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Khairul Islam Higher Education Society's  
**Maharashtra College of  
Arts, Science & Commerce**  
Mumbai — 400 008

**One Day Interdisciplinary  
National Conference  
on  
Sustainable Development:  
Impact on Trade, Commerce,  
Economics and Science**

*Organized by*  
**Faculty of Commerce**  
Maharashtra College  
In collaboration with



**Department of Commerce**  
University of Mumbai

**on Saturday, 19th November 2016**

# **One Day Interdisciplinary National Conference on Sustainable Development: Impact on Trade, Commerce, Economics and Science**

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## **From The Principal's Desk**

Maharashtra College had been a dream of the founder in 1968, a dream to cater to the students of the vicinity especially the girls of the community. Over the past forty seven years their dream has materialised. Presently the college composition in terms of sex ratio is in favour of girls with seventy percent of the students comprising of girls. At the same time we are offering courses right from junior college to post graduation in both traditional and professional courses in all the three faculties viz Arts, Science and Commerce.

It is my proud privilege to chair the National Conference on the topic "Sustainable Development: Impact on Trade, Commerce, Economics and Science." The event has been conceptualized in association with the Department of Commerce, University of Mumbai. The Faculty of Commerce, Maharashtra College, which includes Departments of Commerce, Economics, Accountancy, Mathematics and English, has been instrumental in organizing the event in our college premises. The Faculty of Science and Arts has also been involved considering the multidisciplinary tone of the topic. The concept of Sustainable Development attempts to combine the concerns about various environmental issues integrated with the socio-economic concerns. It holds paramount importance in the face of rapid technological and economic progress and the subsequent depletion of resources. Such depletion poses fundamental challenges to the humanity in the present and future. Different trends of thought on the issue need to be mapped. Many Governmental and Non-Governmental Organizations have embraced it as the new concept of development. Academic discourses are required to provide visibility to the issue. The present Conference is an attempt in that direction. The Conference and the timely release of its proceedings has made possible by the collective efforts of the all the members of the Organizing Committee, the staff and students of the College and the Organising Secretary Dr. Sangeeta Nivrutti Pawar, Associate Professor, Department of Commerce, University of Mumbai, to whom I shall remain highly indebted.

I am highly grateful to all the dignitaries, the guest, the participants, the sponsors and the management for their whole hearted support that has made this national conference a grand success.

I am sure the day long deliberation on the theme of the conference will create a positive impact in each one of us in dealing with the issues relating to sustainable development.

Let us join hands towards a better understanding, compassion and co-operation in building a better environment.

Thanking you,

**Dr. Sirajuddin H.Chougale**  
**Principal**  
**Maharashtra College of Arts, Science and Commerce**  
**Mumbai**



## **From The Desk of Editor-In-Chief**

It is an honour for me to have begun my job as an editor in chief of the proceedings of the national conference on “Sustainable Development: Impact on Trade, Commerce, Economics and Science”.

It has been rightly stated that, if you don't ruffle a few feathers, there no point in being an editor. Certainly we would not hesitate to ruffle a few feathers for achieving something good.

The idea of organizing national level conference was cropped in the minds of a galaxy of intellectuals from our institution and University of Mumbai. In the present scenario of fast changing globe, sustainable development and it's positive and negative impacts occupying prominent position. The concept of sustainable development has a wide range of meanings given by corporates, policy makers, social reformers and environmental activists. Though, regarded as separate, these are connected entities. Hence a conference on sustainable development would be more purposeful, if it is interdisciplinary. We have made an attempt to collect contemporary literature in conformity with the given theme through invited research papers from research scholars all over the country. The proceeding consists of 60 research papers. The mission of this conference was to provide a platform for publication of new concepts, models and theories that will lead to an improvement in the policy formulation by the policy makers.

At the last, I wish to thank chairman of the conference, management, convenor, coordinator; organizing, and advisory committee members, and members of editorial board, students without their support and co-operation it would have been impossible to bring out the issue of the proceedings. A special thanks to Dr. Sangeeta Nivrutti Pawar, Associate Professor, Department of Commerce, University of Mumbai for her role as an organizing secretary of the conference and bringing Maharashtra College on the website of University of Mumbai.

Thanking you,

**Prof. Arab A. Aziz**  
**Editor-In-Chief**  
**Coordinator, BMS & M.COM**  
**Maharashtra College of Arts, Science and Commerce**  
**Mumbai**



## **From The Desk of Co-Editor**

I am very much pleased to be the part of ISBNproceeding published for the One Day Interdisciplinary National Conference "Sustainable Development: Impact on Trade, Commerce, Economics and Science." It consists of research papers, articles and case studies covering various aspects, strategies and issues.

It is obvious that economic growth of the country is inevitable. The strength of Indian economy depends upon the factors like infrastructure, human resource, communication system, transport facilities, research and development, innovation and large industrial base etc.

It all depends upon the vision and good governance as well as proper implementation of plans and policies which can facilitate the development of the country. The great challenge India is facing is to provide the opportunities of employability to the large number of population of the country. This can be possible only through eradication of poverty, illiteracy and developing social awareness through crushing the communal feeling among our citizen. This can be possible only when we Indians change ourselves. Unless we are ready to change nothing will change. As it is mentioned in the verses of Quran ***"Surely Almighty Does Not Change or Alter the Community or The Nation Unless They Change Themselves"***

I am grateful to our management, principal, vice-principal, members of the advisory committee, organizing committee and the students of the college for their support and time in organizing the national in collaboration with the Department of Commerce, University of Mumbai. I should be also grateful to Dr. Sangeeta Nivrutti Pawar, Associate Professor, Department of Commerce, University of Mumbai for her role as an organizing secretary of the conference and bringing Maharashtra College on the website of University of Mumbai.

I also express my sincere gratitude and affectionate wishes to all the delegates who participated and presented their research papers and articles in this conference.

Thanking you,

**Dr. Mohammad Moghees**  
**HOD Commerce**  
**Maharashtra College of Arts, Science and Commerce**  
**Mumbai**



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## Konkan Railways RO-RO Service: Towards Sustainable Development with Reference to Trade and Commerce

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### ABSTRACT

*The Konkan Railways has taken innovative steps in establishing a synergistic relationship between the railways and the roadways instead of being competitors. The introduction of the RORO system is beneficial to both road and rail transport operators. The major benefits are to the nation as a whole. In the process it leads to sustainable development in terms of trade and commerce. This should be a model to be adopted throughout the nation.*

**Keywords:** Konkan; Railway; RORO;

### Sustainable Development

*Sustainable development* has been defined in many ways, but the most frequently quoted definition is from Our Common Future, also known as the Brundtland Commission Report (1987): “*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs*”, or we may term as, ‘Economic development that is conducted without depletion of natural resources’.

