities with spiraling costs of delivering charges and sub-optimal use of land. The second factor relates to the low level of investment made on vertical growth of the cities and creating integrated public transit.

## 2.3 Pollution

The rapid and disharmonic growth of industrial and manufacturing sectors in urban areas along with sprouting of peri-urban areas poses a serious dilemma for the cities and towns. It enlarges the scope for higher carbon emissions, changing land use patterns and waste generation and spearheading problems relating to air, water and, land pollution. Air pollution alone has caused more than 4.2 million deaths around the world (State of Global Air, 2017). According to WHO 10 out of 20 most polluted cities in the world are located in India and have caused around 1.8 million premature deaths. Indian cities New Delhi, Kolkata, Mumbai and, Hyderabad have the highest PM<sub>2.5</sub> levels ranging between at 40-81 µg/m<sup>3</sup> against the WHO prescribed PM<sub>2.5</sub> levels of 10 µg/m<sup>3</sup> (CHE, 2017). The industrial effluents and mining waste dumping, untreated domestic sewage, agricultural run-offs carrying pesticides and fertilizers, oil spills and plastics and other substances are the main causes of water pollution. Not to mention they directly enter into the water recourse, polluting rivers, drains, lakes and groundwater in urban and suburban regions, having its most unambiguous repercussions on aquatic organisms and human health, contaminating groundwater, disrupting food chains and severely destroying ecosystems (Kumar et al. 2017).

**Table 2: WHO most polluted cities in India with pm2.5 level**

Town/City	WHO Ranking	PM2.5
Gwalior	2	176
Allahabad	3	170
Patna	6	149
Raipur	7	144
Delhi	11	122
Ludhiana	12	122
Kanpur	15	115
Khanna	16	114
Firozabad	17	113
Lucknow	18	113

Source: World Health Organization (WHO) Report, 2016

## 2.4 Slum and Squatter Settlements

In recent times, the changing pattern of rural-urban migration has given rise to a number of dynamic changes including the urban centers degenerating into slum and squatter settlements. As per Census of India, 2011 about 17.4 percent of the total urban population was living in slums in 2011. According to the estimations of NSSO, there were 33510 slums existing in urban areas in 2012 with an estimated 8.8 million households, comprising of 13761 notified and 19749 non-notified slumpopulations. Mushrooming of slums emanates from the inadequacies and inefficiencies in housing finance systems, acute shortages of land availability, out-of-reach housing prices and lack of credit availability along with the pressing realities of demographic growth and mass poverty. Incineration of toxic substances by slum dwellers contributes a great deal towards forming acid rain and greenhouse gases and thereby global warming and ozone layer depletion. Lack of civic amenities in slum settlements e.g., unplanned trash disposal and open defecation is linked with water and air pollution as well as high child mortality, poor nutrition and the widening of rich and poor disparities.

**Table 3: Estimated number of slums**

States	Notified slums	Non- notified slums	Total
Andhra Pradesh	3224	1315	4539
Chhattisgarh	632	446	1078
Karnataka	716	708	1424
Madhya Pradesh	1327	308	1635
Maharashtra	1954	5769	7723
Rajasthan	947	653	1600
Tamil Nadu	1208	1156	2364
Uttar Pradesh	836	978	1814
West Bengal	1274	2684	3957
All India	13761	19749	33510

Source: National Sample Survey Office (NSSO) Report, 2012

## 2.5 Climate Change

The unprecedented rise of greenhouse gasses levels (GHGs), the global warming, ‘the heat-island effect’, changes in coastal and marine systems, progressive depletion of ozone layer, loss of biodiversity, waning of green cover and wildlife habitats are the part and parcel of what is popularly known as the ‘climate change’. The most evident impact of climate change in India is visible in the changes in river dynamics in the Brahmaputra and Indo-Gangetic plain due to an alarming level of glacial melt of the Himalayan glaciers (Tangri, 2003). Bangalore is already dealing with the repercussions of water shortage issues, which is further exacerbated by the presence of a scanty amount of rainfall, unabated urbanization and massive fossil fuel burning (Nagendra et al., 2012).

Indian urban environmental risks are a living reality, especially for those living at the bottom of the economic ladder. The urban poor of our country are the most vulnerable ones as they face a

loss of livelihood opportunities, social safety nets, access to affordable public services etc. accentuated by climate-induced changes (Mukhopadhyay and Revi 2009). India's inexorable urban growth has also resulted in massive fragmentation and loss of habitat. The continuous transformation of ecosystems, expansion of agriculture, drastic changes in land use, mass destruction of trees and green cover, market failure, dumping of wastes has aggravated the loss of biodiversity (Nagendra et al., 2013; Chopra, 2016). In order to address the risks of climate change, there is a growing need for societies to accept both adaptation and mitigation measures (UN-HABITAT, 2017).

## 2.6 Water and Sewerage Problems

The seriousness of the challenges posed by untreated sewerage problems and inefficient urban water supply has been recognized in recent times (IIHS: 2014; Mwangi, 2003). According to the Census of India 2011, only 87percent households had bathing facilities within house, while 82percent of households had access to drainage facility. Nearly 10 million urban households lacked latrine facilities, while another 2 million had no access to basic sanitation. Moreover, only one-third of the waste is carried through sewer networks, and only 15percent of wastewater is treated (IIHS: 2014). Almost 70percent of India's surface water resources and a growing percentage of its groundwater reserves are being contaminated by biological, toxic, organic as well as inorganic pollutants. The reckless consumption of water at household and industrial level, indiscriminate drilling of borewells coupled with faulty planning and growing population contributes a great deal towards the present urban water crisis<sup>1</sup>. The occurrences of acute water shortage have been recently observed in Bengaluru city where reservoir levels have dangerously plunged<sup>2</sup>.

**Table 4: Basic facilities to households**

Facilities	Rural households 2001	Rural households 2011	Urban households 2001	Urban households 2011
Bathing facilities	22.8%	45%	70.4%	87%
Drainage facilities	34.1%	37%	77.87%	82%
Latrine facilities	21.9%	31%	73.7%	81%

Source: Census of India, 2011

## 2.7 Solid Waste and Trash Disposal

Solid waste management in India is in a sorry state owing to the spiraling population increase and the general reluctance of municipalities towards improving the pathetic state of waste management system in India. Most urban cities in India are associated with an excessive level of solid waste generation in the form of putrescible & non-putrescible wastes, electronic waste, liquid waste, chemical waste. In fact, about 62 million tonnes of waste is annually generated in India of which 5.6 million tonnes is the plastic waste, 0.17 million tonnes is the biomedical waste, 7.90 million tonnes is hazardous wastes and 15 lakh tonnes is e-waste (IETF, 2017).

Further, the inadequate waste collection and unscientific treatment and disposal of garbage dumps, has often resulted in landfills generation (Joshi et al. 2016; Kumar et al. 2017). If the present scenario of waste management persists, an estimated total of 88 square kilometers would be required to be brought under waste disposal through landfilling by 2050, and the expected waste quantity would be 436 million metric tonnes (MMT) per year, as per the reports submitted by ASSOCHAM and PwC in 2017.

## **2.8 Land Use Change**

Land use change occurs as a response to rural-urban migration, population growth, and extraction of natural resources, unscientific agricultural practices, development of transport system, mining and allied human activities. The impact of transformed land use not only affects the land cover but also has serious manifestations for the global environment, biodiversity and contributes towards environmental degradation (Chawla, 2012). The conversion of fallow and agricultural land into residential and commercial lands for various urban projects has a thorny side to it as it leads to loss of forest cover, deterioration of air and water quality, social fragmentation and infrastructural difficulties (Gupta, 2014).

## **III. Lessons from Theory**

The lessons derived from the Indian urban policy, practice and research can stem the tide of rural-urban migration and develop urban spaces devoid of environmental degeneration. It is now amply clear that environmental degradation and its sustainability despite being an international concern, do not get enough heed from policymakers and political scientists across the globe. The level of investment made and steps taken to avert environmental degradation is abysmally scanty in most cities. This is not an unconscious drift but a well thought-out choice for most countries. It can be well-explained by invoking the concept of “Kuznets Curve”, which states that in the early stages of economic growth, environmental policy and economic development face a situation of ‘conflict of interest’ (EU Economy, 2004). Trying to achieve economic development dampens the chances of achieving sustainable environmental goals. Therefore, to frame policies drawing a fine line between environmental degradation and economic growth should be the goal of every urban planner.

One way to make urbanization work with environmental sustainability is to control and minimize the spill-over effects of cities, i.e., congestion, pollution, sprawled and haphazard development of cities, waste dumping, etc. (Vaidya, 2009). With the level of agglomeration and scale economies climbing up, an array of looming problems associated with it climbs up as well. In order to avert inefficient land use in India, the idea of ‘land pooling’ should be highly endorsed, as it has tasted success in the Town Planning Schemes (TPS) of Gujarat and Pune (Judge et al., 2015). Adopting a well-planned transit-oriented development (TOD) along with other measures taken to overcome urban sprawling is the need-of-the-hour of Indian cities. Another crucially allied step is to craft policies conducive to the construction of settlements with higher floor area ratio (FAR) and density. In this respect, the idea endorsed by Delhi Urban Art Commission (DUAC) of shrinking the ‘Lutyens Bungalow Zone’ (LBZ) by 5.13 sq. km. from its current 28.73 sq. km. to 23.6 sq. km. is laudable insofar as the future outcome is concerned<sup>5</sup>. This deeply contested idea could result in a vertical growth of Delhi, giving ample scope for creation of green public spaces & recreational zones, fields and, parks etc. (Vaidya, 2009).

India's future strategy to attain environmental sustainability alongside economic growth should focus on improving congestion scenario in India. Congestion can be remedied through two means. The first way is to increase the road capacity and the second is to inculcate price mechanisms e.g., congestion charging. In cities like central London, congestion pricing within the 'Congestion Charge Zone (CCZ)' has led to 21percent decrease in traffic and traffic speeds went by around 10percent (Chakrabartty and Gupta, 2015). In India, congestion occurs primarily as a result of poorly constructed roads, improper land use, poor lane discipline, haphazard parking etc. (Rao and Rao, 2012). Therefore, the most appropriate strategies to fight the menace of congestion should include improving traffic management system, public transit subsidy (bus services), car sharing, building pavements for pedestrian, strict parking policies and uniform parking charges etc. (Alamand Ahmed, 2013).

Underscoring the importance of building pollution-reducing infrastructure and arresting repercussions of emissions is deemed a pragmatic step towards restoring natural equilibrium of environment that has to go beyond the knots of individuals. Pigouvian taxation scheme acts as a catalyst bringing socially optimal outcomes as it helps internalize costs imposed on third parties. The government can either impose "pollution standard" implying a maximum allowable pollution level, levy "pollution tax" or "ecological tax", or it can resort to other viable alternative tax-liability schemes in order to minimize information requirement. The inculcation of marketable permits scheme such as a cap and trade if implemented can help reduce air pollution levels in Indian cities. Motor vehicle taxation when imposed along with its allied taxes i.e., toll tax and environment tax can lead to effectual discouragement in car use and car ownership. The implication of Pigouvian tax in India is quite impressive insofar as its potential benefits like cheapening of solar power, discouragement in buying personalized vehicles, better organization etc. are concerned.

At present, Indian cities are facing backlashes in terms of an astounding level of governance bottlenecks and multifaceted challenges in its solid waste management system, sewerage system. The floating Loktak lake provides a poignant example of being one of the worst affected areas by the unabated dumping of municipal wastes<sup>6</sup>. The municipal solid waste (MSW) generation in India nears approximately 133760 tonnes per day, of which only 25884 tonnes is actually treated (Kumar et al., 2017). The common practices regarding solid waste management in Indian cities include open dumping, landfilling, composting, aerobic digestion, biomethanation, thermal treatment like incineration, pyrolysis etc. (Joshi and Ahmed, 2016; Nandan et al., 2017; Kumar et al., 2017). Considering the criticality of the situation, Indian cities immediately need to start dumping solid waste in engineered landfill sites. Development of a countrywide integrated solid waste management programme will go a long way in promoting the idea of proper solid waste management. Furthermore, the potential for energy generation from waste and landfills stands at 2.54 GW as of 2017, of which only 5 percent is being harnessed. Therefore strengthening public-private partnership in waste management could prove to be an excellent opportunity for better waste management systems in India.

Since 1950 the level of extraction of ground water has seen an upward trend. Evidently most of the ground water resource is used for irrigation purposes (89percent), domestic use (9percent) and industrial purposes (2percent). Moreover, water requirements in towns and cities are rising at an alarming rate mostly as a result of growing drinking water demand and other urban needs (Suhag, 2016; Shah, 2016). The water resource usage in towns and cities far outweighs the supplies, as large cities are subject to the "tragedy of the commons" due to poor pricing policies,



demand management and regulation by municipal bodies. In order to tackle the problems related to groundwater depletion, the need is for regulation and monitoring the licensing distribution, management of water demands, imposing of LMRC pricing and technology upgradation (Leitman et al., 1992). Investing in R&D to reinvent ways to recycle and reuse waste and sewage water for agricultural and industrial purposes could fill the void left by groundwater depletion in India and provide an excellent opportunity for environmental rehabilitation (Kamyotra and Bhardwaj, 2011; WSP, 2016).

#### **IV. Urban Environmental Governance and Planning**

Not only are cities “engines of growth” but they are also the hub of unsustainable environment. With the growing concern for environmental sustainability, the responsibilities of urban governing bodies increase manifold almost as a reflex. The conventional methods of ruling the cities and towns fail in the presence of multifarious environmental and urban issues at hand. There is need for a greater policy harmonization and coordination across various channels of the government and formulation of a bottom-up master plan, taking into consideration the integration of emissions reduction strategies, poverty reduction strategies, efficient land use strategies in our development plans, master plans and financial plans. Integrating the environmental degradation mitigation strategies in its conventional planning and governance can have multidimensional social, environmental and economic benefits (Ahluwalia, 2015; UNEP, 2013).

Urban governance and planning in India are far from satisfactory. In this context, the term ‘governance’ contains a myriad of implications, as it encapsulates not only the governmental exercise of authority but also an expansion of collective decision-making i.e., formal-informal, participatory and representative and national, state and local (Pugh, 2000). The urban local bodies (ULBs) fail to perform efficiently towards financing various urban services, owing to its poor revenue base and resource constraints and dependency on central government for financial transfers. They are often incapacitated to function as independent bodies, resulting in poor implementation of various landmark schemes and regulations. Some of the key lessons for the municipalities that can help protect the environment are enumerated as follows:

Firstly, strengthening of urban local bodies (ULBs) through institutional reforms and capacity building can iron out the kinks in urban municipal governance. The issues of poor legal frameworks, lack of manpower, inefficient human resource utilization and inadequate funding must be dealt with due diligence in order to secure better governance. Secondly, there is a need for the urban planners to tap into the fruitful investment opportunities and incentivize the private sector to invest in key projects to revitalize the inclusion of environmental sustainability. Thirdly, various governmental schemes and missions, which are planned with separate capital outlays and implementation agencies, is overburdening and slackening the ULBs. This calls out for an integration of spatial and economic development planning to strategically manage the implementation of schemes and programmes. Fourthly, ULBs lack strict environmental regulations in its operation, leading to infringement of planning laws, and a spurt in illegal development projects hampering environmental sustainability. This requires that ULBs must be empowered with strict environmental laws and physical development regulations to reduce its spillover effects, e.g., unauthorized dumping and tree cutting. Fifthly, the ULBs must be equipped with cutting-edge technologies, enabling them to exploit informational technology every way possible, which necessitates the stimulation of research and use of GIS, remote sensing, geo-informatics and many more. This presupposes heavy investment both by



governmental and private bodies on research and development (R&D) and inculcation of technical education, to reinvent ways of innovation to serve the purpose of better environmental governance. Lastly, the lack of institutionalization of citizen engagement and non-inclusion of public opinion accentuates rampant irregularities in the function of ULBs. Thus, the reorganization of ULBs taking account of public perception and citizen engagement as pivotal factors can lead to better governance and planning.

The flagship urban programmes aiming at urban rejuvenation i.e., 'Smart City Mission (SCM)', 'Jawaharlal Nehru National Urban Renewal Mission (JNNURM)' and 'Atal Mission for Rejuvenation and Urban Transformation (AMRUT)' must try to replicate lessons from other nations such as Singapore and cities like Barcelona and Oslo, which has already established a niche in this field. The major reforms needed in the urban transport sector include prioritization of public transports like bus over private vehicles, creation of congestion free bus and metro routes, GPS and ITS linked ticketing system and promotion of pedestrian modes. The 'public bicycle sharing system' (PBS) of Mysuru, Bhopal, Mumbai and Bengaluru must be encouraged to grow in other parts of the country as well to keep in check the growth of vehicular density and pollution. On the other hand, there is a growing need for the planners to dispense basic urban services, such as housing, streetlights, electricity to the urban poor, wherein the ideas of 'inclusionary zoning' (IZ) and 'assisted self-help housing' becomes central to the discussion. Inclusionary zoning (IZ) or inclusionary housing (IH) helps create affordable housing and workplaces for the urban poor, which could go a long way in fixing the problems of solid waste disposal, which ultimately serves the purpose of creating a degradation-free environment (Mishra, 2017).

## **V. Financing Urban Environmental Improvement**

The urban local bodies (ULBs), especially the municipal bodies are vested with statutory responsibility of carrying out functions relating to provisioning and maintenance of basic urban infrastructure and services to the urban dwellers. In addition, the 74<sup>th</sup> constitutional amendment (1992) devolves distinct responsibilities to the ULBs for the enrichment of environmental and ecological aspects. These include the following:

- (1) Regulation of land use and construction of buildings
- (2) Water supply for domestic, industrial and commercial purposes
- (3) Public health, sanitation, conservancy and solid waste management
- (4) Urban forestry, protection of the environment and promotion of ecological aspects
- (5) Slum improvement and upgradation
- (6) Urban poverty alleviation
- (7) Provision of urban amenities and facilities such as parks, gardens, playgrounds

It is apparent from the foregoing paragraphs that the financial requirements of ULBs are growing swiftly. As per the reports of High Powered Expert Committee (HPEC), an estimated 39 lakh crore (2009-10 prices) is required between 2012-13 to 2031-32 for the purpose of urban infrastructure creation (ES, 2017-18). To meet the growing needs, the XIV Finance Commission has increased the amount of grant to local government to 53.5% from the earlier 27.5%, with the total grant of Rs. 87,144 crores. The prime reasons for the massive underfunding of ULBs in India are due to inefficiency and corruption on the part of municipalities and center, misallocation of revenues to the ULBs, high and rising prices of urban amenities, and inadequate revenue base of the center. The primary weaknesses of municipalities lie in its grossly limited

revenue-generating capacities through tax and non-tax bases. This expedites the “rich city-poor city” syndrome in cities (Mohanty, 2014). Moreover, borrowing of funds requires state government’s approval, which points out the lack of financial autonomy of the ULBs (Ahluwalia, 2015).