### The Concept: RO-RO: Roll On Roll Off

The concept of RORO Logistics is not a new one. This system has been in operation in the shipping industry for number of years. Roll –On Roll-Off ships are vessels designed to carry wheeled cargo which can be self driven on board and off board. Usually such cargoes

are for international transportation. Earlier the concept was that of LO-LO (Lift-On, Lift-Off) by cranes.

It was in 1957 that the concept of RORO adaptable carrier was conceived. The US military ordered the building of a new type of vehicles carrier where the vehicles could be self loaded by driving. Thus the first carrier Comet was built which had stern ramp which allowed vehicles to be self driven directly from the dock onto the ship. This also dramatically sped up the loading and unloading time. Thus RORO was a more convenient method than LOLO. Similarly ferries are operating across the rivers banks which carry cars, trucks, two-three wheelers from one jetty end to the opposite jetty.

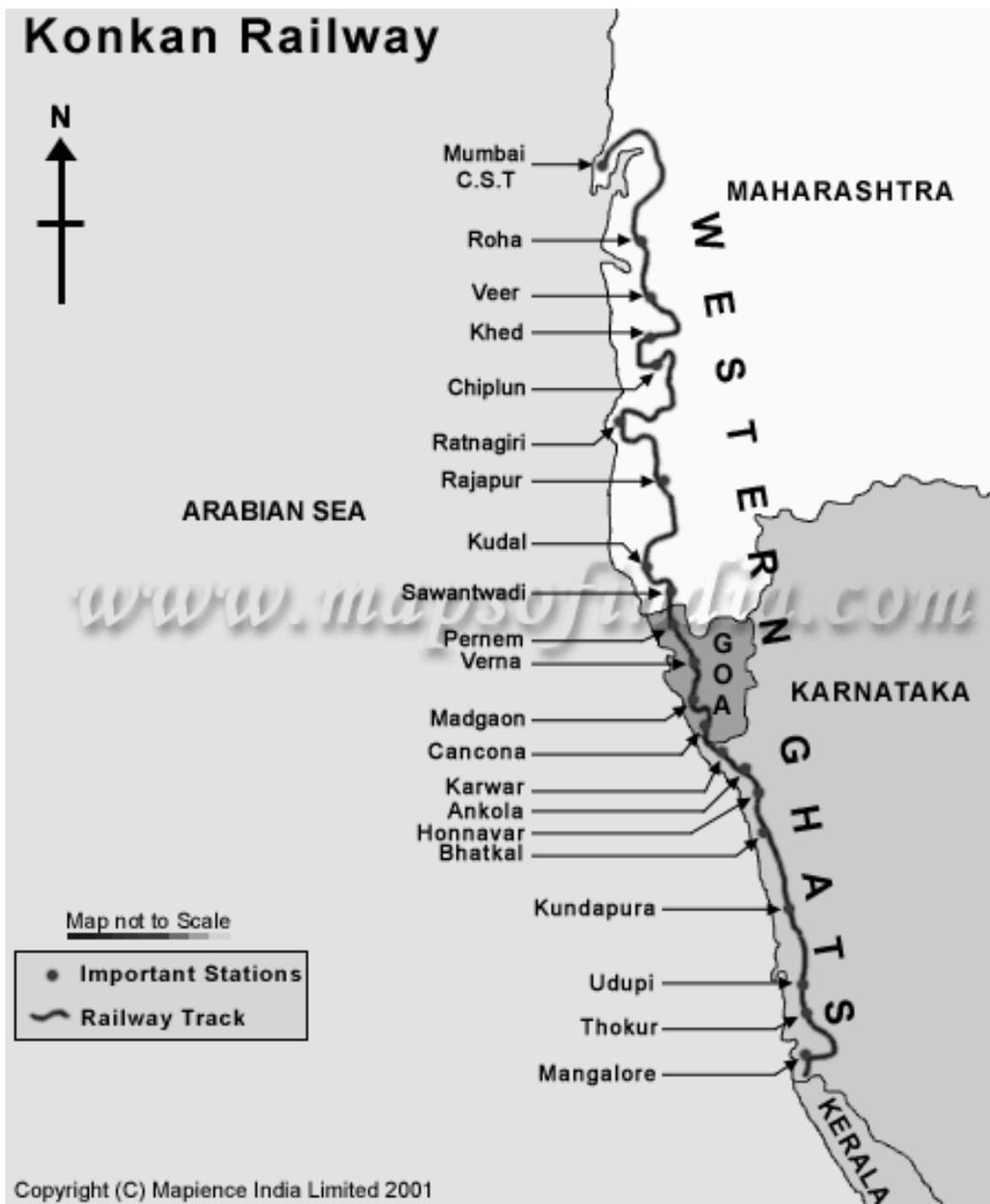
### The Konkan Railways

**Brief History:** The Konkan Railways is a subsidiary zone of the Indian Railways, operated by the Konkan



Railways Corporation Limited (KRCL). It started operating on 20 March 1993; it connects Mumbai to Mangaluru encompassing three states viz. Maharashtra, Goa and Karnataka covering a distance of 741 km. The route is thickly forested mountainous terrain having many rivers with around 2000 bridges and 91 tunnels, popularly known as the Western Ghats. There are almost 123 stations on the route.

**Map-1**



Source: [www.mapsofindia.com](http://www.mapsofindia.com)

**Konkan Railways RO-RO Service:  
Towards Sustainable Development with Reference to Trade and Commerce**

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**Konkan Railway Introduces Innovative RO-RO Service:**

KRCL introduced the **RO-RO** service on 26 January 1999 on an experimental basis. This innovative step initiative was taken by the KRC to boost freight traffic as it was very meagre on the route. The concept was that loaded goods trucks would be carried piggy back on railway flat wagons. On the trial day of the service only five truckers came to avail the service. Marketing this unique concept also played an important role. Apart

from advertisements in all languages newspapers, posters were pasted at all dhabhas of the National Highways. Pamphlets in Marathi, Hindi, Punjabi, Gujrathi etc were distributed to truck drivers at all dhabhas. The KRC staff met fleet owners and apprised about the benefits of the services. Unfortunately on the trial day only five truckers came with their loaded trucks to avail the service. Nevertheless once the service was started it gained patronage through word of mouth. The benefits of the services itself were sufficient to attract the customers.

**Table 1 : Konkan Railway RORO Terminal Operations**

1	Kolad (145kms. From Mumbai) and Verna (12kms. From Madgoan)
2	Verna and Surathkal (20kms. From Manglore)
3	Kolad and Surathkal
4	Ankola (76kms. from Madgoan) and Surathkal

**Table 2 : Some of the advantages of the RORO Service**

<b>Operators</b>	<ul style="list-style-type: none"> <li>i. Increase in profit margin</li> <li>ii. No risk of accident</li> <li>iii. Fuel conservation</li> <li>iv. Less paper work</li> <li>v. Drivers and cleaners relaxed no fatigue</li> <li>vi. Reduction in transportation time of freight by 50%</li> <li>vii. Reduction of accidents</li> <li>viii. Better turnaround of trucks</li> <li>ix. No hassles of octrio, toll etc.</li> <li>x. Minimum paperwork</li> <li>xi. Door-to-door service to the end user</li> </ul>
<b>KRC</b>	<ul style="list-style-type: none"> <li>i. Goods can be carried to and fro</li> <li>ii. No requirement of good sheds</li> <li>iii. No possibility of detention on terminal</li> <li>iv. No additional overheads</li> <li>v. Loading and unloading of goods eliminated</li> <li>vi. No detention at terminals</li> </ul>
<b>Nation</b>	<ul style="list-style-type: none"> <li>i. Fuel conservation</li> <li>ii. Minimization of foreign outflow on import of fuel</li> <li>iii. Decongestion of the National Highway</li> <li>iv. Reduction in pollution</li> <li>v. Reduction of accidents</li> <li>vi. Less wear and tear of the highways</li> </ul>

**Table 3 : Win-Win Situation**

<b>Cost/Time Analysis</b>		
Truck of 15 MT from Mangalore (Suratkal) to Kolad		
	<b>On RORO</b>	<b>By ROAD</b>
<b>Kilometre</b>	721	836
<b>Cost</b>	Charges=Rs.8000/=Rs.10/ per km. 721 kms	A truck usually moves 3km per litre of diesel, which is Rs 50 per litre or <b>Rs 16 per km</b> Plus toll, octrio extra.836 kms
<b>Time</b>	22 hrs	40 hrs.

**Table 4 : RORO Operations at a Glance**

RORO Operation in number of years	16 years
Truck load carrying capacity per rake train	50
Total rakes per day	3
Total trucks ferried till date (2015)	Approx. 5 Lakhs.
Estimated Annual earnings for the Corporation	50 crores
Contribution to the earning of the Corporation in terms of percentage	About 8-9 per cent of total freight earnings of Konkan Railways, and 4-5 per cent of total traffic earnings of the public sector undertaking.
Types of freights	Trucks carry tiles, marble stones, and general merchandise towards Southern States, and in the return direction the trucks move rubber products, betel nut, plywood sheets, packaging material and fruits like pineapple

### Future steps

RORO for passenger vehicles: Let us assume that KRC starts a service from Kolad to Madgoan a distance of 515 kms. This can be travelled stress free under 9hrs. which otherwise would take almost 12hrs., with all the hassles and exposure to traffic jam, bad roads, accidents leading to exhaustion and fatigue. In Madgoan simply roll off the car and start touring Goa all fresh, with cost benefits.

### Conclusion

With the Konkan Railways innovative concept tested and successful, the Indian Railways need to moot the

model in phased manners in various sections across India. This will help the nation to take steps in environmental conservation, reduce crude oil import, help meet international norms in reducing greenhouse gases and better transportation facilities.

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**Picture: RORO**



**Source:** <http://www.dnaindia.com/india/report-konkan-railway-s-unique-ro-ro-service-set-to-complete-15-yrs-on-republic-day-1954161>

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## Indian Economy: Changing Age Structure Impact On Labour Force

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### ABSTRACT

*Currently, India is passing through an unprecedented phase of demographic changes. The ongoing demographic changes are likely to contribute to an ever increasing size of labour force in the country. The Census projection report shows that the proportion of population in the working age group (15-59 years) is likely to increase from approximately 58% in 2001 to more than 64% by 2021.*

**Keywords:** *Demographic change, Age structure, Labour Force, Young population*

### Introduction

Domestic service in service sector is the largest portion of employment for women. But the fact is that there is no exact figure available of the domestic workers because of lack of macro-data. As per the National sample Survey Organization (NSSO) estimates in 2004-05, the number of workers employed in private households, largely as

domestic workers, is 4.75 million workers. Of these, 3.05 million women are in the urban areas, making the sector prominent for female employment in urban areas. The percentage of domestic workers in total female employment in the service sector increased from 11.8 percent in 1999-2000 to 27.1 percent in 2004-05 a phenomenal increase of about 2.25 million in a short span of five years.

**Table 1: Domestic Workers across Sub-Categories**

Categories of Workers	No. of Workers		Female Share	
	1999-00	2004-05	1999-00	2004-05
House/Servant	4,382	23,811	80.4	87.4
Cook	64	966	72.6	73.9
Governess/Babysitter	26	696	76.4	74.2
Total Domestic Workers	4,471	25,474	63.4	71.6

Source: NSSO unit-level data

## Indian Economy: Changing Age Structure Impact on Labour Force

### Data Sources

The report is based mainly on secondary sources of data. Demographic information is obtained from Census of India and information on labour market is based on the employment and unemployment surveys conducted by National Sample Survey Organisation (NSSO). Annual Reports of the MoL&E and few other Ministries of the Government of India and Five Year Plan documents have also been used for analysing various initiatives taken by the Government and documenting the targets and achievements to meet the overall objective of employment growth with distributive justice.

From the data source of the Office of Registrar General & Census Commissioner (RGCC), 2006 the percentage of Population in Age Group of 15-59 Years is depicted as follows. In absolute numbers, there will be

approximately 63.5 million new entrants to the working age group of 15-59 years between 2011 and 2016. Further, it is important to note that the bulk of this increase in the population is likely to take place in relatively younger age group of 20-35 years. Such a trend would make India as one of the youngest nations in the world. In 2020, the average Indian will be only 29 years old, compared to 37 in China and the US, 45 in West Europe and 48 in Japan. This trend is seen significant on the grounds that what matters is not the size of the population, but its age structure. A population “bulge” in the working age groups, however large the total population, is seen as an important advantage characterized as a “demographic dividend”. Hence, this report, inter alia, aims to focus on the young age groups and suggest ways and means to utilize this, demographic dividend to contribute to the overall economic growth of the country.