Urban local bodies (ULBs) are in a precarious state in India, as the gap between the responsibilities of the municipal bodies and the resources to finance those responsibilities are diverging. The paucity of fund is widely evident in various flagship governmental programmes, namely ‘Smart City Mission (SCM)’, ‘Jawaharlal Nehru National Urban Renewal Mission (JNNURM)’ and ‘Atal Mission for Rejuvenation and Urban Transformation (AMRUT)’ and ‘Swachh Bharat Abhiyan’. Smart City Mission (SCM), one of the most touted urban mission aims at providing basic infrastructure and maintaining sustainability of environment is facing gross under-allocation of funds and poor management by center, the state and urban local bodies (ULBs). Against the official allocation of Rs. 7,016 crores, the center’s expenditure was only Rs. 924 crores and Rs. 143 crores in 2014 and 2015 respectively<sup>7</sup>. AMRUT, another landmark urban mission aiming at reducing pollution, providing better water supply and sewerage facilities and green spaces had a total allocation of Rs. 50,000 crores for the FY2015-16 to FY2019-20. However, Union Budget 2018-19 laid out an allocation of Rs. 6000 crores for the fiscal year 2018-19 from Rs. 9000 crores in 2017-18.

**Table 6: State/ UT and Sector-Wise Fund Allocation (InRs. crores, considering States with highest spending levels) as prioritized under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) during 2016-17**

Sr.No.	State/ UT Name	Water Supply	Sewerage	Drainage	Urban Transport	Green Space/Parks	Total size of SAAP
1	Uttar Pradesh	1519.19	1697.62	0	0	70.45	3287.27
2	Tamil Nadu	3147.04	33.71	0	0	68.48	3249.23
3	Maharashtra	1724.31	223.1	0	0	42	1989.41
4	Madhya Pradesh	582.33	925.65	36	70.3	41.53	1655.81
5	Karnataka	551.54	612.65	48.8	17.9	27.65	1258.54
6	Gujarat	233.65	916.07	39	1.7	14	1204.42
7	West Bengal	1077.24	0	0	0	27.62	1104.86
8	Rajasthan	344	555	0	0	20	919
9	Punjab	401.46	296.5	0	0	11.7	709.66
10	Bihar	647.34	0	0	0	16.86	664.2

Source: Ministry of Urban Development, 2016 available at data.gov.in

In the recent years, the concern for environmental problems in urbanized areas has grown rapidly. The local municipal bodies can harness environmental benefits by enacting 'polluters pay principle' or 'congestors pay principle' or by imposing 'user charges'. The 'polluters pay' or the 'congestors pay' principle suggests identification of polluters and fining them with tax in the form of an 'emission fee' or an 'excise tax'. The imposition of user charges by the municipal bodies can not only provide an excellent revenue base for financing local activities, but also keep environmental degradation in check. The imposition of demolition charges and storm water drainage charges by Greater Hyderabad Municipal Corporation (GHMC) demonstrates the befitting application of 'polluters pay principle' (Mohanty, 2003).

## VI. towards Sustainable Urbanization Policy in India

In the short and medium run, environmental protection policies and growth in economic terms come in conflict with other, making either high economic growth a compromise for environmental sustainability and/or environmental policy threatening for economic growth (The EU Economy review, 2004). *The well-being of the future generation is highly correlated with the decisions taken in the present. This notion is intrinsically linked with the broader concept of 'sustainable development'. The report released by Brundtland Commission defines sustainable development as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission, 1987).* Addressing the issue of 'sustainable development', the United Nations has developed 'Sustainable Development Goals' (SDGs), built on the idea of 'Millennium Development Goals' (MDG), which encompasses vast and ambitious goals and targets demanding commitments from countries in fulfilling their respective responsibilities. The United Nations for achieving environmental sustainability has assigned eleven SDG goals (Griggs et al., 2013). These include eradication of extreme poverty (goal 1), improved food security and nutritional status (goal 2); clean and sustainable water and sanitation (goal 6); affordable and clean energy (goal 7); sustainable and inclusive economic growth (goal 8); sustainable and inclusive industrialization (goal 9); sustainable, inclusive and resilient cities and human settlements (goal 11); sustainable and responsible consumption and production patterns (goal 12); tackle climate change (goal 13); conserve and sustainably use oceans, seas and marine resources (goal 14) and promotion of sustainable use of terrestrial ecosystems (goal 15).

*To seek sustainability in urban areas is to strike a balance between the development of the urban areas and resisting environmental degradation.* Achieving sustainability of cities must take cognizance of the integration of social development, economic growth, environmental management, and effective urban governance. The need is for the integration of environmental concerns and sustainability measures in various urban policies so as to make cities more attractive and competitive, create more green spaces, build resilient transport systems and many more (WESS, 2017). However, achieving urban sustainability has been a daunting task for most cities as it is facing financial and administrative setbacks every now and then. Firstly, the sharpest pullback in achieving sustainability has been by the inadequacy of funds of ULBs in providing basic services and infrastructure to the urban population. This calls for an integrated effort to help ULBs in raising resources through various channels like municipal bonds, PPP, credit risk guarantees etc. Secondly, there exist massive administrative bottlenecks in terms of monitoring the progress of SDGs. Therefore, there is an urgent need to form an institutional mechanism with unified and effective administrative framework, which can make concerted efforts in order to carry out sustainable policies in the best possible manner.

Urban sustainability measures entails promotion of cleaner forms of energy including cleaner coal and renewable, minimization of greenhouse gas (GHGs) emissions, retrofitting of transport and waste management systems, practice of green financing, implementation of green energy awareness programmes and many more. Prioritizing energy extraction from sustainable sources mainly solar energy could provide impetus for smooth running of sustainable policies in the future (Economic Survey, 2017-18). The future discourse on sustainability measures should focus on adaptation-led strategy to mitigate climate change related issues.

## VII. Conclusion and Directions for Further Research

There is a growing consensus that the impacts of urbanization on the environment require immediate attention of the policymakers across the globe. The present policies designed to overcome environmental stress of urbanization are myopic and there appears to be a wide gap between policy formulation and action. The prevalent environmental problems associated with the urban settings have serious consequences for the living and non-living beings. Interestingly, the impact of the breakneck pace of urbanization does not keep within the boundaries of urban areas only but also encroach upon the periphery of rural hinterland. The recent urbanization trend shows major impacts on rural economies, their lifestyles, livelihood patterns, consumption demand and waste disposal patterns. Therefore, the need is for envisioning and formulating unique solutions to overcome the looming urban mega crisis in order to build resilient and sustainable cities in India.

The results presented in our paper entails a number of implications of paramount importance for the amelioration of urban environment. First, the major step towards environmental improvement is the policy formulation targeting the tide of rural-urban migration through rural reorganization and retrofitting of urban areas. Second, pollution tax, emissions trading and congestion pricing can instigate positive reduction in net emissions. Third, there is a need for structural reforms and financial autonomy of ULBs. Without strong and responsible ULBs, there cannot be any permanent improvement in the urban environment. Fourth, transit-oriented-development (TOD) can discourage sprawled development, vehicular dependency and traffic congestion, which can ease the way for sustainable cities (NMSH, 2014). Fifth, the inclusionary zoning (IZ) or inclusionary housing (IH) remains the best strategy to accommodate the low-income groups and communities living in slum and squatter settlements (Mishra and Mohanty, 2017). Lastly, adoption of renewable energy options, proper trash dumping and recycling, and creation of pedestrian zones will go a long way in building smart resilient cities.

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## **‘CHILD ABUSE A SERIOUS THREAT TO THE SOCIETY’: AN OVERVIEW**

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### **ABSTRACT**

*Child abuse is a global issue which is a bold threat to any society of the world. The problem is deeply rooted in cultural, economic and social practices. It is a state of emotional, physical, economic and sexual maltreatment meted out to a person below the age of eighteen and is a globally prevalent phenomenon. However, in India, as in many other countries, there has been no assessment of the extent, magnitude and trends of the problem. The growing complexities of life and the dramatic changes brought about by socio-economic transitions in India have played a major role in increasing the vulnerability of children to various and newer forms of abuse. Child abuse has serious physical and psycho-social consequences which adversely affect the health and overall well-being of a child.*

**KEYWORDS:** *Maltreatment, Psycho-Social, Magnitude, Consequences*

## INTRODUCTION

Child a young human being below the age of puberty or below the legal age of majority. Child is the one who is yet not mature enough to know the realities of life. Even then 'Child is the Father of the Man' is sounding maxim which refers to the importance of child in the continuation of of mankind. **Importance** of early childhood development cannot be over looked by any society. The emotional, social and physical development of young **children** has a direct effect on their overall development and on the adult they will become. That is why understanding the need to invest in very young **children** is so **important**, so as to maximize their future well-being and also to build a Society which is conducive to Living. However, all is not well with the 'Child' in every Society especially in societies which are in the developing stage. Often, we come across such stories and information shared by media highlighting the exploitation of child.

## CHILD ABUSE – BASIC DEFINITIONS

Child Abuse is a burning issue in the World and no country can claim with thump that it is free from the menace of Child Abuse. Despite all the differences in cultures and the rules about how we bring up the children, rates of abuse round the world are remarkably similar in some ways (Dr. Desmond Runyan, professor, University of North Carolina, WHO report). No doubt the problem is common to all the societies yet the definitions differed from country to country and society to society. Some of the basic definitions have been discussed in the ensuing discussion.

"Child abuse is any action by another person-Adult or Child- that causes significant harm to a child. It can be physical, sexual, or emotional, but can just as often be about a lack of love, care and attention." (*National Society for Prevention of Cruelty to Children*)

"Child abuse or maltreatment constitutes all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power". (*World Health Organization*)

"Any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse, or exploitation, or an act or failure to act which presents an imminent risk of serious harm" (*The Child Abuse Prevention and Treatment Act – CAPTA*)

"Child abuse is a very complex and dangerous set of problems that include child neglect and the physical, emotional, and sexual abuse of children." (*MedicineNet.com*)

"Child abuse is the physical and/or psychological/emotional mistreatment of children". (*Wikipedia*)

"Institutional Abuse or Neglect is that which occurs in any facility for children, including, but not limited to, group homes, residential or public or private schools, hospitals, detention and treatment facilities, family foster care homes, group day care centers and family day care homes." (*Office of Health and Human Services, US*)

Looking at the above definitions it is observed that maltreatment of a child in any form or manner is the nucleus of child abuse.

## TYPES OF CHILD ABUSE

Child abuse happens in many different ways, but the result is the same- serious physical or emotional harm. Physical or sexual abuse may be the most striking types of abuse, since they often unfortunately leave physical evidence behind. However, emotional abuse and neglect are serious types of child abuse that are often more subtle and difficult to spot. Child neglect is the most common type of child abuse. The Centre for Disease Control and Prevention (CDC) classify four types of child abuse; physical, sexual, emotional and neglect. However, in the present discussion poverty has been taken as Social Abuse.

### A. Physical Abuse

**Physical Abuse** of a child is that which results in actual or potential physical harm from an interaction or lack of an interaction, which is reasonably within the control of a parent or person in a position of responsibility, power or trust. Such injury or incidence is considered abuse regardless of whether the caretaker intended to hurt the child. There may be single or repeated incidents.

Physical abuse includes but is not limited to the following:

<ul style="list-style-type: none"> <li>• Punishing a child excessively</li> <li>• Smacking, punching, beating, shaking, kicking, biting, burning, shoving, choking, throwing, stabbing, grabbing</li> <li>• Hitting a child (with a hand, stick, strap, or other object)</li> <li>• Leaving a child in an uncomfortable and/or undignified posture for an extended period of time or in a poor environment</li> </ul>	<ul style="list-style-type: none"> <li>• Forcing a child to work in poor working conditions, or in work that is inappropriate for a child's age, over a long period of time</li> <li>• Gang violence</li> <li>• Harmful initiation ceremonies</li> <li>• Bullying</li> <li>• Threatening to harm someone</li> </ul>
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### Signs of Physical Child Abuse:

- Physical signs.** Sometimes physical abuse has clear warning signs, such as unexplained bruises, welts, or cuts. While all children will take a tumble now and then, look for age-inappropriate injuries, injuries that appear to have a pattern such as marks from a hand or belt, or a pattern of severe injuries.
- Behavioral signs.** Other times, signs of physical abuse may be more subtle. The child may be fearful, shy away from touch or appear to be afraid to go home. A child's clothing may be inappropriate for the weather, such as heavy, long sleeved pants and shirts on hot days.
- Caregiver signs.** Physically abusive caregivers may display anger management issues and excessive need for control. Their explanation of the injury might not ring true, or may be different from an older child's description of the injury.

### B. Emotional Abuse

**Emotional Abuse** is a pattern of behavior that impairs a child's emotional development or sense of self-worth. Emotional abuse is often difficult to prove and, therefore, Child Protection System(CPS) may not be able to intervene without evidence of harm to the child. Emotional abuse is almost always present when other forms are identified. Emotional abuse includes but is not limited to the following:

<ul style="list-style-type: none"> <li>• Isolating or excluding a child</li> <li>• Stigmatizing a child</li> <li>• Withholding love, support, or guidance</li> <li>• Treating a child who is a victim as a suspect (repeated questioning and investigation)</li> <li>• Failing to provide a supportive environment</li> <li>• Failing to give a child an appropriate sense of self (for example, criticizing weight)</li> <li>• Main caregiver(s) does not respond to a child's emotional needs</li> </ul>	<ul style="list-style-type: none"> <li>• Treating or looking at a child with disdain, disrespect, denigration</li> <li>• Patterns of belittling, denigrating, blaming, scaring, discriminating or ridiculing</li> <li>• Spreading rumors</li> <li>• Blackmailing a child</li> <li>• Institutionalizing a child without exploring other options</li> <li>• Cyber bullying and sexual Solicitation</li> <li>• Exploiting a child</li> </ul>
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### Signs of Emotional Child Abuse:

- a) **Behavioral signs.** Since emotional child abuse does not leave concrete marks, the effects may be harder to detect. Is the child excessively shy, fearful or afraid of doing something wrong? Behavioral extremes may also be a clue. A child may be constantly trying to parent other children for example, or on the opposite side exhibit antisocial behavior such as uncontrolled aggression. Look for inappropriate age behaviors as well, such as an older child exhibiting behaviors more commonly found in younger children.
- b) **Caregiver signs.** Does a caregiver seem unusually harsh and critical of a child, belittling and shaming him or her in front of others? Has the caregiver shown anger or issues with control in other areas? A caregiver may also seem strangely unconcerned with a child's welfare or performance. Keep in mind that there might not be immediate caregiver signs. Tragically, many emotionally abusive caregivers can present a kind outside face to the world, making the abuse of the child all the more confusing and scary.

### C. Sexual Abuse

**Sexual Abuse** is an involvement of a child in a sexual activity that s/he does not fully comprehend, is unable to give informed consent to, or is not developmentally prepared for, such as:

Contact	Non-contact
<ul style="list-style-type: none"> <li>• Kissing or holding in a sexual manner</li> <li>• Touching and fondling genital areas</li> <li>• Forcing a child to touch another person's genital areas</li> <li>• Forcing a child to perform oral sex</li> <li>• Vaginal or anal intercourse and other sexual activity</li> <li>• Biting a child's genital area</li> <li>• Incest, rape, sodomy, indecent exposure</li> <li>• Sex with animals</li> <li>• Sexual exploitation, where sexual abuse of a child involves some kind of commercial transaction (monetary or in-kind)</li> <li>• Child sex tourism, where abusers travel to a place other than their home and there have sex with a child</li> </ul>	<ul style="list-style-type: none"> <li>• Obscene calls or obscene remarks on a computer or a phone or in written notes</li> <li>• Virtual sex</li> <li>• Online sexual solicitation and grooming</li> <li>• Voyeurism</li> <li>• Exhibitionism</li> <li>• Exposed to pornography or used to make pornography</li> <li>• Sexually intrusive questions or comments</li> <li>• Forced to self-masturbate or watch others masturbate</li> <li>• Sexual exploitation and child sex tourism also may be abusive without physical contact (for example, a tour operator or taxi driver who arranges tours and/ or children for sex tourists is an exploiter of children as well).</li> </ul>

**Signs of Sexual abuse** might include:

- a) **Behavioral signs.** Does the child display knowledge or interest in sexual acts inappropriate to his or her age, or even seductive behavior? A child might appear to avoid another person, or display unusual behavior- either being very aggressive or very passive. Older children might resort to destructive behaviors to take away the pain, such as alcohol or drug abuse, self-mutilation, or suicide attempts.
- b) **Physical signs.** A child may have trouble sitting or standing, or have stained, bloody or torn underclothes. Swelling, bruises, or bleeding in the genital area is a red flag. An STD or pregnancy, especially under the age of 14, is a strong cause of concern.
- c) **Caregiver signs.** The caregiver may seem to be unusually controlling and protective of the child, limiting contact with other children and adults. Again, as with other types of abuse, sometimes the caregiver does not give outward signs of concern. This does not mean the child is lying or exaggerating.
- d) **The Online risk.** Warning signs of online sexual child abuse are these:
  - i. Your child spends large amounts of time online, especially at night, and may turn the computer monitor off or quickly change the screen on the monitor when you come into the room.
  - ii. You find pornography on your child's computer.
  - iii. Your child receives phone calls or mail from people you don't know, or makes calls to numbers that you don't recognize.
  - iv. Your child becomes withdrawn from the family.

**D. Neglect**

**Neglect** is usually defined as depriving a child of adequate food, clothing, shelter, supervision, medical care and education. Neglect also harms children although it is more about being inactive and not doing something than the previous forms of abuse, which are more active. Neglect may include:

<ul style="list-style-type: none"> <li>• Inattention/omission of care</li> <li>• Failing to supervise and protect from harm</li> <li>• Leaving a child at home for a long period without supervision</li> <li>• Sending a child away without ensuring they will be safe and happy at the place to which they are sent</li> <li>• Failing to ensure suitable nutrition for a child (a parent may give a child money for food but not monitor to ensure they eat healthily; a parent may deliberately withhold food from a child)</li> <li>• Failing to ensure a child attends school (parent and/or teacher)</li> </ul>	<ul style="list-style-type: none"> <li>• Failing to follow up or report repeated bruising or burns (for example, a community health worker)</li> <li>• Giving in to a child's every wish because it is an easy option – despite knowing this choice is not in the best interest of the child's development</li> <li>• Failing to take time to reasonably monitor children's activities and thus potentially exposing them to risks</li> <li>• Failing to ensure a safe environment (leaving dangerous things within reach of a child, such as medication, guns, knives, pornography etc.)</li> </ul>
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**Signs of Neglect** might include is:

- i. **Physical signs.** A child may consistently be dressed inappropriately for the weather, or have ill-fitting, dirty clothes and shoes. They might appear to have consistently bad hygiene, like appearing very dirty, matted and unwashed hair, or noticeable body odor. Another warning sign is untreated illnesses and physical injuries.
- ii. **Behavioral signs.** Does the child seem to be unsupervised? Schoolchildren may be frequently late or tardy. The child might show troublesome, disruptive behavior or be withdrawn and passive.
- iii. **Caregiver signs.** Does the caregiver have problems with drugs or alcohol? While most of us have a little clutter in the home, is the caregiver's home filthy and unsanitary? Is there adequate food in the house? A caregiver might also show reckless disregard for the child's safety, letting older children play unsupervised or leaving a baby unattended. A caregiver might refuse or delay necessary health care for the child.

Although people usually think of child abuse as someone physically harming a child, it is important to keep in mind that about 60 percent of child abuse cases actually involve neglect. It is sometimes easier to see the signs of physical abuse when a child is hit, kicked, or burned, but looking for signs of neglect is important too, as the consequences can be just as tragic.

#### **E. Social Abuse (Poverty)**

**Social Abuse** is not strictly a form of abuse but it is included here to help differentiate between abuse and neglect and social circumstances, all of which can result in harm to a child. Social abuse may include:

<ul style="list-style-type: none"> <li>• Homeless / stateless</li> <li>• Displaced by war / natural disaster</li> <li>• Forced into being a child soldier</li> <li>• Political uncertainty</li> <li>• Lack of economic options</li> <li>• No or limited access to basic social services</li> <li>• Being denied basic rights through the law (for example, where an offender aged under 18 is tried in court as though they were an adult)</li> <li>• Political campaigns that encourage round-ups of children living on the street</li> </ul>	<ul style="list-style-type: none"> <li>• Practices such as early marriage, male and female genital mutilation, prenatal sex selection and female infanticide</li> <li>• Attitudes that promote ideas of children as the property of adults (parents and husbands) and beliefs that girls are property and inferior to boys</li> <li>• The view of children as half an adult with half of adult rights</li> <li>• High prevalence of violence in mainstream mass media</li> </ul>
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Besides, these above discussed types of child abuse there do exist other types of abuses in orthodox societies which have not been considered in the present discussion. However, in the light of above discussion we try to correlate child abuse with available statistics.

#### **CHILD ABUSE – INDIAN STATISTICS**

India is home to almost 19 percent of the world's children. More than one third of the country's population, around 440 million, is below 18 years. Every fifth child in the world is Indian. Going by the opinion of experts on child abuse nearly 40 percent of these children are in need of care and protection, which indicates the extent of the problem. In a country like India with its

multicultural, multi-ethnic and multi-religious population, the problems faced by socially marginalized and economically backward groups are immense. Within such groups the most vulnerable section is always the children.

**Major Trends in Child Abuse:** It has very clearly emerged that across different kinds of abuse, it is young children, in the 5-12 year group, who are most at risk of abuse and exploitation. (As per the Study on Child Abuse India 2007 by Ministry of Women and Child Development, Govt. of India)

### Physical Abuse

- i. Two out of every three children abused were physically abused.
- ii. Out of 69% children physically abused in 13 sample states, 54.68% were boys.
- iii. Over 50% of the abused children in all the 13 sample states were being subjected to one or the other form of physical abuse.
- iv. Out of those children physically abused in family situations, 88.6% were physically abused by parents.
- v. 65% of school going children reported facing corporal punishment i.e. two out of three children were victims of corporal punishment.
- vi. 62% of the corporal punishment was in Government and Municipal schools.
- vii. The State of Andhra Pradesh, Assam, Bihar and Delhi have almost consistently reported higher rates of abuse in all forms as compared to other states.
- viii. 50.2% working children worked seven days a week.

### Sexual Abuse

- i. 53.22% children reported having faced one or more forms of sexual abuse.
- ii. Andhra Pradesh, Assam, Bihar and Delhi reported the highest percentage of sexual abuse among bothboys and girls.
- iii. 21.90% child respondents reported facing severe forms of sexual abuse and 50.76% other forms ofsexual abuse.
- iv. Out of the child respondents, 5.69% reported being sexually assaulted.
- v. Children in Assam, Andhra Pradesh, Bihar and Delhi reported the highest incidence of sexual assault.
- vi. Children on street, children at work and children in institutional care reported the highest incidence ofsexual assault.
- vii. 50% abuses are persons known to the child or in a position of trust and responsibility.
- viii. After every 15 minutes a child is sexually abused in India.
- ix. A total of 106,958 reported cases of crimes against children were recorded in 2016, out of these 36022 cases of sexual abuse were recorded under Protection of Children from Sexual Offences, Act, 2012.

### Emotional Abuse

- i. Every second abused child reported was facing emotional abuse.
- ii. In 83% of the cases parents were the abusers.
- iii. Equal percentage of both girls and boys reported facing emotional abuse.
- iv. 48.4% of girls wished they were boys.

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**CHILD SEXUAL ABUSE A HEINOUS CRIME-TRAUMATIC EFFECTS**

Child Abuse in any way is a traumatic experience for a child; however child sexual exploitation is the worst of all the types of child abuses. There is no broadly accepted framework on the effects of child sexual abuse. However, Finkelhor and Browne have developed a list of areas that are affected by the sexual interaction of adults with children. It is a fairly comprehensive framework and seems to be gaining wide acceptance in the professional community. All the effects are listed in terms of the molested child, but they are feelings, misconceptions, and thought patterns the molested child may carry into adulthood.

- i. Traumatic Sexualization - the child's sexuality is distorted by age-inappropriate sexualization.
- ii. The perpetrator rewards inappropriate sexual behavior, by trading gifts, affection, privileges, or attention for sex. He is overly attendant to or distorts the meaning and importance of bodily parts. He also conveys misconceptions and confusions about sexual behavior and accepted morality. The abusive behavior may associate in the child fearful memories and events with sex.
- iii. The child may develop distorted views of sexual norms, become confused over sexual identity, become sexual aggressive, or tend to extremes, with either a heightened sensitivity or attraction to sexual behavior or highly negative feelings to all sexual activity.
- iv. Betrayal - the child's expectations of how or what others will provide for care and protection can be severely warped.
- v. Grief reactions, depression, hostility and anger are all common expressions towards the sense of betrayal.
- vi. The child may display an impaired ability to judge the trustworthiness of others.
- vii. All or nothing extremes in behavior or thinking may be expressed. The child may be delinquent, aggressive, and show discomfort in close relations, or he or she may become overly attached and be indiscriminate in relations with all adults.
- viii. Powerlessness - continued invasion gives rise to feelings of vulnerability, and may damage self-efficacy if the child cannot convince others of the abuse or sees no one stopping the abuse.
- ix. The child may become fearful and anxious, suffer nightmares, become depressed, run away, or show truancy. Eating and sleeping disorders may occur.
- x. The child may try to gain control of conflicting emotions by recapitulating the experience by trying to abuse others.
- xi. Stigmatization - the child's sense of being is denigrated and the child is isolated from a larger society.
- xii. The perpetrator may explicitly denigrate and blame the victim, or the child may blame himself or herself for the abuse, and therefore feel an overwhelming sense of shame and responsibility.
- xiii. The child's sense of self-esteem is damaged.
- xiv. The child has a feeling of being different from everyone around him or her.
- xv. The child will isolate himself or herself from peers, may participate in criminal or delinquent behavior, may abuse drugs and alcohol, may practice self-mutilation and may become suicidal.

- xvi. Boys suffer confusion over sexual identity and fear of homosexuality. They display increased aggressive behavior after the abuse.
- xvii. Boys have a greater tendency than girls to re-enact their abuse by abusing other children.

### **TRAITS PROJECTING PRESENCE OF CHILD ABUSE**

Experienced educators, who have seen all forms of child abuse at one time or another, are of the opinion that there are signs which alerts the stakeholders about the presence of child abuse.

#### ***The Child:***

- a) Shows sudden changes in behavior or school performance;
- b) Has not received help for physical or medical problems brought to the parents' attention;
- c) Has learning problems that cannot be attributed to specific physical or psychological causes;
- d) Is always watchful, as though preparing for something bad to happen;
- e) Lacks adult supervision;
- f) Is overly compliant, an overachiever, or too responsible; or
- g) Comes to school early, stays late, and does not want to go home.

#### ***The Parent:***

- a) Shows little concern for the child, rarely responding to the school's requests for Information, for conferences, or for home visits;
- b) Denies the existence of -- or blames the child for -- the child's problems in school or at home;
- c) Asks the classroom teacher to use harsh physical discipline if the child misbehaves;
- d) Sees the child entirely bad, worthless, or burdensome;
- e) Demands perfection or a level of physical or academic performance the child cannot Achieve; or
- f) Looks primarily to the child for care, attention, and satisfaction of emotional needs.

#### ***The Parent and Child:***

- a) Rarely touch or look at each other;
- b) Consider their relationship entirely negative; or
- c) State that they do not like each other.

*None of these signs proves that child abuse is present in a family.* Any of them may be found in any parent or child at one time or another. But when these signs appear repeatedly or in combination, they should cause the educator to take closer look at the situation and to consider the possibility of child abuse.

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## **ROLE OF CHILD CARE WORKER/PARENTS IN ADDRESSING CHILD ABUSE RELATED ISSUES**

Child abuse is a serious issue for which particular actions should be taken for prevention. Remember that the children are innocent and are defenseless individuals. Here are some tips for the Child Care Workers to help prevent child abuse and neglect by some simple actions:

- a) Be kind to children you know. Let them feel that they have a friend to talk to and be free to tell what they feel. Show them that you care, even if you only ask them about their day at school.
- b) Talk to parents you know about properly caring for the children. Encourage them with a spirit of looking after the children's welfare. Ask them about how their family is. Show them what your concern is by being a friend.
- c) Devote some of your time in programs that support families in your community. You can give donations to them to help them reduce the stress of having financial problems.
- d) Report any child abuse you know. This will help stop the abuse as soon as possible. If a child talks to you about the abuse he experiences, make him feel confident that you can be trusted. Just let him narrate you the story. Remember that the child is looking for protection and support. You could be able to stop child abuse.
- e) Provide security and give them their basic needs. A healthy environment is essential to a family. Nurture children with loving care.

## **FOSTERING DISCIPLINE AMONG CHILDREN**

Importance of discipline is to teach children socially acceptable ways of expressing natural desires and drives. Discipline guides your child into adulthood. Successful discipline gears the child's developmental stage. Don't expect a child of any age to perform something he or she is not ready for. Children need positive reinforcement, so reward your child for doing right with smiles, hugs, attention, praise and thanks. Never hit or shake a child as hitting is not a useful discipline tool for your children. Hitting and other physical punishment are not effective because they teach violence to the child. It makes children too much angry to be sorry for what they've done and it can hurt a child physically. Discipline is best taught by example. The lessons you teach your child come from what your child see you doing – not what you say. If what you are doing is not working, change it! Your best efforts, even those that worked in the past, may break down. Try to keep sight of your basic principles and always cherish your relationship with your child. The important thing is not whether your child behaves in the next few minutes or today or this week rather how your child turns out in 5, 10, or 20 years from now.

## **HOW TO PREVENT CHILD ABUSE: CHILD PROTECTION AND CONDUCT**

No doubt that child abuse is a menace in the society but is preventable if necessary precautions are taken at the primary level of interaction. Norms in the society are nothing but do's and don'ts of acceptable behaviour.

### **DO'S:**

Followings are the some of the do's:

- i. Plan and organize the work and the workplace so as to minimize risks.
- ii. As far as possible, be visible in working with children.

- iii. Ensure that a culture of openness exists to enable any issues or concerns to be raised and discussed.
- iv. Empower children - discuss with them their rights, what is acceptable and unacceptable.
- v. Educate the child to walk or move away when something obnoxious is happening around.
- vi. Educate the Child about the possible possibilities of exploitation without creating scare in his mind.
- vii. Keep the Children under your eye; not leaving them alone or with stranger for long period of time.
- viii. Ensure the safety of the child in school by interacting with his teachers and friends more often.
- ix. Seek feedback from the school teachers or friends about the activities the child indulge more often.
- x. Long Absence of the child from home place should be viewed seriously.
- xi. Teach your child to think, feel, and then act in different situations.
- xii. Teach the child about good touch and bad touch.
- xiii. Have trusted adult around children when they are exposed to sports, excursions, cultural events, parks or in social gatherings.
- xiv. Be prepared in advance with age appropriate responses.
- xv. Minimize opportunities for sexual abuse by ensuring presence of trusted adult.
- xvi. Be friendly with children and build their faith in you as their guardian. Once they trust you they will share their outside experience with you.

Above mentioned is not an exhaustive or exclusive list of Do's. The idea is that the Care-giver should perform actions or behaviour, which may be construed as good practice or potentially acceptable behaviour.

#### **DON'TS:**

Followings are the some of the don'ts:

- i. Don't deflect the question of your child about body parts; make them understand in a suitable manner.
- ii. Don't require children to hug or kiss you or someone if they do not wish to.
- iii. Don't teach your children that our family has certain secrets.
- iv. Do not hit or otherwise physically assault or physically abuse children.
- v. Don't develop physical/sexual relationship with children.
- vi. Don't let your child in company of friends who are not of his age.
- vii. Don't set aside the query of your child on any issue, though you may ignore it for a while but resolve that at appropriate time & place.
- viii. Don't develop relationships with children who could in any way be deemed exploitative or abusive.
- ix. Don't behave physically in a manner which is inappropriate or sexually provocative.
- x. Don't act in ways intended to shame, humiliate, belittle or degrade children, or otherwise perpetrate any form of emotional abuse.
- xi. Don't discriminate against, show differential treatment, or favour particular children to the exclusion of others.
- xii. Don't spend excessive time alone with children away from others.



Above mentioned is not an exhaustive or exclusive list of Don'ts. The idea is that the Care-giver should avoid actions or behaviour, which may be construed as poor practice or potentially abusive.

## CONCLUSION

We need to understand that "child abuse" means any kind of harm done to a child and does not just mean sexual abuse. Need of the hour is to teach your children that there is a difference between "good" and "bad" touches. Explain them that no one has the right to hurt your child or touch him or her in private areas or touch in any way that makes him or her feel uncomfortable. Alert your children that the words they need to remember are "No", "Go", "Yell" and "Tell". If anyone touches a child in a way he or she doesn't like or tries to make them accompany a stranger or person they don't feel comfortable with, they should always say "No!" and Go away from the person or situation as quickly as possible and if need be should raise danger voice to Yell. A danger voice is a very loud, high-pitched yell that gets attention immediately. It should never be commonly used. A child should tell about the incident to a parent, teacher or caregiver immediately. Help your child to understand that he or she need to be wary not just of the traditional idea of "strangers" but of anyone who makes them feel uncomfortable, even if it is someone they know - like the next-door neighbor. Talk to your child about situations they must avoid, like taking any food or medicine from a person who is not a parent, teacher, caregiver or close friend. Help a child to identify a police officer. Take him or her to the local police station and let him or her see what a uniform looks like and what a badge looks like. Show your child how to make a call to home and how to call Child Protection Services.

All said and done to tackle the looming threat of child abuse the first and the foremost step is to spread "Awareness"; amongst children, parents, guardians, caregivers, and above all in the society to ward off any abusive behaviour towards the tender children.

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## IMPACT OF NON-PERFORMING ASSETS ON THE PROFITABILITY OF PUBLIC AND PRIVATE BANKS

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### ABSTRACT

*The Indian banking sector has been facing serious problems of raising non-performing assets. Non-Performing Assets is a vital factor in the examination of financial performance of the banks. Today non-performing assets are one of the major concerns for scheduled commercial banks in India. It is necessary to cut down NPAs to improve the financial health in the banking sector. An attempt is made in this paper to understand the concept of NPAs, causes and its impact on the profitability of public and private sector banks. The four public banks and four private banks are selected on the basis of net sales namely State Bank of India, Canara Bank, Punjab National Bank, Bank of Baroda, Yes Bank, ICICI Bank, Axis Bank and Kotak Mahindra Bank. Banks has been selected to study the relation of Gross NPAs and Net profit. The data has been taken from the annual published reports of the banks for the period 2008-2009 to 2017-2018. The result shows that except for Yes Bank all the other banks exhibit negative correlation between Gross Non-Performing Assets and Net profits. The Study concluded that in case of Yes Bank, the relationship between NPA and Profitability was found positive which may be the effect of other variables also.*

**KEYWORDS:** NPA, Banking Sector, Profitability, Gross Npa, Public Banks, Private Banks

**INTRODUCTION:**

The banking sector in India is the combination of both private as well as public sector. Non-performing sector are also called as non-performing loans. It is made by a bank or finance company on which repayment or interest payments are not being made on time. A loan is an asset for a bank as the interest payment and the repayment of the principal create a stream of cash flows. It is from the interest payments that as bank make its profits. Banks usually treat assets as non-performing if they are not serviced for some time.

A Non-performing asset (NPAs) is defined as a credit facility in respect of which the interest and/or installment of principal has remained 'past due' for a specified period of time. In simple terms, an asset is tagged as non-performing when it ceases to generate income for the lender.

A non-performing asset (NPAs) is a loan or advance for which the principal or interest payment remained overdue for a period of 90 days. Non-Performing Assets is used by financial institutions that refer to loans that are in jeopardy of default the so called NPL. Once the borrower has failed to make interest or principal payments for 90 days the loan is considered to be a non-performing asset. Non-Performing Assets are problematic for financial institutions since they depend on interest payments for income. Troublesome pressure from the economy can lead to a sharp increase in NPLs and often results in massive write-downs.