**Table 2: Compound Annual Growth Rate ((%)) of Employment UPSS**

Employment growth	1983-1994	1994-2000	2000-2005
<b>Rural</b>			
<b>Male</b>	1.93	0.80	2.20
<b>Female</b>	1.37	0.03	3.61
<b>Persons</b>	1.73	0.51	2.70
<b>Urban</b>			
<b>Male</b>	3.23	2.86	3.28
<b>Female</b>	3.78	1.50	5.41
<b>Persons</b>	3.34	2.58	3.71
<b>Total</b>			
<b>Male</b>	2.25	1.35	2.51
<b>Female</b>	1.67	0.19	3.90
<b>Persons</b>	2.06	0.98	2.95

Source: Based on respective rounds of NSSO Employment and Unemployment Survey Reports

**Table 3: Projected population, LFPR, LF and Employment of 2009-10 to 2014-15**

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total population (in millions)	1177	1193	1208	1224	1239	1254
LFPR (%)	44.2	44.4	44.8	45.1	45.4	45.8
Labour Force (in millions)	520	530	541	552	563	574
Annual incremental labour force (in millions)	10	10	11	11	11	11
Scenario I– Employment growth (2% ) (in millions)	506	516	526	537	548	559
Scenario II– Employment growth (2.25%) (in millions)	506	517	529	541	553	566
Scenario III – Employment growth (2.5%) (in millions)	506	519	532	545	559	572

**Notes and sources:** Population projections have been taken from RGI, 2006; Projection of LFPR has been done on the basis of linear trends in LFPR observed between 1993-94 and 2004-05 across rural-urban, male-female and various age groups of population; employment projection is based on employment elasticity observed during 1993-94 and 2004-05 and GDP growth for 2009-10

**Table 4: Average Daily Wage ((in Rs.)) of Regular and Casual Workers (15-59 years), 2004-05**

	Male	Female	Index of gender bias in wage payments
Regular			
Rural	144.93	85.53	0.59
Urban	203.28	153.19	0.75
Casual			
Rural	55.03	34.94	0.63
Urban	75.1	43.88	0.58

Note: Index of gender bias in wage payments has been calculated as the ratio of female wage to male wage. Smaller ratio indicates high gender bias.

Source: Calculated from unit level data of NSSO, 2004-05

In addition to low wages for casual workers, there is also gender bias in wage payments. It is important to note that the gender bias in casual wage payment is low in rural areas (0.63) than in urban areas (0.58). However, the reason for low gender bias in wage payments in rural areas is highly suppressed wages both for male and female rural workers. The gender bias is also noticeable in case of urban regular workers.

Rural casual labour constitutes the single largest segment of the total workforce in India. Among rural casual labourers, agricultural labourers occupy a predominant position. The rural agricultural wage rate, hence, is considered as one of the most robust indicators of economic well-being, not only of agricultural labourers, but also of the overall rural population (Deaton & Dreze, 2002). However, agricultural wages have not only been persistently lower than non-agricultural wages, the rate of increase in the former has lagged behind the latter (Figure 4).

Among the various reasons for higher rise in real wages of non-agriculture activities are enhanced labour productivity and policy intervention through employment generation programmes. In contrast, the agriculture sector continues to be over crowded, leading to low labour productivity. All these have led to a lower growth in real wages in agriculture over the years.

Raising the wage levels of casual workers both in agriculture and non-agriculture needs adequate policy attention. In this regard, stricter implementation of the Minimum Wages Act, 1948 and targeted employment generation programmes are important policy considerations. A number of studies carried out in recent years have shown that the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has had significant positive impact on rural wages. Moreover, standardisation of minimum wages across various States through centrally fixed and periodically revised Statutory National Floor Minimum Wage may be an important policy initiative in this regard.

### **Unorganised Workers' Social Security Act, 2008**

An important recent initiative to safeguard the interest of unorganised workers has been enactment of the Unorganised Workers Social Security Act, 2008. The Act provides for constitution of National Social Security Board which will recommend formulation of social security schemes for unorganised workers/categories of unorganised workers from time to time. Accordingly, the National Board was constituted in 2009. Subsequently, the Board recommended that social

security schemes viz. Rashtriya Swasthya Bima Yojana (RSBY) providing health insurance, Janashree Bima Yojana (JBY) providing death and disability cover and Indira Gandhi National Old Age Pension Scheme (IGNOAPS) providing old age pension may be extended to Building and other Construction Workers, MGNREGA workers, Asha workers, Anganwadi workers & helpers, Porters/Coolies/Gangmen and Casual and Daily Wagers.

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## Electrophoretic studies of isoenzymes of Glutamate dehydrogenase (EC 1.4.1.3) (GDH) in *Cressa cretica L.*

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### **Abstract**

*Cressa cretica L.* is an associate halophyte which generally grow near marshy land which is less frequently washed by marine water and the soil is generally deficient in nitrogen content. The plant has adapted to nitrogen stress by evolving efficient nitrogen assimilating isozymes. In present investigation 3 isoenzymes of Glutamate dehydrogenase (EC 1.4.1.3) (GDH) are separated electrophoretically from the leaves of *Cressa cretica L.*

**Keywords:** halophyte, isozyme, Glutamate dehydrogenase

Markert and Moller (1959)<sup>1</sup> described the term 'isozyme' for the first time for the multiple forms of an enzyme. These enzymes are with similar or identical substrate specificity, occur in the same organism but differ in certain physico-chemical properties. According to Vessel and Bearn (1962),<sup>2</sup> the duplication of gene with subsequent mutations at both the parent and the daughter loci could be the biological mechanism for producing multiple molecular forms of an enzyme. However, Rider and Taylor (1980)<sup>3</sup> suggested that the multiplicity of the enzyme might be due to genetic and primary causes, where organism carries multiple genes, each one coding a different type of enzyme subunit. It may also be due to posttranslational causes, as homogenous enzyme subunits are modified differently resulting in a range of subunits from a single gene. Multiple forms of an enzyme may also result due to the influence of environment on the molecules of proteins. Lumry and Erying (1954)<sup>4</sup> termed these forms as 'conformational forms'.

Isozymes commonly occur in microorganisms (Brown *et al.*, 1975)<sup>5</sup> plants (Liu, 1975)<sup>6</sup> and animals (Georgiev, 1975)<sup>7</sup> and have been extensively studied by several workers (Vezina *et al.*, 1987<sup>8</sup>; Chen and Cullimore, 1989<sup>9</sup>; Cai and Wong, 1989<sup>10</sup>). Isozymes are known to function in the biochemical modulation of intracellular reactions (Ting *et al.*, 1975)<sup>11</sup>. Even though isozymes exhibit tissue specificity, which implies a significant physiological role for them, they are essentially alike in enzyme activity (Markert and Apella, 1961)<sup>12</sup>. According to Kay *et al.* (1967)<sup>13</sup>, isozymes differ from one another in several catalytic properties, as affinity for the substrate, behaviour towards coenzyme, pH optima, thermal stability and sensitivity to inhibitors.