With a view to moving towards international best practices and to ensure greater transparency, it has been decided to adopt the '90 days' overdue' norm for identification of Non-Performing Assets, from the year ending March 31, 2004. Accordingly, with effect from March 31, 2004, a non-performing asset (NPAs) is a loan or an advance where;

- Interest and/or installment of principal remain overdue for a period of more than 91 days in respect of a term loan,
- The account remains 'out of order' for a period of more than 90 days, in respect of an overdraft/Cash Credit (OD/CC),
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted,
- Interest and/or installment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purposes, and
- Any amount to be received remains overdue for a period of more than 90 days in respect of other accounts.
- Non submission of Stock Statements for 3 Continuous Quarters in case of Cash Credit Facility.
- No active transactions in the account (Cash Credit/Over Draft/EPC/PCFC) for more than 91days

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### Categories of Non-Performing Assets:

Banks are required to classify Non-Performing Assets further into the following three categories based on the period for which the asset has remained non-performing and the reliability of the dues:

- **Substandard Assets**
- **Doubtful Assets**
- **Loss Assets**

**1. Substandard Assets:** With effect from 31 March 2005, a substandard asset would be one, which has remained **Non-Performing Assets** for a period less than or equal to 12 months. In such cases, the current net worth of the borrower/ guarantor or the current market value of the security charged is not enough to ensure recovery of the dues to the banks in full. In other words, such an asset will have well defined credit weaknesses that jeopardise the liquidation of the debt and are characterized by the distinct possibility that the banks will sustain some loss, if deficiencies are not corrected.

**2. Doubtful Assets:** With effect from March 31, 2005, an asset would be classified as doubtful if it has remained in the substandard category for a period of 12 months. A loan classified as doubtful has all the weaknesses inherent in assets that were classified as substandard, with the added characteristic that the weaknesses make collection or liquidation in full, – on the basis of currently known facts, conditions and values – highly questionable and improbable.

**3. Loss Assets:** A loss asset is one where loss has been identified by the bank or internal or external auditors or the RBI inspection but the amount has not been written off wholly. In other words, such an asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value.

### 4.2. Types of Non-Performing Assets

1. **Gross Non-Performing Assets**
2. **Net Non-Performing Assets**

➤ **Gross Non-Performing Assets:** Gross Non-Performing Assets are the sum total of all loan assets that are classified as Non-Performing Assets as per RBI guidelines as on Balance Sheet date. **Gross Non-Performing Assets** reflects the real **Non-Performing Assets** and the quality of the loans made by banks. It consists of all the nonstandard assets like as sub-standard, doubtful, and loss assets.

It can be calculated with the help of following formula:

Gross Non-Performing Assets Ratio =  $\frac{\text{Gross Non-Performing Assets}}{\text{Gross Advances}}$

➤ **Net Non-Performing Assets:** Net Non-Performing Assets are those type of Non-Performing Assets in which the bank has deducted the provision regarding **Non-Performing Assets**. **Net Non-Performing Assets** is obtained by reducing the provisions from Gross Non-Performing Assets and shows the actual burden of banks. Since in India, bank balance sheets contain a huge amount of Non-Performing Assets and the process of recovery and write off of loans is very time consuming, the provisions the banks have to make against the Non-Performing Assets according

to the central bank guidelines, are quite significant. That is why the difference between gross and net **Non-Performing Assets** is quite high.

It can be calculated by following formula:

Net Non-Performing Assets= Gross Non-Performing Assets– Provisions on Gross Advances

### **5. Reasons for occurrence of non-performing assets**

The banking sector has been facing the severe problems of the rising NPAs. But the problem of NPAs is more in public sector banks when compared to private sector banks and foreign banks, the NPAs in PSB are increasing due to external as well as internal factors.

#### **Internal factors**

**Internal factors are those which are internal to bank and are controllable by bank**

- **Poor lending decision.**
- **Non-compliance to lending norms.**
- **Lack of post credit supervision.**
- **Failure to appreciate good payers.**
- **Excessive overdraft lending.**
- **Non-transparent accounting policy.**

#### **External factors**

External factors are those which are external to banks and they are not controllable by banks

- **Socio political pressure.**
- **Change in industrial environment.**
- **Endangers macroeconomics disturbances.**
- **Natural calamities.**
- **Industrial sickness.**
- **Diversion of funds and willful defaults.**
- **Time/cost overrun in project implementation.**
- **Labour problems of borrowed firms.**
- **Business failures.**
- **Inefficient management.**

**Goyal and Kaur (2008)** analyzed the performance of seven new private sector banks for the years 2001-07. The various statistical tools like mean, standard deviation, annual compound growth rate and one-way Anova have been applied. The researchers calculated various ratios relating to capital adequacy, asset quality, employee productivity, earning quality and liquidity of banks. The study evidenced that capital adequacy ratio of all the banks has been above 9 per cent, the prescribed limit of Reserve Bank of India. Average debt/equity ratio is found to be maximum in the case of Axis Bank. Kotak Mahindra Bank registered maximum percentage increase in NPAs over the previous years. Ratio of advances to total assets has shown an increasing trend for all the banks under study which showed an increase in lending operations. The study witnessed significant differences among the mean ratios of all parameters except for liquid assets to total assets, liquid assets to total deposits, net profit to average assets and percentage change in NPAs. **Prasad and Ravinder (2011)** analyzed the profitability of four major banks in India, i.e., State Bank of India, Punjab National Bank, ICICI Bank and HDFC



Bank for the period 2005-06 to 2009-10. Statistical tools like arithmetic mean, one-way ANOVA, Tukey HSD Test have been employed for the purpose of study. The profitability of these banks have been evaluated by using various parameters like Operating Profit Margin, Gross Profit Margin, Net Profit Margin, Earning per Share, Return on Equity, Return on Assets, Price Earnings Ratio and Dividend Payout Ratio. The study revealed that State Bank of India performed better in terms of earning per share and dividend payout ratio, while Punjab National Bank performed better in terms of operating profit margin and return on equity. The study found that HDFC Bank outperformed in terms of gross profit margin, net profit margin, return on assets and price Earnings ratio. The study evidenced that ICICI Bank paid highest portion of earning as dividends to shareholders. Analysis ranked HDFC Bank on the top position followed by Punjab National Bank, State Bank of India and ICICI Bank. **Kokane. & Nerlekar. (2017)** analyzed the relationship between the Non Performing Asset levels of public sector banks with Capital Adequacy Ratio of each bank over a period of time 2009-2015. They had used statistical tool ANOVA to find the correlation between Non-Performing Assets and Capital Adequacy Ratio. The finding of the research indicates negative correlation between NPA and CAR which bring conclusion that infusion of capital will help banks over their declining Non-performing assets. Author suggested that with the increased capital in the balance sheet the NPA will be equally balanced out. **Goel (2018)** studied and compared the management of non-performing assets in public and private sector banks in Haryana from the period 2012-13 to 2016-17. She had used various statistical tools like ANOVA, regression to analyse the impact of Non-Performing Assets on profitability, liquidity and solvency of public and private sector banks. He had concluded that there is a growth in the Gross as well as Net NPAs of both bank groups, but percentage of NPAs is more in public sector bank as compared to private sector banks. Gross NPAs percentage in public sector banks was 2.7 % in 2006-2007 which grew up to 9.3 % in 2015-2016. Whereas in private sector banks Gross NPAs was 1.9% in 2006-2007 which grew only up to 2.8 % in 2015-2016. HE also concluded that the non-performing assets has the deep impact on the profitability, liquidity and solvency of both sector banks. Further he suggested that Private Banks should rely more on the SARFAESI act for the recovery of NPAs as it has been observed that recovery with the help of SARFAESI act is the most effective method of recovery of NPAs. Banks should strengthen their KYC norms as this will help in knowing the integrity of their borrowers towards repayment of loans. Public sector banks should give regular checks on the client's account.

### Objectives of the study

- To understand the concept and categories of non-performing assets.
- To know the reasons of NPAs on Indian banking sector.
- To know the impact of NPAs on profitability of public and private sector banks.

### RESEARCH METHODOLOGY:

Research methodology shows the various means for data collection for the present study. The study is carried by using secondary data only. The present study provides an easy way to understand the concept of NPAs and its impact on profitability of banking sector. The data of the study is obtained from the secondary sources such as various websites, journals and magazines, articles that directly or indirectly related to NPAs. The collected data of banks is analyzed with the help of regression.

## Impact of Non- Performing Assets on Profitability of Public and Private Sector Banks

It has been discussed earlier that non-performing assets have impact on the profitability of the banks. To study the impact of non-performing assets on banking sector, simple linear regression is used.

### 1.1 Impact of NPAs on Profitability of Public Sector Banks

For evaluating the impact of non-performing assets on the profitability of public sector banks, Gross non-performing assets as a percentage of total advances and profits as a percentage of total advances of ten years starting from period 2008-2009 to 2017-2018 of State Bank of India, Punjab National Bank and Canara Bank and Bank of Baroda are calculated on individual basis.

For calculating the impact of non-performing assets on profitability following ratios and formulas are used.

**Independent Variables Are:** Gross NPAs as a percentage of Total Advances =  $\text{Gross NPA} / \text{Total Advances} \times 100$

**Dependent Variables Are:** Profits as a percentage of Total Advances of Public Sector Bank =  $\text{Profits} / \text{Total Advances} \times 100$

### 1.1 State Bank of India

**TABLE 1.1: GROSS NPA PERCENTAGE TO TOTAL ADVANCES AND PROFITS PERCENTAGE TO TOTAL ADVANCES OF STATE BANK OF INDIA**

Year	Gross NPA Percentage To Total Advances	Profits Percentage to Total Advances
2008-09	2.90	1.68
2009-10	3.09	1.45
2010-11	3.35	1.09
2011-12	4.57	1.35
2012-13	4.90	1.35
2013-14	5.09	0.90
2014-15	4.36	1.01
2015-16	6.71	0.68
2016-17	7.15	0.67
2017-18	11.55	-0.34

$H_0$ : NPAs have no impact on banks profitability

**TABLE 1.2: MODEL SUMMARY**

R	R square	Adjusted r square	Standard Error of estimate
0.947	0.897	0.884	0.194

Table 1.2 provides the value of R and  $R^2$ . Value of R = 0.947 which indicates high correlation among two variables. The value of  $R^2 = 0.897$  which indicates that the variation in profits is highly explained by the NPAs. In other words, it can be said that NPAs have high impact on the profitability of the public sector banks.

**TABLE 1.3: ANOVA**

	Sum of squares	DF	Mean Square	F	Sig
Regression	2.6299	1	2.62991	69.791	0.000
Residual	0.3014	8	0.0376		
Total	2.9313	9			

Table 1.3 reports that how well the regression equation fits the data. The results of ANOVA table predicts that regression model predicts the dependent variable significantly well as the significance value is  $.000 < 0.05$ . This value indicates the goodness of fit of the data.

**TABLE 1.4: COEFFICIENTS**

	Unstandardized Coefficients		Standardized Coefficients	Sig
	B	Std. Error	Beta	
Constant	2.103	0.147356		0.00
Gross NPA percentage of total advances	-0.209	0.0249	-0.947	0.00

$$X = 2.103 - 0.209Y$$

X = Profits as a percentage of total advances

Y = Gross NPAs as a percentage of total advances

In table 1.4, the value of constant = 2.103, Gross NPAs as a percentage of Total Advances = - 0.209. This shows that Gross NPAs have negative impact on the profitability of bank.

From the above findings, it can be concluded that the null hypothesis is rejected and NPAs have negative impact on banks profitability.

## 1.2 Bank of Baroda

**TABLE 1.5: GROSS NPA PERCENTAGE TO TOTAL ADVANCES AND PROFITS PERCENTAGE TO TOTAL ADVANCES OF BANK OF BARODA**

Year	Gross NPA Percentage to Total Advances	Profits percentage to total advances
2008-09	1.28	1.55
2009-10	1.37	1.75
2010-11	1.38	1.85
2011-12	1.55	1.74
2012-13	2.43	1.37
2013-14	2.99	1.14
2014-15	3.80	0.79
2015-16	10.56	-1.41
2016-17	11.15	0.36
2017-18	13.21	-0.57

$H_0$ : NPAs have no impact on banks profitability

**TABLE 1.6: MODEL SUMMARY**

<b>R</b>	<b>R square</b>	<b>Adjusted r square</b>	<b>Standard Error of estimate</b>
0.895	0.801	0.776	0.517

Table 1.6 provides the value of R and  $R^2$ . Value of R =0.895 which indicates high correlation among two variables. The value of  $R^2 = 0.801$  which indicates that the variation in profits is highly explained by the NPAs. In other words, it can be said that NPAs have high impact on the profitability of the public sector banks.

**TABLE 1.7: ANOVA**

	<b>Sum of squares</b>	<b>DF</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig</b>
Regression	8.646	1	8.646	32.236	0.0004
Residual	2.145	8	.268		
Total	10.792	9			

Table 1.7 reports that how well the regression equation fits the data. The results of ANOVA table predicts that regression model predicts the dependent variable significantly well as the significance value is  $.000 < 0.05$ . This value indicates the goodness of fit of the data.

**TABLE 1.8: COEFFICIENTS**

	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>Sig</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	
Constant	1.891	.244		0.00
Gross NPA percentage of total advances	-.208	.036	-0.895	0.00

$$X = 1.891 - 0.208Y$$

X = Profits as a percentage of total advances

Y = Gross NPAs as a percentage of total advances

In table 1.8, the value of constant = 1.891, Gross NPAs as a percentage of Total Advances = -0.208. This shows that Gross NPAs have negative impact on the profitability of bank.

From the above findings, it can be concluded that the null hypothesis is rejected and NPAs have high impact on banks profitability.

### 1.3 Canara Bank

**TABLE 1.9: GROSS NPA PERCENTAGE TO TOTAL ADVANCES AND PROFITS PERCENTAGE TO TOTAL ADVANCES OF CANARA BANK**

<b>Year</b>	<b>Gross NPA Percentage to Total Advances</b>	<b>Profits Percentage to Total Advances</b>
2008-09	1.57	1.50
2009-10	1.53	1.78
2010-11	1.48	1.91
2011-12	1.73	1.41

2012-13	2.58	1.19
2013-14	2.51	0.81
2014-15	3.95	0.82
2015-16	9.74	-0.87
2016-17	10.00	0.33
2017-18	12.44	-1.11

**H<sub>0</sub>:** NPAs have no impact on banks profitability

**TABLE 1.10: MODEL SUMMARY**

R	R square	Adjusted r square	Standard Error of estimate
0.931	0.866	0.850	0.404

Table 1.10, provides the value of R and R<sup>2</sup>. Value of R = 0.931 which indicates high correlation among two variables. The value of R<sup>2</sup> = 0.866 which indicates that the variation in profits is highly explained by the NPAs. In other words, it can be said that NPAs have high impact on the profitability of the public sector banks.

**TABLE 1.11: ANOVA**

	Sum of squares	DF	Mean Square	F	Sig
Regression	8.521	1	8.521	52.02	0.00009
Residual	1.310	8	0.164		
Total	9.831	9			

Table 1.11, reports that how well the regression equation fits the data. The results of ANOVA table predicts that regression model predicts the dependent variable significantly well as the significance value is .000 < 0.05. This value indicates the goodness of fit of the data.

**TABLE 1.12: COEFFICIENTS**

	Unstandardized Coefficients		Standardized Coefficients	Sig
	B	Std. Error	Beta	
Constant	1.867	0.198		0.00
Gross NPA percentage of total advances	-0.229	.031	-0.930	0.00009

$$X = 1.867 - 0.229Y$$

X = Profits as a percentage of total advances

Y = Gross NPAs as a percentage of total advances

In table 1.12, the value of constant = 1.867, Gross NPAs as a percentage of Total Advances = -0.229. This shows that Gross NPAs have negative impact on the profitability of bank.

From the above findings, it can be concluded that the null hypothesis is rejected and NPAs have high impact on banks profitability.

#### 1.14 Punjab National Bank

**TABLE 1.13: GROSS NPA PERCENTAGE TO TOTAL ADVANCES AND PROFITS PERCENTAGE TO TOTAL ADVANCES OF PUNJAB NATIONAL BANK**

Year	Gross NPA Percentage TO Total Advances	Profits Percentage to Total Advances
2008-09	1.62	2.00
2009-10	1.72	2.09
2010-11	1.81	1.83
2011-12	2.97	1.66
2012-13	4.36	1.54
2013-14	5.41	0.96
2014-15	6.75	0.80
2015-16	13.54	-0.96
2016-17	13.20	0.32
2017-18	19.97	-2.83

$H_0$ : NPAs have no impact on banks profitability

**TABLE 1.14: MODEL SUMMARY**

R	R square	Adjusted r square	Standard Error of estimate
0.966	0.934	0.926	0.424

Table 1.14, provides the value of R and  $R^2$ . Value of R = 0.966 which indicates high correlation among two variables. The value of  $R^2 = 0.934$  which indicates that the variation in profits is highly explained by the NPAs. In other words, it can be said that NPAs have high impact on the profitability of the public sector banks.

**TABLE 1.15: ANOVA**

	Sum of squares	DF	Mean Square	F	Sig
Regression	20.545	1	20.545	114.278	0.000
Residual	1.438	8	0.179		
Total	21.983	9			

Table 1.15 reports that how well the regression equation fits the data. The results of ANOVA table predicts that regression model predicts the dependent variable significantly well as the significance value is  $.000 < 0.05$ . This value indicates the goodness of fit of the data.

**TABLE 1.16: COEFFICIENTS**

	Unstandardized Coefficients		Standardized Coefficients	Sig
	B	Std. Error	Beta	
Constant	2.447	0.208		0.00
Gross NPA percentage of total advances	-0.239	0.022	-0.966	0.00

$$X = 2.447 - 0.239Y$$

X = Profits as a percentage of total advances

Y = Gross NPAs as a percentage of total advances



In table 1.16, the value of constant = 2.447, Gross NPAs as a percentage of Total Advances = -0.239. This shows that Gross NPAs have negative impact on the profitability of bank.

From the above findings, it can be concluded that the null hypothesis is rejected and NPAs have high impact on banks profitability.

## 2 Impacts of NPAs on Profitability of Private Sector Banks

### 2.1 Impact of NPAs on the Profitability of Private Sector Banks

For evaluating the impact of NPAs on the profitability of private sector banks, Gross NPAs as a percentage of total advances and profits as a percentage of total advances of ten years starting from period 2008-2009 to 2017-2018 of YES Bank, ICICI Bank, HDFC Bank and Axis Bank are calculated.

For calculating the impact of NPA on profitability following ratios and formulas are used.

#### Independent Variables Are:

Gross NPAs as a percentage of Total Advances =  $\text{Gross NPA} / \text{Total Advances} \times 100$

#### Dependent Variables Are:

Profits as a percentage of Total Advances of Public Sector Banks =  $\text{Profits} / \text{Total Advances} \times 100$

#### 2.1.1 Yes Bank

**TABLE 1.17: GROSS NPA PERCENTAGE TO TOTAL ADVANCES AND PROFITS PERCENTAGE TO TOTAL ADVANCES OF YES BANK**

Year	Gross NPA Percentage to Total Advances	Profits percentage to Total Advances
2008-09	0.69	4.43
2009-10	0.27	3.98
2010-11	0.24	4.07
2011-12	0.22	5.51
2012-13	0.20	6.30
2013-14	0.31	7.11
2014-15	0.41	6.90
2015-16	0.76	6.88
2016-17	1.53	6.71
2017-18	1.29	5.97

$H_0$ : NPAs have no impact on banks profitability

**TABLE 1.18: MODEL SUMMARY**

R	R square	Adjusted r square	Standard Error of estimate
0.303	0.092	-0.02	1.23

Table 1.18 provides the value of R and  $R^2$ . Value of R = 0.303 which indicates high correlation among two variables. The value of  $R^2 = 0.092$  which indicates that the variation in profits is explained by the NPAs. In other words, it can be said that NPAs have low impact on the profitability of the public sector banks.

**TABLE 1.19: ANOVA**

	Sum of squares	DF	Mean Square	F	Sig
Regression	1.123	1	1.23	0.808	0.39
Residual	12.23	8	1.52		
Total	13.46	9			

Table 1.19 reports that how well the regression equation fits the data. The results of ANOVA table predicts that regression model predicts the dependent variable significantly well as the significance value is  $0.39 > 0.05$ . This value does not indicate the goodness of fit of the data.

**TABLE 1.20: COEFFICIENTS**

	Unstandardized Coefficients		Standardized Coefficients	Sig
	B	Std. Error	Beta	
Constant	5.323	0.645		0.00
Gross NPA percentage of total advances	0.780	0.868	0.243	0.39

$$X = 5.323 + 0.780Y$$

X = Profits as a percentage of total advances

Y = Gross NPAs as a percentage of total advances

In table 1.20, the value of constant = 5.323, Gross NPAs as a percentage of Total Advances = 0.780. This shows that Gross NPAs have positive impact on the profitability of bank.

From the above findings, it can be concluded that the null hypothesis is accepted and NPAs have no impact on banks profitability.

### 2.1.2 ICICI Bank

**TABLE 1.21: GROSS NPA PERCENTAGE TO TOTAL ADVANCES AND PROFITS PERCENTAGE TO TOTAL ADVANCES OF ICICI BANK**

Year	Gross NPA Percentage to Total Advances	Profits Percentage to Total Advances
2008-09	4.42	1.72
2009-10	5.23	2.22
2010-11	4.64	2.38
2011-12	3.73	2.55
2012-13	3.31	2.87
2013-14	3.10	2.90
2014-15	3.90	2.88
2015-16	6.02	2.23
2016-17	9.08	2.11
2017-18	10.39	1.32

$H_0$ : NPAs have no impact on banks profitability

**TABLE 1.22: MODEL SUMMARY**

<b>R</b>	<b>R square</b>	<b>Adjusted r square</b>	<b>Standard Error of estimate</b>
0.775	0.599	0.549	0.348

Table 1.22 provides the value of R and  $R^2$ . Value of R = 0.775 which indicates high correlation among two variables. The value of  $R^2 = 0.599$  which indicates that the variation in profits is highly explained by the NPAs. In other words, it can be said that NPAs have high impact on the profitability of the public sector banks.

**TABLE 1.23: ANOVA**

	<b>Sum of squares</b>	<b>DF</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig</b>
Regression	1.451	1	1.451	11.976	0.008
Residual	0.969	8	0.121		
Total	2.420	9			

Table 1.23 reports that how well the regression equation fits the data. The results of ANOVA table predicts that regression model predicts the dependent variable significantly well as the significance value is  $.008 < 0.05$ . This value indicates the goodness of fit of the data.

**TABLE 1.24: COEFFICIENTS**

	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>Sig</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	
Constant	3.192	0.25		0.00
Gross NPA percentage of total advances	-0.162	0.047	-0.775	0.008

$$X = 3.192 - 0.162Y$$

X = Profits as a percentage of total advances

Y = Gross NPAs as a percentage of total advances

In table 1.24, the value of constant = 3.192, Gross NPAs as a percentage of Total Advances = -0.162. This shows that Gross NPAs have negative impact on the profitability of bank.

From the above findings, it can be concluded that the null hypothesis is rejected and NPAs have high impact on banks profitability.

### 2.1.3 Axis Bank

**TABLE 1.25: GROSS NPA PERCENTAGE TO TOTAL ADVANCES AND PROFITS PERCENTAGE TO TOTAL ADVANCES OF AXIS BANK**

<b>Year</b>	<b>Gross NPA Percentage to Total Advances</b>	<b>Profits Percentage to Total Advances</b>
2008-09	1.10	2.23
2009-10	1.26	2.41
2010-11	1.12	2.38
2011-12	1.06	2.50
2012-13	1.21	2.63

2013-14	1.37	2.70
2014-15	1.46	2.62
2015-16	1.80	2.43
2016-17	5.70	0.99
2017-18	7.79	0.06

$H_0$ : NPAs have no impact on banks profitability

**TABLE 1.26: MODEL SUMMARY**

R	R square	Adjusted r square	Standard Error of estimate
0.978	0.957	0.951	0.189

Table 1.26 provides the value of R and  $R^2$ . Value of R = 0.978 which indicates high correlation among two variables. The value of  $R^2 = 0.957$  which indicates that the variation in profits is highly explained by the NPAs. In other words, it can be said that NPAs have high impact on the profitability of the public sector banks.

**TABLE 1.27: ANOVA**

	Sum of squares	DF	Mean Square	F	Sig
Regression	6.470	1	6.470	179.39	0.00
Residual	0.288	8	0.036		
Total	6.758	9			

Table 1.27 reports that how well the regression equation fits the data. The results of ANOVA table predicts that regression model predicts the dependent variable significantly well as the significance value is  $.000 < 0.05$ . This value indicates the goodness of fit of the data.

**TABLE 1.28: COEFFICIENTS**

	Unstandardized Coefficients		Standardized Coefficients	Sig
	B	Std. Error	Beta	
Constant	2.952	0.057		0.00
Gross NPA percentage of total advances	-0.359	0.026	-0.978	0.00

$$X = 2.952 - 0.359Y$$

X = Profits as a percentage of total advances

Y = Gross NPAs as a percentage of total advances

In table 1.28, the value of constant = 2.952, Gross NPAs as a percentage of Total Advances = -0.359. This shows that Gross NPAs have negative impact on the profitability of bank.

From the above findings, it can be concluded that the null hypothesis is rejected and NPAs have high impact on banks profitability.

## 2.1.4 HDFC Bank

**TABLE 1.29: GROSS NPA PERCENTAGE TO TOTAL ADVANCES AND PROFITS PERCENTAGE TO TOTAL ADVANCES OF HDFC BANK**

Year	Gross NPA Percentage to Total Advances	Profits Percentage to Total Advances
2008-09	2.01	2.27
2009-10	1.44	2.34
2010-11	1.06	2.45
2011-12	1.02	2.64
2012-13	0.97	2.81
2013-14	0.99	2.80
2014-15	0.94	2.80
2015-16	0.95	2.65
2016-17	1.06	2.62
2017-18	1.31	2.66

$H_0$ : NPAs have no impact on banks profitability

**TABLE 1.30: MODEL SUMMARY**

R	R square	Adjusted r square	Standard Error of estimate
0.809	0.654	0.61	0.118

Table 1.30 provides the value of R and  $R^2$ . Value of R = 0.809 which indicates high correlation among two variables. The value of  $R^2 = 0.654$  which indicates that the variation in profits is highly explained by the NPAs. In other words, it can be said that NPAs have high impact on the profitability of the public sector banks.

**TABLE 1.31: ANOVA**

	Sum of squares	DF	Mean Square	F	Sig
Regression	0.211	1	0.211	15.137	0.005
Residual	0.111	8	0.013		
Total	0.323	9			

Table 1.31 reports that how well the regression equation fits the data. The results of ANOVA table predicts that regression model predicts the dependent variable significantly well as the significance value is  $.005 < 0.05$ . This value indicates the goodness of fit of the data.

**TABLE 1.32: COEFFICIENTS**

	Unstandardized Coefficients		Standardized Coefficients	Sig
	B	Std. Error	Beta	
Constant	3.138	0.142		0.00
Gross NPA percentage of total advances	-0.455	0.116	-0.809	0.005

$$X = 3.138 - 0.455Y$$

X = Profits as a percentage of total advances

Y = Gross NPAs as a percentage of total advances

In table 1.32, the value of constant = 3.138, Gross NPAs as a percentage of Total Advances = -0.455. This shows that Gross NPAs have negative impact on the profitability of bank.

From the above findings, it can be concluded that the null hypothesis is rejected and NPAs have high impact on banks profitability.

### 3. SUMMARY

#### ➤ Correlation of Gross Non-Performing Assets & Profitability of public and private sector banks

1. There is a high degree of negative correlation (-0.209) of Gross Non-Performing Assets & Profitability of SBI during the study period.
2. There is a high degree of negative correlation (-0.229) of Gross Non-Performing Assets & Profitability of Canara Bank during the study period.
3. There is a high degree of negative correlation (-0.239) of Gross Non-Performing Assets & Profitability of Punjab National Bank during the study period.
4. There is a high degree of negative correlation (-0.208) of Gross Non-Performing Assets & Profitability of Baroda during the study period.
5. There is a high degree of negative correlation (-0.359) of Gross Non-Performing Assets & Profitability of Axis Bank during the study period.
6. There is a high degree of positive correlation (0.780) of Gross Non-Performing Assets & Profitability of Yes Bank during the study period.
7. There is a high degree of negative correlation (-0.455) of Gross Non-Performing Assets & Profitability of HDFC Bank during the study period.
8. There is a high degree of negative correlation (-0.162) of Gross Non-Performing Assets & Profitability of ICICI Bank during the study period.

### 4. CONCLUSION OF THE STUDY:

The banks have expressed correlation between gross Non-Performing Assets and Net profits. Only Yes Bank has shown positive correlation, and all the other banks expressed negative correlation. The gross Non-Performing Assets had a negative impact on profitability of banks. If the NPAs increase then the profit will decrease. But in case of Yes Bank, increasing profit may be the result of efficient management of NPAs, or other financial services of the bank. To solve the problem of increasing gross NPAs, banks should adopt strict measure to recovery non-performing assets or legal action should be initiated.

NPAs affect the financial performance of Indian banks as well financial growth of economy. Indian banking system is facing the NPAs problem. Every country's economic growth depends upon their financial system.

The financial system mainly comprises banking sector. Especially public sector banks should focus on their NPA Management to grow their profitability. The financial institutions should develop new strategies planning to improve the recovery of loan. Non-performing assets (NPAs) is affecting the performance of financial institutions both financially and psychologically. The non-performing assets have become a major cause of concern. Absorbing the credit management skills has become all the more important for improving the bottom-line of



the banking sector. The current NPAs status continues to disturb Indian banking Sector. Several experiments have been tried to reduce NPAs but nothing has hit the mark in tackling NPAs. The Indian banking sector faced a serious problem of NPAs. A high level of NPAs suggests high probability of a large number of credit defaults that affect the profitability and liquidity of banks. Most of the problem related to NPA is faced by public sector banks. To improve the efficiency and profitability, the NPAs have to be scheduled. Strict measures are needed to be taken up to combat these NPAs crises. It is highly impossible to have zero percentage NPAs. Improvement in recovery management properly functioning of banks depends on time recovery of loan. Banks should develop a new recovery programs for over dues, monitoring accounts, keeping regular contact with borrowers. However, many borrowers are defaulters not because of low income but due to lack of ethics. Improving the credit Management- Management of credit is essential for proper functioning of banks. Preparation of credit planning, proper credit appraisals, disbursements, post sanction follow-up and need based credit are the some areas of credit management that needs improvement in order to reduce the NPAs. Banks should reduce dependence on interest income- Indian banks are largely dependent on the lending and investment as in comparison to developed countries. Indian banks should look for sources (income) from fee based services and products. Credit Information Bureau India LTD (CIBIL) the institutionalization of information sharing arrangement is now possible through the newly formed Credit information Bureau of India Limited (CIBIL) it was set up in the year 2001, by SBI, HDFC, and two foreign technology partners. This will prevent those who take advantage of lack of system of information sharing amongst leading institutions to borrow large amount against same assets and property, which has in no measures contributed to the incremental of NPAs of banks.

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## RURAL DEVELOPMENT PROGRAMMES IN INDIA: A REVIEW

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### ABSTRACT

*Rural areas form 70 percent of the total area of India. Along with their large presence, they highly contribute to the overall economy of the country. Keeping this in mind, the development of rural areas has been a major concern since the independence of India in 1947. The Government of India has adopted various measures in the form of launching several rural development programmes. These rural development programmes have focused on the basic amenities of the rural people. These basic amenities include housing, sanitation, electricity, road connectivity, irrigation, education, healthcare, and telecommunications. The government forms annual analysis of the growth rate of rural development in accordance with the growth rate of these programmes. This analysis is done on different aspects like fund allocation, fund utilization, physical factors, financial factors, and alike. Further, this analysis helps the government to improve its approach towards rural development. This study aims to review the past studies of rural development programmes with special reference to Indira AwaasYojna and Pradhan Mantri Gram SadakYojna. This paper will be helpful to academicians, policymakers, and government for understanding the status of rural development programmes in India.*

**KEYWORDS:** *Indra Awas Yojana, Pradhan Mantri Gram Sadak Yojana, Rural Development Programmes, Rural Development*

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### 1.0.INTRODUCTION

Rural development is a multi-faceted and multi-dimensional process, which has been taking place due to the interventions of government, non-governmental organizations and private sector as well as the efforts of people themselves, with a view to bringing about an improvement in the living standards of people residing in rural areas. The importance of rural development needs no overemphasis, as nearly half of the world's population and two-thirds of population in the developing countries continues to live in rural areas. India is one of the leading countries in the

world where several approaches have been tried out in the past six decades to achieve rural development.

Keeping in mind the importance of rural development, the studies of various scholars have been reviewed.

AdullaYesaiah (2008) was of the view that rural development being the lifeline of the agro-based economy of India, held a significant role. The rural areas form two-thirds of the country. Both agricultural as well as economic productivity are important for the development of rural areas. The rising necessity for the development was that of usage of appropriate technologies in rural areas so that the government policies can be effectively and efficiently implemented.<sup>1</sup>

K.S. Narayana (2003), in his article, attempted to study the different components which enhance the rural development. Also, various issues and problems, which cause hindrance in the growth of Indian villages, were confronted. According to the study, though the country had progressed in various field in terms of infrastructure, science, and technology, there is still need to improve the living standards for present as well as future generations.<sup>2</sup>

Mishra and Sharma (1979), theoretically, stated that rural development is not only confined to the development of rural areas but also developing the living standards of rural individuals. Further, rural development leads the individuals to become self-reliant and create self-sustaining societies, thereby giving the required direction to each component of rural life.<sup>3</sup>

Singh (1986) pointed out that development can not only be measured in terms of revenues and infrastructures being provided, but also the change in the attitude of the individuals. For the development of rural areas, various Government programmes have been implemented. These programmes are framed in such a way that focuses on all the fields, right from employment to healthcare.<sup>4</sup>

Shankar Chatterjee (2011) attempts an explorative study and conducted the survey on rural development programmes in various conditions of India as of late. Numerous parts of the rural economy have been studied by the author. Beginning from destitution, self-improvement gatherings, wellbeing, accounting techniques, infrastructure to women's interest have been incorporated here. The present independent work programmes principally incorporate Swarnajayanti Gram Swarojgar Yojana (SGSY) and compensation business incorporates Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) both have been examined with field contemplates. The framework programmes like Gokul Gram Yojana which was considered as State sponsored programmes has been examined with the goal that individuals from different parts of the nation can get a thought regarding this program. Also, RUDSETI approach, wellbeing programmes, accounting programmes and so forth have been undertaken as case study.<sup>5</sup>

Ghosh (2017) in his article evaluated the status of rural infrastructure in 16 major states of India to examine its impact on rural development. It was found that though various government initiatives for development of rural infrastructure had been adopted, the growth rate of rural development was less than expected. Also, regression coefficients of the composite indices and individual indicators of rural infrastructure revealed that for enhancing agricultural productivity, it is necessary to improve physical infrastructure as well as social infrastructure. The infrastructure development leads to improved literacy rate, reduce poverty, increase life expectancy, and decrease infant mortality. The author also suggests that the government needs to

invest more to improve rural infrastructure, specially, in housing, road connectivity, electricity, irrigation and telecommunications.<sup>6</sup>

## **2.0.RURAL DEVELOPMENT PROGRAMMES IN INDIA**

India has many rural areas and are solely responsible for food production which are exported in many parts of the world. Development of these areas is very important. Development of rural sectors comprises of health and sanitation, connectivity with the urban areas, proper places to live, farming facilities. For the development of such rural areas, Ministry of Rural Development, government of India has launched several schemes which provides people of villages with better health (that comprises of hospital facilities, free vaccination schemes, medicines on lower rates and essential ones free, etc.), good sanitation (that comprises of making of toilets, pest control, etc.), housing facilities (in which government provides fund for making a pakka house), road connectivity with the nearby cities (in which government provides funds to the contractors for making cemented roads connecting the rural areas with the cities).

Some important schemes under the Rural Development Programme are as follows:

### **1. Pradhan Mantri Gram SadakYojna(PMGSY):**

This scheme comprises of rural development by rural road connectivity, which then leads to increased economic and social services. Through this scheme, the government builds all-weather roads, which helps people of rural areas to get better connectivity with the urban areas, which helps them in better agriculture, educational facilities for children, etc. This scheme is advantageous for many villagers, which helps them to lead better lives.<sup>7</sup>

Dr.Pradeepta Kumar Samanta (2015) considered rural roads as that asset of the nation which could act as a tool for social inclusion and helping in developing the rural economy, thereby developing a sustainable environment. The rural roads help in rural-urban connectivity to improve the accessibility to the farmers of markets for their farm produce. The improvement in rural roads helps in reducing transport cost as well as stimulating marketing. This, further, helps in increasing agricultural productivity and profitability. For the development of rural economy, good quality of rural roads is the necessity. It has been evident that the implementation of PMGSY scheme at ground level is different from that discussed in the plan document. Further, PMGSY scheme is confined to the construction and maintenance of highways, expressways, bypasses and bridges. The rural roads which link remote, hilly and backward areas are not much profitable to the private sector. The rural road infrastructure should not be neglected because it helps to prevent any inequality between the growth of urban and rural areas.<sup>8</sup>

### **2. Swarnjayanti Gram SwarozgarYojna (SGSY):**

This scheme is also known as Ajeevika. This scheme is renamed National Livelihood Mission. Under this scheme, government aims to educate the women so that they can start their work and thus helping their family. Government provides loan of 3 lakhs rupees at an interest of 7% which is then decreased to 4% when payment is done. This ultimately helps in growth of Indian Economy.