Environmental conditions are known to have a great influence on the isozyme pattern of different enzymes. Pahlich (1972)<sup>14</sup> observed changes in the isozyme pattern and electrophoretic mobility of GDH due to

## Electrophoretic studies of isoenzymes of Glutamate dehydrogenase (EC 1.4.1.3 )(GDH) in *Cressa cretica* L.

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environmental changes. Similarly, Srivastava and Singh (1987)<sup>15</sup> also reported variation in the number of GDH isozymes due to variation in nutritional and environmental conditions. Modified activity of certain enzymes under saline environment are either due to conformational changes (Kalir and Poljakoff-Mayber, 1975)<sup>16</sup> of the enzyme molecule or due to the changes in isozyme pattern (Sanglikar, 1982)<sup>17</sup>. Hasson-Porath and Poljakoff-Mayber (1969)<sup>18</sup> based on their isozyme pattern of MDH reported that Na<sub>2</sub>SO<sub>4</sub> did not affect the isozyme pattern. However, NaCl caused the appearance of new isoenzymes in pea root tips. According to Somero (1975),<sup>19</sup> isoenzymes serve an important mechanism for broadening the environmental tolerance range of the organisms.

### Material and Methods

The plant material of *Cressa cretica* L. were collected from the natural habitat and brought to the laboratory in polythene bags and used for the study of protein profile and isozymes of glutamate dehydrogenase (GDH).

#### Enzyme Extraction:

Plants were collected from natural habitats and brought to the laboratory in polythene bags. The plants were washed with deionized water and blotted dry. One g fresh leaf material was ground vigorously in 10 ml chilled extraction buffer (0.2M Tris-HCl pH 8, 3.5 mM MgCl<sub>2</sub> and 2.5% Polyethylene glycol) using a mortar and pestle. The homogenate was then passed through 4 layers of muslin and the filtrate was centrifuged at 10,000 rpm for 20 minutes. The debris was removed and the supernatant was used as the enzyme source. Throughout the extraction, procedure the temperature was maintained around 0°C±2°C. Minimum quantity of buffer was used to get concentrated extract.

#### Polyacrylamide Gel Electrophoresis:

PAGE was carried out at low temperature (4°C±1°C) according to the method of Zweig and Whitaker (1967)<sup>20</sup>. The gels used for the separation of anionic samples in the present experiment were 7.5% running gels; stacking pH 8.3. The gels were cast in neutral glass plates (7 cm

long, 8 cm wide and 0.75 mm thickness with 10 wells) of vertical electrophoresis unit (BIO-RAD, MINI PROTEAN-II). The gel was polymerized with polymerizing catalysts like ammonium persulphate and TEMED (accelerator of polymerization of gel). For the electrophoresis, the buffer was prepared using 6g Tris-HCl, 28.8 g glycine and volume was made to one liter. The buffer was diluted 10 times and pH was adjusted to 8.3 before use.

The enzyme extract was mixed with bromophenol blue as a front marker and loaded in a polymerized gel wells. The entire gel plate was fitted in the electrophoretic unit, it was flooded with running buffer and the anodal, and cathodal ends were connected to the power system. The electrophoretic run was carried out at a current of about 2 mA /well, at a constant voltage of 150 volts. The run was carried out for about 90 minutes until the bromophenol marker front migrated to the other end of the plate. Subsequently, the gel was loosened with a jet of water and removed from the glass plate.

#### Detection of GDH:

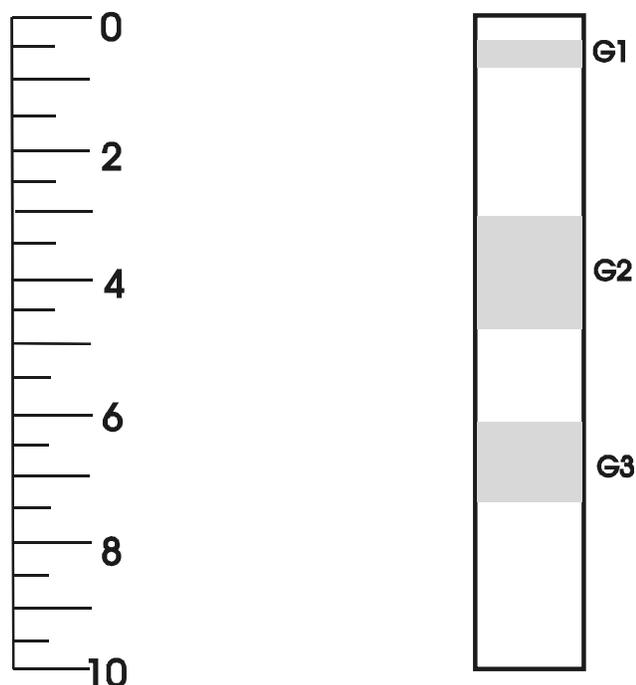
Isoenzymes of GDH were detected on the gels by the method of Brewer and Singh (1970)<sup>21</sup>.

The staining mixture was prepared by dissolving 0.25 M L-glutamic acid, 1.5 mM NAD, 0.163 mM phenazine methosulphate (PMS) and 0.43 mM nitroblue tetrazolium (NBT) in 0.125M phosphate buffer (pH 9.0). The staining mixture was prepared shortly before use as the reactants are less stable in solution.

For detecting GDH isoenzymes, the gels were incubated in the staining mixture at 37°C. GDH activity generates NADH, which reduces phenazine, which in turn reduces NBT. The reduced NBT is an insoluble formazan, which is coloured.

### Results and Discussion

Three bands G1, G3 and G5 of Rf values of 0.062, 0.416 and 0.656 were observed representing GDH activity in the leaves of *C. cretica*. (Figure 1). Isoenzymic



**Figure 1. Zymogram depicting isoenzymes of Glutamate dehydrogenase (GDH) from the leaves of *Cressa cretica* L.**

nature of GDH in higher plants is well established (Thurman *et al.*, 1965; Yue, 1969)<sup>22</sup>. Number of GDH isoenzymes varied amongst different plants studied and upto 7 isozymes have been reported in *Pisum sativum* (Hartman, 1973)<sup>23</sup>, *Medicago sativa* (Hartman *et al.*, 1973)<sup>24</sup>, *Arabidopsis thaliana* (Cammaerts and Jacob, 1985)<sup>25</sup> and *Vitis vinifera* (Loulakakis and Angelakis, 1990)<sup>26</sup>. Ratajczak *et al.* (1986)<sup>27</sup> observed 8 isozymes of GDH in lupin root nodules. According to Srivastava and Singh (1987)<sup>28</sup>, isozymic number of GDH enzyme varies with plant species as well as with nutritional and environmental conditions.