Studying the implementation of the SGSY program of the past ten years produces a mixed picture. Dedicated administrative systems built in Andhra Pradesh, Kerala, Tamil Nadu etc. have made the SHG movement successful. In these states, the strong network of SHGs and their federations has allowed poor people to access significant institutional credit and resolve some of



the crucial technological- and market-related problems which they would have to face. But the success of the scheme in other parts of the country has been comparatively sluggish. For creating 17 lakh SHGs of the rural BPL households, it took more than 10 years and for completing the coverage of the remaining households, a further 28 lakh SHGs need to be created, which is clearly a high order given not only the availability of resources, but more importantly the distribution systems in place in different states. However, since only 22 percent of SHGs had access to bank loans for income-generating activities, including micro-enterprises, there was a need to increase the credit absorption potential of SHGs by systematic skill-building capacity and ongoing technological, marketing and even placement aid, in addition to streamlining the credit distribution system for ensuring the adequate availability.<sup>9</sup>

SGSY aims to encourage multi-stage loans instead of one-time loans. Therefore, the need of the Swarozgaris had to be carefully assessed and promoted over the years to increase their credit intake. Nevertheless, it was found that all the loans disbursed by the banks were one-time loans in Jammu and Kashmir. Also, there has been no effort for encouraging beneficiaries to increase their requirements. In addition, rather than the loan component, the beneficiaries were more involved in the subsidy portion of the program.<sup>10</sup>

### **3. National Rural Employment Guarantee Act (NREGA):**

This was launched in 2005. This is an Indian Labour Law, that focuses on “right to work”. Under this scheme people of the rural areas are provided with 100 days of guaranteed wage employment in a financial year by providing them work to make assets (roads, canals, wells, etc). This ultimately helps in empowering the people of rural areas by helping them financially and decreasing migration to the urban areas.

A new scheme has been launched and legislation has been enacted under the name of 'National Rural Employment Guarantee Act' (NREGA) to extend the benefits to rural people. It guarantees adult members of every rural household, involved in unskilled manual work, 100 days of employment in a financial year. The Act was initially implemented in 200 districts and was gradually extended to other areas notified by the central government. It is considered a "Silver Bullet" since it focuses on abolishing rural poverty and unemployment by generating demand in the Indian village for productive labor. It offers an alternative source of livelihood that will affect migration reduction, child labour, poverty alleviation, and self-sustaining villages through the development of productive assets such as road construction, water tank cleaning, soil and water conservation work, etc., making it the world's largest anti-poverty initiative.<sup>11</sup>

### **4. Pradhan Mantri AwasYojna/ Indira AwasYojna:**

This scheme aims to provide funds to the people of the rural areas so that they can build their houses. This is basically a public housing scheme. Funds are provided by both central and state government. The payment is made in the parts (i.e. after the completion of certain level of the house one payment is made, another is given after the completion of second level). The participation of the contractors is not allowed.<sup>12</sup>

In her article Housing for the Rural Poor, Indira Hirway (1987) argues that the government has never conducted a comprehensive survey for assessing the nature and extent of housing needs in rural areas. Also, the government has not provided adequate funding for rural housing. She believes that by additional measures, the government must improve the current housing condition. She reviews various housing policies and programs for the rural poor. Among some

suggestions, she states that (i) an all-India survey should be carried out for assessing the current housing conditions in rural areas, and studying the nature and extent of rural people's housing needs, particularly the weaker sections, (ii) preparing an inventory of available housing technology at all levels in India and also at regional level, (iii) a collaborative approach to the design and implementation of housing schemes, (iv) linking housing programs with other rural development programmes, and (v) providing financial support for homeless people.<sup>13</sup>

### **5. SarvSiksha Abhiyan:**

This is an Indian Government scheme that aims to provide primary education to the children between the ages of 6 to 14. This was launched by Atal Bihari Vajpayee. Education is the basic right for the children and thus the government provides funds for establishing schools in different rural areas for educating them. This scheme also provides food to the children in order to increase the strength of the students.<sup>14</sup>

Chand, Vijiya Sherry and Amin - Choudhury, Geeta. (2006), in their study, reported innovations that were seen after the implementation of the Sarva Shiksha Abhiyan. The Sarva Shiksha Abhiyan (SSA), launched in 2002, is one of the rural development programmes of the Government of India focusing on primary education. Different innovative approaches in teaching methods have been reported in 13 states. These innovations have played a major role in reducing the drop-out rate of children in school. It was also noted that in 2006 from approximately 3 million disabled children, 1.83 million were enrolled in schools. One of the encouraging innovation steps was the linking of civil works to an educational purpose such as teaching rainwater harvesting. Strategies should be developed to focus on a problem area identified by national guidelines, and monitoring and evaluation systems should be developed whenever possible to facilitate changes to interventions.<sup>15</sup>

### **6. Sampoorna Gramin Rozgar Yojna (SGRY):**

This scheme of Indian Government aims to provide beneficial employment to the people of rural areas. It also aims to increase the nutritional levels of the people of rural areas thus providing them good food. This scheme also aims to provide better infrastructure to the villagers. Funds are provided by the government to the Panchayats which releases them into different tiers. Food grains are provided at the subsidised level to increase the agriculture and measures are taken under natural calamities. Water conservation is also done by making new ponds, managing the old ones.<sup>16</sup>

The scheme envisages giving food grains to the rural poor at a rate of 5 kg per man-day as part of SGRY wages. While official statistics showed that all food grains that were sent from the districts were distributed among the beneficiaries, the vast majority of beneficiaries declined it. The Mates have mentioned that the beneficiaries were generally not interested in receiving food grains as part of the wages because of its poor quality. Also, the beneficiaries stated that in order to make money from it, contractors sell those food grains in the open market. The government should therefore take the necessary steps to remove the misconception among wage seekers about the quality of food grains. In this regard, both print and electronic media can play a crucial role. Therefore, the supply of food grains under SGRY should be regulated more closely or all salaries should only be paid in cash to the beneficiaries.<sup>17</sup>

## 7. Sansad Adarsh Gram Yojna

It was launched by the government of India in October 2014 as a village development project. Under this project, each and every member of the parliament would have to undertake the responsibility that by the end of 2019 they would develop physical and institutional infrastructure in three villages. The Saansad Adarsh Gram Yojana (SAANJHI) was launched on 11th October 2014. Their goal is to develop three Model Grams by the end of March 2019. Out of the three, one was achieved in 2016. By 2024, it is expected that five Adarsh Grams would be selected and developed.

India's Prime Minister, Mr. Narendra Modi, adopted Jayapur, a village in Varanasi, while launching the Saansad Adarsh Gram Yojana (SAANJHI) programme, to develop it in a model village. Since then the village, with a mere population of 2,974 comprising 1,541 males and 1,433 females, has been developing at a faster pace. Since the adoption of this village under the SAANJHI scheme, several development initiatives were routed to this village through CSR wing of some major companies. Different initiatives that were taken included: Pucca houses are being constructed for the poor residents of the village, toilets were built, rural banking was given a major impetus with the opening of two bank branches in the village, solar-powered lanterns were distributed to the villagers, solar-powered street lights were installed and easy loans were processed, a major impetus for financial inclusion in the village. Jayapur adopted under Saansad Adarsh Gram Yojana (SAANJHI) has really acted as a CSR forum. The companies also did not shy away from performing their role to construct it as a model village.<sup>18</sup>

## 8. Training to Rural Youth for Self-Employment (TRYSEM)

For encouraging the training of the youth from the under developed and rural areas, a national programme popularly called TRYSEM (Training to Rural Youth for Self-Employment) was started in 1979. The accumulation of the under and unemployed young beings in the less fortunate and under privileged areas led to the initiation of this national programme. To increase self-employment, under this programme, a number of forty chosen young beings, including both men and women in each section were up skilled in both the skill advancement and business aptitude. This programme served a boon in restricting the locomotion of the young beings of the underdeveloped areas to the developed areas, as it was creating opportunities in their area only. This programme also acts as a catalyst for the motivation for the advancement of the under privileged areas as the internal demands of these areas were met, in their area only.

The independent research institutes/organizations evaluated the TRYSEM program in a Quick Study by Planning Commission (June to August 1993). The findings revealed that around 47.19 percent of the total TRYSEM beneficiaries were unemployed while 32.54 percent opted for self-employment after training. Of self-employment ones, 12.41 percent chose trades. The lack of funds was noticed as the major reason for those beneficiaries who went for training and wanted to take up self-employment. Also, after training under TRYSEM, many trainees were unsatisfied with the socio-economic conditions prevailing, thus preferred not to apply for loan under IRDP (Planning Commission, 2002). The study also refers to TRYSEM as a weak link in the overall strategy for self-employment in rural areas in terms of targeted goals.<sup>19</sup>

Ankita Gupta (2006) stated that many beneficiaries of TRYSEM felt that it is a way to receive a stipend during the training period and not as a way to develop genuine skills that would help in self-employment.<sup>20</sup>

## 9. Aajeevika - National Rural Livelihood Mission

This mission was launched by the Ministry of Rural Development (MORD) in June 2011. This mission consists of a part investment by the World Bank. It aims at creating an effective and efficient platform for the rural poor. It also enables them to increase their household income by enhancing their livelihood. It even helps provide them improved access to various financial services. This program was renamed Deendayal Antyodaya Yojana (DAY-NRLM) in November 2015.<sup>21</sup>

Women empowerment as part of human growth includes a multi-dimensional approach to promote effective women's involvement in production as well as discussion making. Rural people are motivated to join self-help groups (SHGs) and develop their capacity through learning and capacity building. Since 1999, the SGSY is now obliged as the NRLM has been renamed Aajeevika and since 2011 has been finished in the nation's mission mode. The initiative was renamed Deendayal Antyodaya Yojana-NRLM in November 2015. The Deendayal Antyodaya mission has effectively brought more than 4.5 Cr to diversify jobs and empower women. Women in the SHGs side. The study was undertaken to analyze the impact of Deendayal Antyodaya Yojana- National Rural Livelihood Mission in Bajiagaon community development block of Nagaon district of Assam. The investigation found that NRLM could be successful in expanding income and enhancing the status of respondents in both pre-SHG and post-SHG.<sup>22</sup>

Since independence, the basic amenities of rural areas revolve around housing conditions and road connectivity. The growth rate of each rural development programme is analysed by the government so that any change in the programme required may be made. Among these, most changes have been made in two major programmes, namely, Indira Awaas Yojna (IAY) and Pradhan Mantri Gram Sadak Yojna (PMGSY). This makes it important to study the opinions of various scholars so that status of these programmes can be understood. Following are some of the reviews of the studies of some scholars regarding IAY and PMGSY.

### 3.0.INDIRA AWAAS YOJNA

Dinesh P.T., and Jayalsheela (2008) studied the problems and prospects of rural housing in India. Around 60 percent of the country constitutes of rural areas, due to which there is a great concern for improving the housing conditions in rural areas. The study pointed that the status of housing conditions reflects the level of living standards. The better the housing conditions, the better are the living standards, further leading to the betterment employment opportunities, ultimately leading to the overall development of rural areas. Thus, the housing condition is one of the most important elements of transforming rural life. Though Government has adopted various programmes for the rural development, it has not yet penetrated into the needy rural part of the nation. Thus, the present need is to put in all the efforts for development at different levels to achieve the better housing conditions for rural areas in a sustainable manner.<sup>23</sup>

Dhruvakumar and Choudhary (2008) analyzed the housing shortage in India and the limitations of IAY scheme in solving the housing problem. They suggested that the problem of high cost of construction of houses can be solved to a great extent by applying the principle of economy of scale by involving outside agencies in the construction of IAY Houses. According to them, this will take unnecessary work load away from the Panchayat and Blocks.<sup>24</sup>

According to Kumar (1996) good housing policies alone will not ensure good results. There is need to improve the delivery system for rural housing, and the housing policy should be

reviewed periodically to tackle effectively the problem of shortage of dwelling units. He identified that the involvement of NGOs would lead to innovations in rural housing schemes. He recommended that the widening of Indira Awas Yojana scheme to cover more people should not affect the interest of the Scheduled Castes and Scheduled Tribes.<sup>25</sup>

Sihaag (2000) revealed that despite several lakhs of houses built under Indira Awas Yojana, the housing scenario is quite dismal. Some of the major drawbacks in the rural housing are the ignorance about and the lack of access of scientifically proven and validated options in building designs, technologies and materials. The systematic approach being adopted now, addressed to the critical issues of design, availability of credit, technologies and materials would usher in new hopes for rural housing in India.<sup>26</sup>

Sahota (2005) analyzed the different schemes for rural housing in India and examined the role of Indira Awas Yojana in solving the housing problem. He found that there is a clear correlation between poverty and housing: the poor person either does not have a house or lives in an unserviceable kutcha house. He remarked that special schemes for rural housing of the various State Governments have made very limited progress due to paucity of resources except in Andhra Pradesh.<sup>27</sup>

Murthy (1988) observed that the choice of appropriate materials for construction has a bearing on the cost, labour intensity, durability and liveability of the house. Houses under this Indira Awaas Yojana are found to be constructed with burnt, brick walling tiles or RCC roofing. Unless good quality seasoned wood is used, roofing will not be satisfactory. It is suggested that appropriate technology familiarly known as low cost technology, which aims at reducing the costs without sacrifice of quality or durability through better engineering management avoiding costly and energy oriented materials be adopted.<sup>28</sup>

#### **4.0. PRADHAN MANTRI GRAM SADAK YOJNA**

Sampath R. & D. Murugan. (2013) evaluated rural road infrastructure development with particular reference to Pradhan Mantri Gram Sadak Yojana (PMGSY). According to them, connectivity to rural infrastructure development on rural roads is one of the main elements. It encourages access to financial and social services and thus creates enhanced agricultural revenue and possibilities for jobs in rural India as well as guarantees sustainable poverty reduction. The Ministry of Rural Development (MORD) is engaged in the assignment of poverty reduction, sustainable development and socio-economic transformation in rural India. Different schemes are being introduced across the country to allow the rural India development process. Pradhan Mantri Gram Sadak Yojana (PMGSY) was introduced to boost rural road connectivity with a perspective to enhancing access the socio-economic facilities and thus creating enhanced financial and social possibilities in rural India. The main findings include (a) Assam, Bihar, Madhya Pradesh, Chhattisgarh, and Jammu and Kashmir have reported a progressive trend under PMGSY in the new road connectivity among the districts. As a consequence, the general economic productive activity has risen. (B) Punjab, Rajasthan, Madhya Pradesh, Bihar and Jharkhand states reported notable performance in the development of rural road infrastructure in the event of road construction in kilometers (c) With regard to the distribution of resources for road and bridge construction, Odisha has shown remarkable progress and is strongly followed by Bihar, Madhya Pradesh, Rajasthan and West Bengal (d) Rural road infrastructure growth in rural regions of Indian states has been progressive and its general progress and efficiency is extremely encouraging.<sup>29</sup>



Shamdasani (2016) analysed the effect of PMGSY on decision making in agriculture and discovered a shift from subsistence to market-oriented farming. In line with that, the usage of costly, productivity-enhancing inputs such as fertilizer, manure, hybrid seeds, and hired labor had increased. The research states that this impact is caused by enhanced inter-village mobility, and the increase in input utilization indicates that other processes, such as input and output market prices, may also be at play. However, with presently accessible information, it was not feasible to isolate these processes.<sup>30</sup>

Herakal et al (2016) stated that rural road infrastructure under PMGSY provides good connectivity to educational institution, hospitals, and market centres. For the study, the survey was conducted in Karnataka for assessing the effect of PMGSY scheme on construction industry. The investments in PMGSY had great influence in strengthening the local construction industry. The study revealed that there had been 1.5 times increase in the number of engineers for maintaining and monitoring the quality on site. There was seven fold increase in the vibratory rollers, 2.3 times increase in the hot mix plants, 2.8 times increase in pavers, 2.7 times increase in earth movers and 3.3 times increase in crusher plants. The responses of 35 % respondents showed that there was no cost overrun in maintenance of PMGSY roads while about 65% respondents showed that PMGSY require adaptation of new technology for speeding the execution process.<sup>31</sup>

Kale and Pimplikar (2017) studied the past, present as well as future performance of PMGSY in Indapur Taluka in Pune district of Maharashtra, India. The primary data was collected by questionnaire while the secondary data was collected by different government reports including PMGSY guidelines, OMMAS details, Quality control reports, and DPRS of various reports. From the secondary data, allocation of fund and utilization of fund were calculated by comparing PMGSY guidelines. Along with this, SWOT analysis of PMGSY scheme was conducted. The study, thus, helped in understanding the benefits of PMGSY to rural people from economical, health as well as educational point of view.<sup>32</sup>

## 5.0.CONCLUSION

India, being a developing country, constitutes of two-third areas as its rural. The Government has introduced various rural development programmes for the welfare of the rural individuals. The chapter discusses the previous literature related to the rural development and two different Government programmes, IAY and PMGSY. The literature on the rural development makes it highly evident that the Government programmes for rural development have not yet achieved the target set during the implementation of those programmes. The opinions on IAY made it clear that the housing conditions in rural areas have been focused upon but due to different ill-practices, the shortage of the houses still remains a concern in the rural development. On the other hand, the studies of PMGSY reveal that the rural road infrastructure has contributed to increase in employment opportunities and raising the rural economy level. But there are loopholes in the implementation of PMGSY. Thus, though there has been advancement in the overall physical and financial performance of the country, rural areas are yet to be developed as in comparison with the urban areas, specifically in the areas of housing and road infrastructure.

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## EAST-WEST ENCOUNTER: A STUDY OF GITA MEHTA'S SNAKES AND LADDERS

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### ABSTRACT

*Snakes and Ladders* deals with post-colonial and post-modern issues covering a span of fifty years of independent India i.e. 1947-1997 where Gita Mehta, in the capacity of a diasporic writer, runs between two cultures-East and West. The book opens with the autobiographical chapter of the novelist herself and from chapter-II to the last one, she becomes mediator between her diasporic view and the rapid socio-political changes taking place as a consequence of decolonization and the current globalization. The novelist maps and dramatizes, in *Snakes and Ladders*, the interaction between India and West and assertion of the superiority of the oriental views. It cannot be denied that India has both bewildered and attracted the west. Independence has been the beginning of a process of social and political transformation for us but somehow, there has always been a baffling mixture of western, rational approach and the traditional ritualistic meditation. India is evolving not as a nation of fearless citizens but as a nation of sycophants and fawning coteries.

**KEYWORDS:** Karmic Power... Orientalism... Machine and Materialism.. Indian Philosophy Spontaneous and Balanced... Orthodox and Innovation... Internal Imperialism

### INTRODUCTION

Gita Mehta, a writer of original thinking and imagination *interalia* her awareness of the contemporary and political situation in India, who as a devout critic of Indian society as well as a ruthless artist, brings together the personal and the political elements, the abuse of power, corruption and nepotism among the political tycoons reach out menacingly into the private lives of ordinary denizens. As a diasporic writer connecting the East and the West along with having the first hand knowledge of both the cultures, Gita Mehta in *Karma Cola* imbibes her diligent and doable efforts how to insert bonhomie in human life. The westerners have realized that for smooth, spontaneous and harmonious flow of life, materialism and physical relations are nothing but spiritual food is everything. The westerners are famished of spirituality, for this they make

their spiritual sojourns to India where instead of pursuing the real target, take asylum in sexual meditation and valium. In short, the foreigners understand the silhouette of karmic power in karma exercises.

Each snippet of Snakes and Ladders deals with post-colonial and post-modern issues covering a span of fifty years of independent India i.e. 1947-1997 where Gita Mehta, in the capacity of a diasporic writer, runs between two cultures. The book opens with the autobiographical chapter of the novelist herself and from chapter-II to the last one, she becomes mediator between her diasporic view and the rapid socio-political changes taking place as a consequence of decolonization and the current globalization. In Raj, the novelist covers fifty years of imperialism where ancient India peeps through its all social customs, traditional values and monarchy bereft of industrialization, commercialization and modernism. Through Raj and Snakes and Ladders, Gita Mehta assimilates the whole 20<sup>th</sup> century – where epilogue of the former becomes the prologue of the latter. In other words, it is meant to say that Raj culminates in the year 1947 and this year becomes the commencement of the book of tales Snakes and Ladders. In British raj, the people of India discarded the western approach and their way of living, and in the post independent India, the same people started imitating western culture. Symbolically speaking, India is ascending high above through the ladder of Indian social, cultural and philosophical values, Karmic powers, Love and brotherhood along with the streak of modernism but at the same time, it descends through the snakes of corruption, breach of faith, self-centredness, capitalism and modern ills. It is our Orientalism that makes an equilibrium between the two.

Gita Mehta maps and dramatizes, in Snakes and Ladders, the interaction between India and West and assertion of the superiority of the oriental views. It cannot be denied that India has both bewildered and attracted the west. Independence has been the beginning of a process of social and political transformation for us but somehow, there has always been a baffling mixture of western, rational approach and the traditional ritualistic meditation. India is evolving not as a nation of fearless citizens but as a nation of sycophants and fawning coteries. Despite substantial changes in the political and economic concerns, between the colonial and postcolonial situations, there are important and obvious threads of continuity in the two conditions. Decolonization, instead of bringing freedom to the real sense has landed the country into another colonization – the internal imperialism with despotic and dynastic rule in the offing. The western impact of rapid industrialization and urbanization in a predominately country has been a grave mistake of our leaders. Just after independence, Pandit Nehru, the then Prime Minister, influenced by western pattern, wanted India to be progressive and rich.

In the chapter “Food For Thought”, Gita Mehta says, “Prime Minister Nehru and his advisers came up with a bold new plan to take India’s bullock-cart economy into the machine age of the twentieth century”<sup>1</sup>. It resulted in the neglect of agriculture but it had its bright moments too. Because of unchecked urbanization, agricultural land was sold and the farmers living near metropolises and big towns became rich overnight. The novelist describes the phenomenon through the words of a farmer:

‘Isn’t it wonderful? I worked so hard for so many years but the land gave me so little. Now I get up early morning and just smile at my field. And each day I get richer’.(SL:64)

Confrontation between India and West do not stop here. In the nuclear age, every new strategy and tool are welcomed and have been materialized with more rationality and pragmatism. Today, India is fully equipped with scientific advancement and industrialization on the western pattern. In the chapter “Typing”, the novelist describes the growth of modern India influenced by western thoughts:

Today colour televisions are made in the country. Indian-made computers, fax machines, telephone answering machines and all the other paraphernalia of instant communications are making it possible for Indians to be part of the future.

The hand-held cellular telephone, that appendage of the successful urbanite, has even made its entry into parts of rural India. ...The farmer himself will be drawing on his hookah and talking into a cellular telephone, possibly making a real-estate deal as the city's boundaries stretch towards his fields. Or he may be establishing crop prices from the grain market.(SL:81)

In the contemporary scenario of 21<sup>st</sup> century, tradition and modernity, orthodox and innovation go side by side in the life of an Indian. An Indian looks ahead but not at the cost of his social and moral ethics and ethos. As a plausible citizen, he tries to create equipoise between the orientalism and occidentalism. He has no hesitation in using modern equipments, a symbol of west, but he clings to his faith worshipping them like that of God. It is his faith that the worship of equipments is must for their smooth functioning and profits. As a result of which, videos are worshipped which reflects the interaction between India and West:

We worship air-conditioners and computers and cash registers and bullock carts – in an annual ritual called Weapon Worship....

By honouring our implements we honour human ingenuity, and Weapon Worship originated with warriors honouring their weapons, the tools of their trade. In modern India people still place garlands on the machines of their differing trades, hoping for an auspicious response. (SL:80)

The study of modern orientist vision would be incomplete or lopsided without pagan culture. An Indian sees the image of mother in river and cow, of father in sun, of paternal uncle in moon, and of deities in trees. In the chapter “Trees”, Gita Mehta paints the Indian faith in trees, “In tribal India the tree is venerated as the earth-mother, not only because trees provide food, air, nourishment, occupation, materials for housing and fodder and fuel, but because without the tree there is neither soil water”(SL:193). The novelist compares a tree with philosophy as a tree provides food and shelter when a person is physically famished and philosophy provides intellectual diet:

Then there is the tree and Indian philosophy. To the philosophers of ancient India the forest was the symbol of an idealized cosmos. The great Indian philosophical academies were all held in groves of trees – an acknowledgement that the forest, self-sufficient, endlessly regenerative, combined in itself the diversity and the harmony which was the aspiration, the goal of Indian metaphysics.(SL:191)

Logies and sophies are an integral and inevitable for the completion of Indian life as “over thousands of year, India has woven a mantle of conservation around herself with threads of morality, art, philosophy, religion, mythology. Especially mythology”(SL:192). Gita Mehta is very much concerned over the burning issues of social and environmental conditions prevalent in

21<sup>st</sup> century. A man is disconnected from his cultural and philosophical roots if he believes in deforestation. “We will, quite literally, cut ourselves off from our cultural and philosophical roots by the action of cutting down our trees” (SL:199), says the novelist.

In the grab of intellectual and philosophical *messiah*, Gita Mehta preaches that a perfect and fine balance between technology and ecology is must for the spontaneous and balanced steam of human life. “The Hindu scriptures tell us that we are living in Kalyug, the Age of Evil, the era of immortality”(SL:193). The novelist explores the east-west inter-action when she finds that by clinging with religious faith and mythology, Indians feel no ignominy in making grandiose gains by recklessly slaughtering flora and fauna:

*Money Grows in Trees!* the newspaper advertisements shrieked.

*Earn Green Gold!*

Sometimes trees were not mentioned at all, merely wealth.

*Bumper Profits Will Be Yours!* (SL:197)

Occidental and orientist interaction and overlapping is presented by Gita Mehta by the coalition of the music, movies and attires of both the cultures. In the chapter “Communications”, the novelist presents hybridity which is just because of the interaction of India and West:

...a young Indian rock star had arrived in town from London, and the music he was playing to packed halls was a hybrid of Western and Eastern tunes called Indi-pop. ...Apache Indian. Or was he a Raga-rap star? Still, the ear-rings framing the singer’s clean features and strong brown face were similar to those worn by many Indian farmers.... The audience of young girls dancing to his music were themselves dressed in hybrid forms – saris and mini-skirts, anklets and Doc Marten boots, *salwar kameezes* and torn Levi’s – enjoying a brief fling with freedom before the restrictions of Indian society overwhelmed their lives.(SL:188)

As a true Indian novelist writing in Indian sensibility, Gita Mehta explores the superiority of oriental views over the occidental scenario because the age of machine and materialism is represented by the West. It is the Indian philosophy that invents culture and civilization. Indian civilization has produced and originated such social, moral and cultural fabrics which are indistinguishable from any other culture and civilization. But it is the resilience of our great Indian society that it has all the magical qualities i.e. perseverance, endurance, tolerance and patience which perhaps human beings have ignored and avoided. The Indian social vision concentrates on the transition from dark to light. The resilience of our society is visible when we find how the Buddha provided enlightenment under a tree, how temples are built under the blessings of gods and to say *namaaz* , 70,000 Muslims kneel in mosques. So, the Indian social society assimilates Hinduism, Jainism, Sikhism, Muslims and Christian in its lap providing egalitarian approach to every caste, creed and religion.

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(All the subsequent textual citations are from this edition and page numbers are given in the parentheses following the quotes with SL)





## ROLE OF TECHNOLOGY IN DISASTER MANAGEMENT

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### ABSTRACT

*It might just as well have been called the decade of natural disasters – with a catalogue of flooding, earthquakes, landslides and droughts rarely seen in such profusion. There has been an increase in the number of natural disasters over the past few years, and the impact in terms of human, structural and economic losses has increased considerably. Of all the global environment issues, natural hazards are in some ways the most manageable. The risks are readily identified. Effective mitigation measures are available. And the benefits of vulnerability reduction greatly exceed the costs. Modern technologies have been developed that reduce the exposure to natural hazard of the physical and built environment and other elements of socio-economic life<sup>2</sup>. The definition of disaster is now all encompassing, which includes not only the events emanating from natural and man-made causes, but even those events which are caused by accident or negligence.*

**KEYWORDS:** *Emanating, Negligence, Earthquakes, Encompassing,*

### INTRODUCTION

The vast majority, about 94 percent, of natural disasters result from four major causes

- Earthquakes, storms, floods and droughts. Three quarters of the world's population live in areas that were affected by these phenomena at least once between 1980 and 2000. Earthquakes and volcanic eruptions cause on average almost half of all natural disaster casualties, but windstorms and other weather-related events cause the most economic damage.
- The majority of developing and developed countries are prone to many types of natural and manmade disasters. The history of countries shows these fatal disasters have caused hundreds of thousands of deaths and significant economic loss. Earthquake in Iran (2003), the Tsunami in Asian countries (2004), the earthquake in Pakistan (2005), and famine in African countries (2005) and hurricanes in America are some sad examples of the many disasters that happen every year all over the world.

– Disasters cause a considerable amount of damage around the world every year. There has been an increase in the number of natural disasters over the past few years, and the impact in terms of human, structural and economic losses has increased considerably. According to official statistics issued by the Centre for Research on the Epidemiology of Disasters (CRED) and the United Nations International Strategy for Disaster Reduction (UN/ISDR) in 2010, natural disasters have caused the death of more than 780,000 people over the past ten years and destroyed a minimum of US \$ 960 billion worth of property and infrastructure. It has been identified that the severity of the impact by natural disasters is directly linked to unplanned urban development and ecosystems.

While we cannot prevent an earthquake or a hurricane from occurring, or a volcano from erupting, we can apply the scientific knowledge and technical know-how that we already have to increase the earthquake- and wind- resistance of houses and bridges, to issue early warnings on volcanoes and cyclones and organize proper community response to such warnings.

Despite the increasing frequency and severity of the catastrophes that strike humankind, it is becoming increasingly possible to prevent and mitigate the effects of disaster. Of all the global environment issues, natural hazards are in some ways the most manageable. The risks are readily identified. Effective mitigation measures are available. And the benefits of vulnerability reduction greatly exceed the costs. Yet, while disaster relief captures the imagination of the public, disaster prevention often ranks relatively low on public agendas. Relief and rehabilitation constitute the primary form of disaster risk management and account for most of spending on disaster- related activities annually, leaving a very low balance for prevention.

Progress in the science and technology of natural hazards and of related coping mechanisms have made it possible over the past years to introduce significant changes in the integrated approach to the problematic of natural disasters. Science and technology help us to understand the mechanism of natural hazards of atmospherically, geological, hydrological, and biological origins and to analyze the transformation of these hazards into disasters. Scientific knowledge of the violent forces of nature is made up of an orderly system of facts that have been learned from study, experiments, and observations of floods, severe storms, earthquakes, landslides, volcanic eruptions and tsunamis, and their impacts on humankind and his works<sup>1</sup>.

Although earthquake prediction is still not possible, considerable options exist today to make more accurate forecasts and to give warnings of several impending hazard events. Warnings of violent storms and of volcanic eruptions hours and days ahead have saved many lives and prevented significant property losses. Modern technologies have been developed that reduce the exposure to natural hazard of the physical and built environment and other elements of socio-economic life<sup>2</sup>. Owing to progress in design and construction engineering, earthquake-resistant structures, including high-rise buildings, critical lifelines and industrial facilities, are technically feasible and have become a reality. One component of these breakthroughs in disaster reduction, in some instances, has been enhanced capacity to control or modify the disaster events themselves.

### **The United Nations Struggle for Disaster Reduction**

The United Nations called the 1990s the International Decade for Natural Disaster Reduction. It might just as well have been called the decade of natural disasters – with a catalogue of flooding, earthquakes, landslides and droughts rarely seen in such profusion. This pattern has continued

into the 21st century with spectacular catastrophes such as the Indian Ocean tsunami, the northern Pakistan earthquake and the inundation of New Orleans<sup>3</sup>.

Over the last few decades, scientific knowledge of the intensity and distribution in time and space of natural hazards and the technological means of confronting them have expanded greatly. The dramatic advances in the understanding of the causes and parameters of natural phenomena and in the techniques for resisting their forces were presented, in the mid-80s, by Frank Press, a lead scientist, as the rationale which made propitious the launching of the international decade devoted to reduce significantly the consequences of natural hazards<sup>4</sup>. The Resolution of the United Nations General Assembly which proclaimed the International Decade for Natural Disaster Reduction (1990-1999) called for a concerted worldwide effort to use the existing scientific and technical knowledge, adding new knowledge as needed, in order to underpin the adoption and implementation of public policy for disaster prevention. The International Strategy for Disaster Reduction is the successor of the Decade and provides a framework for each nation to fully utilize existing knowledge on the lithosphere, atmosphere, and biosphere and the know-how on disaster protection gained in prior years, and to build effectively and creatively upon past accomplishments so as to meet the projected needs for safer communities

UNESCO is closely involved in raising public awareness and improving education about natural disasters, two certain ways of helping vulnerable populations to cope with risk. "The Indian Ocean tsunami of December 2004 and the devastating impact of Hurricane Katrina and Hurricane Rita in the United States of America have many aspects but one crucial factor is the importance of public awareness, preparedness and information transmission," UNESCO's Director-General, Koïchiro Matsuura, told the organization's General Conference in 2005<sup>5</sup>.

### **Hyogo Declaration**

Governments met in Kobe, Japan for the second World Conference on Disaster Reduction. They adopted what is known as the Hyogo Declaration and agreed upon a Framework for Action for the decade between 2005 and 2015 aimed at building the resilience of nations and communities to disasters. The Framework is linked both to the Millennium Development Goals and to the UN Decade of Education for Sustainable Development (2005-2014), which is led by UNESCO. The Framework includes the following five commitments:

- **Make disaster reduction a priority**

Governments should integrate disaster risk reduction into their laws, programmes and plans, and ensure the participation of local communities in planning.

- **Know the risks and take action**

Countries should define and understand potential risks so that they can develop early warning systems adapted to the needs of each community.

- **Build understanding and awareness**

Governments should provide information, include disaster reduction in formal and informal education, and ensure that invaluable local knowledge about disaster risks is preserved and transmitted.

- **Reduce risk**

Countries should apply safety codes to ensure that schools, hospitals, homes and other buildings do not collapse in earthquakes; avoid sitting communities in hazard-prone areas such as flood plains; and protect forests, wetlands and reefs that act as a natural barrier to storms and flooding.

▪ **Be prepared and ready to act**

Governments and regional or local authorities should conduct risk assessments; adopt contingency plans; test preparedness by such measures as evacuation drills; and ensure emergency services, response agencies, policy makers and development organizations are coordinated.

The perception about disaster and its management has undergone a change following the enactment of the Disaster Management Act, 2005. The definition of disaster is now all encompassing, which includes not only the events emanating from natural and man-made causes, but even those events which are caused by accident or negligence. There was a long-felt need to capture information about all such events occurring across the sectors and efforts made to mitigate them in the country and to collate them at one place in a global perspective.

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## DIASPORA GOVERNANCE AND NATIONAL SECURITY: CHALLENGES FOR INDIA

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### ABSTRACT

*In the era of globalization, remittances have increasingly become a potent tool that has projected the agenda of diasporic involvement in the development of the home country. In this context, the paper will examine the role of Diaspora in promoting security or insecurity. It will further explore the changing importance of Diaspora in the foreign policy of India and its implications for national security. It is obvious from the Indian government's plan to rope in its Diaspora for the quest of resources, business, and strategic partnership to enhance development goals and national security of the country. The new feature of India's diplomacy since the 1990s has been also to strengthen its partnership with different countries. Thus, India is engaged in a vigorous strategy to rope in its diaspora not only for economic purposes but also to strengthen its relations with their host countries" (Pathak, 2017).*

**KEYWORDS:** *Remittances, Diasporic, Enhance*

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### INTRODUCTION

Diaspora has become an important factor in the foreign policy and national security of the countries in the contemporary globalized international system. It has moved to the top of the security agenda, due to the concerns that it poses security threats such as networks for international criminal activities and providing conduits for the spread of international terrorism. However, such concerns need to be placed within the broader context of the range of impacts that Diaspora has on the state's core national security interests. There is a need to have an objective and balanced view of Diaspora roles and their impact on security which requires recognizing not only the negative impacts of Diaspora groups on security but also their potential to enhance local, regional and international peace and security. As the Diaspora escapes the direct control of its state of origin, it is rational for the state to pursue policies that aim at rendering the Diaspora governable mainly by producing a self-disciplined Diaspora that can act



in accordance with its national interests. Thus, the states with Diaspora or migration policies that harness the power of Diaspora will be more secure in the new globalized security environment.