Kanamori *et al.* (1972)<sup>29</sup> detected new isozymes of GDH on the zymogram of PAGE due to ammonia treatment. Similar observation of synthesis of new isozymes of GDH under high levels of ammonia in the cellular environment was made by several workers (Ratajczak *et al.*<sup>30</sup>, 1977, Givan, 1979)<sup>31</sup>. According to Loulakakis and Angelakis (1991)<sup>32</sup>, ammonia induces expression of

isozyme. Plants growing under high salt concentration are known to accumulate high concentration of ammonia (Strogonov, 1964)<sup>33</sup>, which may lead to synthesis of new isozyme of GDH. Isozymic studies of GDH in leguminous plants have suggested that the GDH isozymic pattern is the result of an adaptation of the cell to nitrogen metabolism (Mazurowa *et al.*, 1980)<sup>34</sup> suggesting a physiological role of GDH isoenzymes in the regulation of nitrogen metabolism. However, in the present study three isozymes of GDH were detected in the leaves. This may be in response to halophytic nature of the plant.

### Conclusion

Electrophoretic studies of Glutamate dehydrogenase (GDH) enzyme extracted from the leaves of *C. cretica*, revealed 3 isoenzymes of Rf values of 0.062, 0.416 and 0.656.

From the present investigation it can be concluded that even though the plants of *C. cretica* an associate halophyte generally grow in soil which is poor in nitrogen content, it has a high nitrogen content in the plant which is due to an efficient enzyme machinery responsible for assimilating the nitrate and ammonia available to the plant.

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## Sustainable Development Through Green Technology

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### ABSTRACT

*At the outset the concept of sustainable development and its link with green technology has been described. Then I have focused on one of the aspects of green technology i.e. green building. This paper confines on the concept, principles, system and benefits of green building. Of course, one of the main goals of green building is to make the earth more sustainable, but it really does go deeper than that. When we decide to go green, our goal will be to actually help to sustain the environment without disrupting the natural habitats around it. When we start a building project, and we disrupt the natural habitats around it, we can actually make an impact in the wildlife and environment that will be much like a butterfly effect. Even the smallest changes that we can make will help to promote a better planet earth, and a better place for us all to live - not just us humans, but also the plants and wildlife that take up their residence here on earth as well.*

**Keywords:** Environmental Degradation, sustainability, green technology, green building, green building design, HVAC (heat ventilation and air conditioning) design.

### Introduction

The experts have made many studies during the period of 30 to 40 years and came to the conclusion that environment and development are interconnected. And they are presumed to be the two sides of the same coin. After the revolution of LPG industrial development has been taken place drastically. But at the same time there were side effects of these developments in the form of environmental degradation. Therefore there was a need for focusing special attention on eco-friendly environment. This has generated the concept of sustainable development.

### Concept

The term Sustainable Development was brought into

picture by World Commission on Environment and Development 1987 in its report titled "Our Common Future" which means "meeting the needs of present generation without compromising the needs of future generations".

Thus it may be described as a "development that meets the needs of the present without compromising the ability of the future generation to meet their own needs".

The ability of meeting the needs can be determined by the accumulation of human capital through education and technological advancement as well as man-made physical capital (machines, tool etc.). As it is obvious that, the impact of the overall productivity of accumulated capital- is more than its compensation for any loss from depletion of natural capital.



As far as the interest of the future generation is concerned, In the past benefits of development were emphasised at the cost of environmental loss – which was totally ignored. About 60% of world ecosystem is degraded or used unsustainably. This results to increasing gap between rich and poor across the world.

There may be many reasons for these problems like institutional failure, lack of mechanism to insure that polluters should pay the full cost of their pollution. Another important reason may be that the policies made by the people who are in power with vested interests without considering the interest of those who are most affected.

Therefore it was argued that these costs must be considered when development projects are decided upon. e.g. .efforts should be made to preserve if natural capital depletion takes place in one area replenished elsewhere.

Another argument was made that environmental resources should be assigned monetary value as far as possible.

The term Sustainable Development in wider sense also envisages protection of human capital and physical capital, so that the future generations do get, if not more, at least as much as the present generation has inherited from the past. This involves various steps such as management of resources (natural capital, human capital and physical capital). When we satisfy the present needs, we should maintain or enhance the quality of these resources.

## Green technology

**Sustainability** means meeting the needs of society in ways that can continue indefinitely into the future without damaging or depleting natural resources. In other words, meeting present needs without compromising the ability of future generations to meet their own needs.

For example:

a) **“Cradle to cradle” design** - ending the “cradle to

grave” cycle of manufactured products, by creating products that can be fully reclaimed or re-used.

b) **Source reduction** - reducing waste and pollution by changing patterns of production and consumption.

c) **Innovation** - developing alternatives to technologies - whether fossil fuel or chemical intensive agriculture - that have been demonstrated to damage health and the environment.

d) **Viability** - creating a center of economic activity around technologies and products that benefit the environment, speeding their implementation and creating new careers that truly protect the planet.

Above mentioned examples may be put forth to understand the true concept of sustainable development. Thus we may conclude that sustainable development is very wide term which includes many areas of environment protection. Green technology is also one of the important areas to be focused as a tool of sustainable development.

## Areas of green technology

### a) Energy

Perhaps the most urgent issue for green technology, this includes the development of alternative fuels, new means of generating energy and energy efficiency.

### b) Green building

Green building encompasses everything from the choice of building materials to where a building is located.

### c) Environmentally preferred purchasing

This government innovation involves the search for products whose contents and methods of production have the smallest possible impact on the environment, and mandates that these be the preferred products for government purchasing.

### d) Green chemistry

The invention, design and application of chemical

products and processes to reduce or to eliminate the use and generation of hazardous substances.

### e) Green nanotechnology

Nanotechnology involves the manipulation of materials at the scale of the nanometer, one billionth of a meter. Some scientists believe that mastery of this subject is forthcoming that will transform the way that everything in the world is manufactured. “Green nanotechnology” is the application of green chemistry and green engineering principles to this field.

### What is a Green Building?

These are the days of green revolution and everyone is talking about going green. For example clean Mumbai, green Mumbai. It is due to the fast economic industrial and social growth of the country as fast as the growth rate is increasing the earth as well as environment cannot be sustainable. This will lead to the shortage of certain natural resources which are very important for everyone us to survive. This has led to focus on green building. But, what exactly is green building? Lets take a closer look at what it is, why you should consider it, and what the goals of a green building are. You are sure to find that it is something that you should take part in.