India's engagement with the world is increasing, so is the demand and desire for the protection of its national interests. Eventually, India is gearing up to play an important role in global affairs with its Diaspora emerging as an important factor in foreign policy with wider implications for national security. In this context, the paper will examine the role of Diaspora in promoting security or insecurity. It will further explore the changing importance of Diaspora in the foreign policy of India and its implications for national security. The case of South African Indians will be scrutinized to provide insights on how Diaspora contributes to security dilemma and risk.

### **Diaspora: Promoting Security or Insecurity**

A critical analysis of the contribution of Diaspora in the security arena reveals both its positive and negative roles. Diaspora's initiatives for development in the home country have the potential to promote the national security of the country. Some of the propositions by various scholars working on the security aspect of Diaspora could be summarized as:

“The remittances sent by Diaspora to their relatives in the home country are the most significant examples of Diaspora involvement in securitizing their home countries politically and economically” (Lyons, 2006). “Remittances have the potential to harness the economic security of recipients, and the development of societies recovering from the distress of war or economic collapse” (Faist, 2005). In the era of globalization, remittances have increasingly become a potent tool that has projected the agenda of diasporic involvement in the development of the home country. However, an important issue is the role of such remittances in enhancing security or insecurity in the receiving and sending states (Lindley, 2006). “The investments and trade initiatives by the Diaspora can affect significantly the development agenda of the home country. These can serve as catalysts for promoting security since the causes of insecurity are not only political but are also rooted in materialistic or economic reasons” (Adamson, 2006).

Diaspora is also engaged politically in the security arena. Lobbying for their cause in the adopted homeland and the international affairs can have a positive impact on their country of origin. Diaspora often plays lobbying and advocacy roles to bring issues concerning their home country onto the international agenda. Though usually, the lobbying takes place in the host country in some cases, Diaspora members also network with international agencies. “Lobbying and advocacy may take different forms which include raising awareness of the situation in the home country by disseminating information, organizing demonstrations for more specific causes and promoting public education and relations” (Horst, 2007). “Diaspora organizations lobby the host governments, to shape policies that are favorable to, or against, a homeland government. They also influence their homeland's policies through their support or opposition to the governments. Such influence is also demonstrated through the financial support of political parties, social movements, and civil society organizations” (Baser & Swain, 2008). “the Diaspora has the potential to act as critical agents of social change. Diaspora groups can serve to act as bridges or as mediators between their home and host societies and transmit the values of pluralism and democracy” (Shain & Barth, 2003). Social remittances i.e., new ideas, values/norms as well as new forms of collaboration are central to the processes of social change.

Thus, there are four main mechanisms by which Diaspora can contribute positively to the country of origin: (1) knowledge application through knowledge transfer, capacity development, and ‘brain circulation’; (2) social development through philanthropy and volunteerism; (3)



political influence through political participation, cultural diplomacy, awareness-raising, and conflict transformation; and (4) financial development through remittances, fund-raising, investments, and business networks.

However, negatively the Diaspora networks can act as dangerous grounds for identifying, recruiting, and training local and international terrorists and drug and human traffickers among other international criminals. The Diaspora is a security risk factor and has a bearing on the security of their home as well as host country (Collier, 2000; Collier & Hoeffler, 2004). Diaspora could get engaged through economic, political, and military means in the conflict in their home country in numerous ways. "Diaspora may be directly or indirectly involved in illegal trade and money laundering activities that support warring parties, and through which resources for continued conflicts can be allocated" (Duffield, 2002). Diaspora can secure tangible and intangible resources to fuel armed conflicts, and they can provide opaque institutional and network structures that enable the transfer of arms and money to terrorist groups (Bercovitch, 2007). Though the information about the actual amounts, scope, and impact of Diaspora support to the warring parties through remittances remains inadequate it should not be underestimated and needs to be considered with caution. Thus, there is a need to control and have proper supervision over remittances because they could be used for funding wars or terrorist activities.

### **Indian Diaspora: Importance for the foreign policy and National Security of India**

India is gearing up to play an important role in global affairs with its Diaspora emerging as an important factor in foreign policy and having wider implications for its national security. The positive contribution of the Indian Diaspora in providing support to the Indian economy through remittances is well recognized. "They have also the potential to bring investments and know-how to strengthen the Indian economy. The Indian Diaspora is in a privileged economic position and also enjoys political influence in various countries and thus could facilitate the Indian foreign policy goals. It can also play a positive role in mobilizing support in their respective host countries in favour of India-related issues. They can politically lobby and propagate the Indian point of view to the relevant decision-making authorities within their host countries" (Pathak, 2017).

In short, politically, the Indian Diaspora in their host countries could promote and safeguard the Indian interests with its potential to act as a lobbying or pressure group. Secondly, the Indian Diaspora could contribute significantly to the economic security of India through remittances, investments, transfer of technology/skills, and foreign trade. India tops the chart in the world with over \$79 billion in annual remittances. "Indian Diaspora is also a good market for trade within the host population. Thirdly, the Indian Diaspora could provide an opportunity to India and their respective host countries to strengthen their relations by forming bridges of cooperation. Besides, they could contribute significantly to the development of cultural linkages. India has thus started a robust and unrelenting engagement with its Diaspora" (Pathak, 2017).

Since the 1990s, "India started setting up dedicated institutions and also created incentives for overseas Indians to invest in India. Though economic factor has remained the most important driver of India's policy approach towards its Diaspora, however, it led to the realization of many other aspects related to the significance of the Indian diaspora for the country's growth and development. The new feature of India's diplomacy since the 1990s has been also to strengthen its partnership with different countries. Thus, India is engaged in a vigorous strategy to rope in

its diaspora not only for economic purposes but also to strengthen its relations with their host countries" (Pathak, 2017). "Engaging its Diaspora in a sustainable and mutually rewarding manner across the socio-economic and cultural space is at the heart of the Indian policy and to create conditions, partnerships, and institutions that will best enable it to connect with Diaspora comprehensively is central to all the programmes and activities" (MOIA, 2015).

"The success of Indians in diverse professions like Academics, Media, Film and IT apart from successful entrepreneurs, CEOs, scientists, and other professionals has created trust in India's intellectual abilities abroad. It has been a crucial factor in branding India as a source of well-educated and hard-working professionals. Besides, the Indian diaspora has also been instrumental in safeguarding India's interests in their host countries. For example, the Indian diaspora in the US, lobbied hard as a pressure group to promote Indian interests during the Kargil war, India's nuclear tests (1998), for blocking the Burton amendment (to cut aid to India), and during the agreement between India and the US on civil nuclear cooperation" (Pathak, 2017).

However, there are concerns as well about the negative influence of the Diaspora role which has implications for the national security of India. There are concerns that it could provide conduits for the spread of international terrorism as well as poses other security threats. "Groups and individuals within the Diaspora have been suspected of continuously supporting various insurgent groups operating in India, lending them both moral and material support through hawala operations, money laundering, etc. Kashmiri separatists, Khalistan supporters, Tamil Tigers, Al Qaeda associates enmeshed with other state and non-state actors are among India's security challenges. It is worthwhile to note that while India has not been fully successful in capitalizing on its Diaspora but Pakistan has been effectively leveraging elements within the Indian Diaspora to destabilize and obstruct India. David Headley, Tahawur Hussain Rana, Dawood Ibrahim, and Abu Jundal are examples of how Pakistan has been using the Diaspora community to carry out acts of terrorism against India" (Sharma, 2012). Fugitive economic offenders like Nirav Modi, Mehul Choksi, and Vijay Mallaya also add to this list of Diaspora communities involved in money laundering scams and facing corruption charges in India. The role played by Indian businessmen like Ajay Gupta (Gupta family) who is facing corruption investigation along with former President Zuma in South African politics is another cause for concern.

Sometimes the negative influence of Diaspora activism is also visible on India's bilateral relations with the country of residence. For example, "Operation Blue Star, which hurt the sentiments of a large number of Sikhs across many countries besides India, adversely impacted India's relations with Canada..." (Sharma, 2012). Another case is the Tamil issue in Sri Lanka, which has an undesirable impact on India-South Africa relations. Tamil communities in South Africa showed solidarity towards the Tamils of Sri Lanka and lobbied with the South African government for support to the LTTE and also able to raise the anti-India temper.

### **South African Indians: Security dilemma and Risk**

South Africa is very important from the Indian point of view for its interests in Africa. It can work as a diplomatic and economic guarantor for India in Africa. South Africa stands out as one of the biggest trading partners of India in Africa and has the potential for a durable trade relationship with India. To secure its interest and enhance its maritime presence in the Indian Ocean, India's collaboration with South Africa is also inevitable. South African Indians provide

an opportunity to India for strengthening its linkages with South Africa. "The million-strong Indian community in South Africa provides familial and trading links between the two countries and contribute significantly to the overall economic relations" (Pathak, 2003).

The Indian Diaspora constitutes about 3 percent of South Africa's total population and is currently estimated to number around 1.5 million. PIOs in South Africa constitute a major segment of an economically advanced class since the 1960s. They are engaged in various sectors of the economy namely farming, trade, manufacturing, transport, government services, and other professions like medicine, law, accounts, and teaching, etc. They have become known for their economic, professional, academic, scientific, and artistic successes and have captured the trade, commerce, and business leadership of their new homelands. South African Indians have been actively engaged in philanthropic activities through establishing educational institutions, hospitals, giving donations to the poor and needy people, and providing relief in natural calamities (Pathak, 2011). They have also played a considerable role in the political domain of South Africa.

Initiatives have been taken by the Indian government to strengthen its relations with South Africa with the Indian Diaspora forming the bridges of cooperation. In this context, the organization of 'PBD Africa' on 1- 2 October 2010 in Durban in which the President of South Africa, Jacob Zuma, and the Premier of the Province of KwaZulu-Natal, Zweli Mkhize's participated points to a certain realization. Not only it underlines India's eagerness to draw in its diaspora towards foreign policy objectives, but also shows the PIOs' interest and South Africa's readiness to accept such linkages to strengthen the bilateral relations with an old ally by accepting its drive to rope in PIOs for economic gain. The Indian Diaspora in South Africa could further contribute to India's development process through investments, transfer of technology/skills, and foreign trade. They could also act as lobbying or pressure groups within South Africa to safeguard the Indian interests.

However, there is also a need to understand the negative impact of the Diaspora role which in the South African case was revealed during the Tamil crisis in Sri Lanka. The Tamil issue in Sri Lanka hurt the sentiments of a large number of Tamils across many countries including India and South Africa which adversely impacted their relations also. "Following the defeat of the LTTE in May 2009, the mood in the Diaspora has been a mix of anger, depression, and denial. Nonetheless, most Tamils abroad remain profoundly committed to Tamil Eelam, the existence of a separate state in Sri Lanka. Tamil communities in South Africa showed solidarity towards the Tamils of Sri Lanka" (International Crisis Group, 2010). There was a demand from powerful Tamil Diaspora lobbies to push the human rights agenda. There was also a strong lobby in South Africa that was taking an anti-Sri Lanka stand. Even the UN Human Rights High Commissioner Navi Pillay was under pressure from a 'tsunami' of emails from the Tamil Diaspora including the South African Tamil community to call for a war crimes probe (Samath, 2009). This was a typical illustration of the influential lobbying role of Diaspora. The Tamil Diaspora in South Africa lobbied with the government for support to LTTE and also able to raise the anti-India temper.

**LTTE activities and influence in South Africa:** "Initially, the LTTE raised funds through officiating priests in the Hindu temples, who were Tamils from Jaffna, northern Sri Lanka, to procure weapons to support their war for an independent state in Sri Lanka. Later, they effectively won the support of key political leaders, particularly from the South African Indian Tamil community" (Gunaratna, n.d.). Among them were ANC leaders including

parliamentarians. "In 1995, LTTE began to operate a series of training camps in South Africa. The camps provided accommodation and facilities to train recruits in guerrilla warfare. The South African Tamils formed South African Tamil Tigers and many of them were trained by LTTE trainers from Sri Lanka and retired South African service personnel drawn from Koevoet and 32 Battalion. Upon graduation, the best was transported to Sri Lanka and were inducted via India by boat and via the Maldives by air" (Gunaratna, n.d.).

On the order from President Mandela to dismantle the camps "the South African troops assisted by NIA raided the three LTTE camps on October 29, 1997" (Gunaratna, n.d.). The camps were in Laudium near Pretoria, Lenasia near Johannesburg, and New Castle near KwaZulu-Natal. However, neither the trainees nor the trainers were arrested. "Within a month the LTTE resumed training but at a lower scale and in smaller groups. The LTTE established its influence in South Africa through a series of front organizations that adopted a technique to portray themselves as peace organizations. In addition to disseminating propaganda and raising funds, these fronts organized public events and engage in lobbying. Among the most active LTTE fronts are PASLO, MASLO, DPJ, TESM, PSLSM, and TRO. LTTE also attempted to infiltrate other Tamil organizations like the Natal Tamil Federation, the South African Tamil Federation, and the Tamil Federation of Gauteng" (Gunaratna, n.d.). The LTTE front organizations continue to operate in South Africa.

The LTTE lobbied and received the support of many South African Indian Parliamentarians. The "South African Tamil parliamentarians were more vulnerable towards supporting LTTE interests in South Africa. The LTTE and their fronts used the strategy of drawing parallels between Sri Lanka and South Africa. As a direct outcome of propaganda, South Africa banned the sale of weapons to Sri Lanka. Despite efforts by the Government of Sri Lanka to explain its position to Ibrahim Ibrahim, then Chair, Portfolio Committee on Foreign Affairs, and Kader Asmal, Chair, Portfolio Committee on Defence, South Africa did not revoke its decision. This explains the influence of the LTTE, which they had painstakingly built in South Africa over the years" (Gunaratna, n.d.). They also mobilize Tamil support in South Africa for demonstrations, rallies, seminars, and lobbying. For instance, on June 4, 1996, when Sri Lanka's national airline Air Lanka flew into South Africa, 100 Tamils were demonstrated in Durban.

The Tamil communities in both countries, India and South Africa are vulnerable to LTTE influence. Similarly, the leaders in both countries, India and South Africa are vulnerable to ethnic compulsions. They can be against the LTTE but cannot afford to be against the Tamils. The problem both amongst the Tamil minority in South Africa and large sections of the Tamil population in India is that the LTTE successfully manipulated Tamil opinion. "There are prominent South Africans, including South African Tamils who are aware of LTTE's role in the Rajiv Gandhi assassination in 1991 and do not wish to support the LTTE. But they form the silent majority" (Gunaratna, n.d.). It is natural that the Tamil issue will not have only an impact on Sri Lanka and South Africa, but will have also implications for India and international security as well.

"Amongst the language groups represented among the Indian immigrants who came from India to Natal, South Africa, from 1860 onwards, Tamil people form the majority. Now there are more than 250,000 Tamils spread over in many cities, the concentration being in Natal and Durban. Tamil heritage has been an inspirational and healing factor during the turbulent periods that they have undergone. During the period 1900 to 1949 many temples were

built and the rich traditions are well nourished by priests from Sri Lanka” (Sivasupramaniam, 2017).

The role of the Diaspora is also under scrutiny due to their involvement in opposing not only Indian government policies but involvement in raising anti-India temper and lobbying for it. In 2018, "the South African Muslim Lawyers Association and the South African Kashmiri Action Group laid a complaint with the National Prosecuting Authority, calling for the arrest and prosecution of PM Modi, for crimes against humanity under the Rome Statute, upon his arrival in Johannesburg for the 10<sup>th</sup> BRICS Summit" (Singh, 2018). Some activists have accused the South African government of betraying the human rights-based foreign policy in favour of India by not opposing India on the Kashmir issue and even the CAA.

Meanwhile, it is also worthwhile to recall that an international bonding was forged for the cause of Indian Muslims once the South African Muslims met the British Indian Muslims in London in 1905. The delegation of eminent members like Abdul Gani (Chairman, TBIA), Haji Habib (Secretary, Pretoria Committee), Haji Ojer Alley, and Ayub Hajee Beg Mahomed of the Indian community in South Africa (who were trying to repeal the Peace Preservation Ordinance under Mahatma Gandhi leadership) tried to enlist the sympathies of a few Britishers including prominent Indians who had settled down in Britain, the most important among them being Justice Amir Ali. This meeting of the South African Muslim leaders with Amir Ali forged a long-lasting comradery that led to the origination of the All-India Muslim League and Hamidia Islamic Society, both established in 1906. Later, in 1908 Amir Ali established Muslim League in London. This was the first phase of isolation where the Muslims drifted from the larger national cause in favour of their sectarian agenda and forged a communal brotherhood. This was the edifice for the Khilafat Movement that started in 1919. The same naivety, which was in display during the Khilafat, has repeated itself in the recent anti-Citizenship Amendment Act (CAA) protests as radical Islamist forces are using the jargons of secularism, constitutionalism, and democracy to further their communal radicalization and consolidation. The most striking feature of this whole process is that impacts of radicalization instantly manifest with a violent and vulgar polarization of Islamist forces to defame the image of the nation.

## CONCLUSION

Diaspora communities have become significant and increasingly important players in today's globalized world. However, as the Diaspora escapes the direct control of its state of origin, it is rational for the state to pursue policies that aim at rendering the Diaspora governable mainly by producing a self-disciplined Diaspora that can act in accordance with its national interests. This accounts for Indian policy initiatives because it aims at creating what has been called a "transnational governmentality" through institutions, privileges, and discursive strategies, and seeking to render the diasporic population governable and favorable to its national interests. It is obvious from the Indian government's plan to rope in its Diaspora for the quest of resources, business, and strategic partnership to enhance development goals and national security of the country. However, the challenges to overcome the national security threats posed by elements within Indian Diaspora remain a major concern. Though the Indian government has increasingly incorporated its Diaspora into its foreign policy strategies in recent years, a lot remains to be done on the national security front to address the challenges. A greater engagement with Diaspora and emphasis on cultural and civilizational linkages could be an appropriate policy option.



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## ROLE OF ICT IN GOVERNANCE: ITS IMPACT ON CITIZENS

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### ABSTRACT

*"We (...) declare our common desire and commitment to build a people-centered, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life (...)."*

**KEYWORDS:** *Potential, People-Centered, Commitment World Summit On The Information Society (WSIS), Declaration Of Principles, Geneva 2003*

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