### Defining a Green Building

A Green Building or a sustainable building can be defined as a structure that is designed, built, renovated, operated, or re-used in an ecological and resource efficient manner.

In other words the green building can be called as a building project that would allow us to preserve most of the natural environment around the project site, while still being able to produce a building that is going to serve a purpose. The construction and operation will promote a healthy environment for all involved, and it will not disrupt the land, water, resources and energy in and around the building.

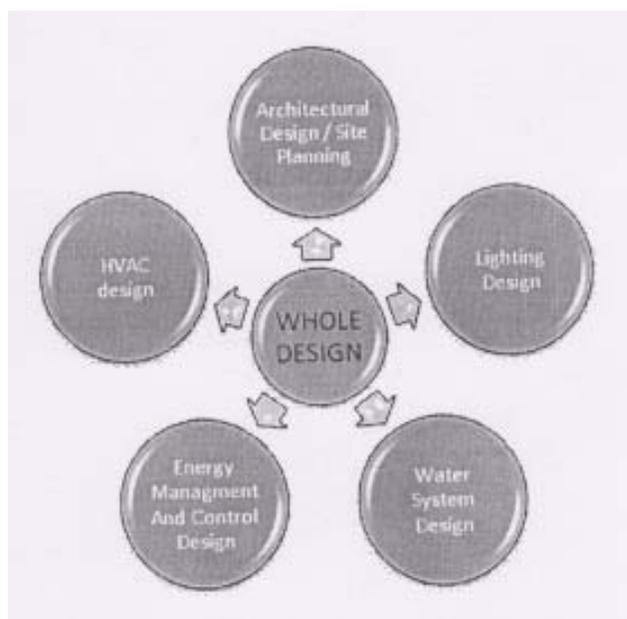
The U.S. EPA says “Green building is the practice of

*creating structures and using processes that are environmentally responsible and resource-efficient throughout a building’s life-cycle from siting to design, construction, operation, maintenance, renovation and deconstruction. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green building is also known as a sustainable or high performance building.”*

### Objectives of a green building:

- Protecting the health of residents
- Improving productivity through optimum use of resources
- Using energy, water and other resources more efficiently
- Reducing overall negative impact to the environment
- Improving quality of living and optimum use of internal spaces

### Green building design



### Architectural design:

While designing the architecture plan certain principles should be followed such as —



- Positioning of windows, shading
- Selection of materials for wall, roof, windows, including insulation
- Landscaping
- North – south orientation would reduce cooling loads by 1.5%
- Roof and wall insulation reduced cooling load by 23
- Insulated windows reduced cooling load by 9% (window to wall ratio 7%)
- Day lighting
- Earth cooling
- Natural Ventilation (night cooling)

### Lighting design

- Use of effective solar control strategies (overhangs) and high performance glazing's limit associated solar gains.
- Achieving this daylight credit will likely increase energy savings in the Energy and Atmosphere credits. This is largely due to savings in the electric lighting that results from well daylight spaces.
- Daylighting strategies can have synergies with other energy efficiency strategies such as displacement ventilation.
- Minimize site lighting where possible
- Full cutoff-luminaries
- Low-reflectance surfaces
- Low-angle spotlights

### Water system design

Reduce potable water consumption for landscape by 50% over a theoretical baseline design for the specific region.

### Successful Strategies

- Drought tolerant plants
- Drip irrigation, moisture-sensing irrigation technologies
- Recycled rainwater system
- Municipally-provided non-potable water source use

- Water Use Reduction, 20% and 30% Reduction

### Successful Strategies

- Dual flush water closets
- Ultra low-flow water closets and urinals
- Waterless Urinals
- Sensor-operated, Low-flow lavatories
- Rainwater collection reuse systems
- Gray water reuse systems

### Energy management and control design

#### Photovoltaic (Solar electric)

- Photovoltaic is a device which produce free electrons
- when exposed to light resulting in power generation.
- Photovoltaic does not release any of the green house gases when in use.
- Photovoltaic uses a non-conventional, renewable source of energy which has no adverse effects on the environment.
- 23 kW solar photovoltaic system
- 55% energy savings over base building

#### HVAC design

The main purpose of commercial HVAC (Heat, Ventilation & Air conditioning) systems is to provide the people working inside the building with “conditioned” “air conditioned” air means that air is clean and odor-free, and the temperature, humidity and movement of the air are within certain comfort ranges

- Systems may be clustered at a central location and serve an entire campus of buildings
- Locate system away from acoustically sensitive areas of the building
- Selecting efficient air conditioning based on your climate.
- Selecting the proper type of and efficient heating system for your climate
- Designing and sealing air distribution systems properly.

### Cost benefits analysis of green building

Normally it is presumed by the people that green building projects will be most costly and it will entail heavy expenditure. But in real sense it is not so. In fact while starting the project it may cost a bit more, because green materials and products can be more costly, we really have to consider the type of savings that we will be able to reap. We will be able to save on energy costs, because going green also means conserving energy. We should really look at the green building as more of an investment than anything else. Thus green building will be able to save money, as well as an investment which is a step towards sustainable development.

### Feasibility analysis of Green Building

We can analyse the benefits of green building from different directions:

#### Environmental analysis

- Reduce wastage of water
- Conserve natural resources
- Improve air and water quality
- Protect biodiversity and ecosystems

#### Economic analysis

- Reduce operating costs
- Improve occupant productivity
- Create market for green product and services

#### Social analysis

- Improve quality of life
- Minimize strain on local infrastructure
- Improve occupant health and comfort

### Conclusion

With new technologies constantly being developed to complement current practices in creating greener structures, the benefits of green building can range from environmental to economic to social. By adopting greener practices, we can take maximum advantage of environmental and economic performance. Green construction methods when integrated while design and construction provide most significant benefits.

As we can see, green building is something that everyone should really jump on to. If we don't plan to rebuild our home, then we may just want to make a few green changes within our home to ensure that we are able to get the goals that we want out of it. We can cut down on our energy usage, save money, and make a big impact on the environment. We will find that it isn't as hard as people make it out to be, and we will feel better about our self when we go green too!

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## Poverty Alleviation through Islamic Measures: *Zakah* and *Waqf*

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### ABSTRACT

*Poverty is a multi-dimensional term covering economic and non-economic factors that hamper the process of growth and development. Alternate theoretical and practical solutions have been presented to combat this problem. Islam views society as an entity based on equity and justice and has devised strong measures to deal with poverty and income inequality. Dominant among these are the institutions of Zakah and Waqf that function to create efficiency in distribution of resources in society and develop a strong system of social values.*

**Keywords:** Poverty alleviation, Zakah, Waqf

### Introduction

Economic crisis have affected many countries through the 1970s, 1980s, 1990s and 2000s. The poor have been the worst affected in these crisis. Economists are looking at various competing alternative theories to arrive at a solution. Considering the magnitude of poverty, governments and markets alone may not be able to solve the problem. Contribution of civil societies, charitable institutions and non-government organisations is important. Islam offers a theoretical and practical methodology to alleviate poverty on a sustainable basis. It stresses on satisfying basic needs and needs of social security of present and future generations.

### Objective of the paper

The objective of this paper is to explain the Islamic concepts of *Zakah* and *Waqf*, discuss certain issues surrounding these institutions and elucidate the primary roles they play in alleviating poverty. It begins with the

review of the concept of poverty, followed by discussion on the mechanisms of *Zakah* and *Waqf* and concomitantly explaining their role and effectiveness as poverty eliminating strategies.

### Concept of Poverty

Poverty usually indicates lack of income to afford minimum basic needs. But the term is multidimensional and not just restricted to scarcity of income. Apart from shortage of food, shelter, clothing, health and education, various non-economic factors also cause poverty. Social values, customs, norms and institutions in any society influence the extent of poverty. It is believed that there is no single definition or a measurement technique to compare poverty across countries or even within a country.

The Human Development Report (1999) developed a comprehensive index known as Human Poverty Index (HPI) that takes into account indices such as health

status, knowledge, economic provisioning, and social inclusion. However, the HPI seems to suffer from problems such as reliability of data. Further since it is a macro variable, it is difficult to interpret the findings and use it for formulating policies, particularly poverty alleviating policies. While studying poverty, the socioeconomic environment and the political system should also be considered.

In the later half of the 20<sup>th</sup> century, inspite of rise in global income levels, poverty among developed countries has increased. Considering the menace of poverty and deprivation, attempts have been made at the global level to combat this problem. Among the various Millennium Development Goals, the first has been eradication of poverty. The ethical and social system under Islam is based on principles of equity and provides in-built mechanisms, dominantly *Zakah* and *Waqf*, to deal with the problems of the poor.

### ***Zakah* and *Waqf***

*Zakah* is one of the fundamentals of Islam that has direct economic implications. It is obligatory on those Muslims who own wealth (criteria has been specified). It requires them to distribute a part of their wealth among specified heads in order to alleviate poverty and achieve economic emancipation. In Arabic, *Zakah* means growth, increase, cleanness and purity recognised as one of the five pillars of Islam or basics of Islam. It is an essential form of worship. *Zakah* rate is fixed at 2.5% of physical and financial assets (excluding agricultural products) held by people. Items constituting wealth are included under goods liable for *Zakah* in such a way that during the Prophet's (pbuh) time all rich persons were subjected to this obligation. It covered the flow of income as well as the stock of wealth or assets. Hafiz ibn Qayyim describes the philosophy and objective of *Zakah* in the following words: "Therefore Allah in His wisdom imposed an obligation on wealth which may not be (too much of) a burden on (the wealthy) but should be adequate for the needy so that they do not have to turn to any other direction." (Gamielien 2010 p. 46)

*Waqf* is a voluntary charitable act that implies holding from consumption and sale. It has wide economic implications. It is an ongoing charity that continues generating benefits. For instance, building a source of water supply like wells, canals, a house for travellers and others. It covers any act of charity for the benefit of society at large including providing religious services, public utilities, relief to the needy, education and research, health care, environmental, scientific and other purposes (Ahmed,2004).

Both *Zakah* and *Waqf* are welfare institutions to mitigate poverty. An equitable distribution of income, socio-economic justice and eradication of poverty are important features of an Islamic economic system wherein the basic needs of all in the society need to be fulfilled. Evidences from history

Ahmed (2004) provides evidences from history about the effect of distribution of *Zakah*. Narrations from the time of Umar bin al Khattab (13-22 H) and the period of Umar bin Abdul Aziz (99-101H) indicate that poverty was eliminated during the time of these two rulers to such an extent that *Zakah* proceeds in some regions could not be disbursed due to lack of poor in those regions.

### **Role of *Zakah* and *Waqf* in poverty alleviation**

It is necessary to comprehend the causes of poverty in order to arrive at a solution. The problem of poverty can be addressed by viewing it through both macro and micro perspective. According to the macro-perspective, extent of poverty depends on growth, distribution and changes in the distribution of incomes over a period of time. There is inequality in the economy in relation to poor people's access to opportunities. At the macro-level, *Zakah* can play an important role in redistributing income in favour of the poor within the community. It can help in designing specific programs related to provision of education, health and social services. *Waqf* plays a larger role in mitigating poverty at the macro level as it can be used to provide services like provision



of public utilities, infrastructure and the like.

In view of micro-perspective, poor households face a number of constraints which limit their use of resources, its productivity and income levels. They suffer from lack of resources in the form of human, physical and financial capital (Ahmed, 2004). Both *Zakah* and *Waqf* can be used in targeting poverty at the micro level more effectively.

### Effectiveness of *Zakah* and *Waqf*

Unfortunately, the effectiveness of the institutions of *Zakah* and *Waqf* in removing poverty has declined in the recent past. As several parts of the Muslim world fell to the military and cultural colonization during the 19<sup>th</sup> century, many laws and social practices were changed (Ahmed, 2004). There are several issues affecting the institutions of *Zakah* and *Waqf*:

**Conceptual issue:** The institution of *Zakah* is undergoing a conceptual problem. Traditional interpretations of the texts of Prophet's traditions (*Sunnah*) are used to define assets and properties liable for *Zakah* payments. In recent times, there are many new items of income and wealth that determine the financial status of individuals and institutions. But these do not find a mention in the classical books of Islamic jurisprudence. The modern financial system is quite complex with introduction of new financial institutions markets and instruments. These constitute new varieties of financial assets. There are differences of opinions among contemporary scholars regarding the inclusion of these assets under the purview of *Zakah*. As a result, most assets and income sources that determine wealth in the modern times remain outside the reach of *Zakah*. *Zakah* is regarded as voluntary payment: *Zakah* collecting agencies do not have the right to monitor *Zakah* payments of the wealthy or make it obligatory on them. They merely collect *Zakah* that is paid to them voluntarily. At times the rich are not even aware of the essentiality of *Zakah* payments and do not regard these payments as obligatory. Scholars have suggested enforcement of *Zakah* as an effective component of

poverty reducing strategy.

**Mistrust on *Zakah* collecting agencies:** A few instances of corruption and malpractices in the management of *Zakah* funds have caused mistrust regarding institutions of *Zakah*. There is lack of confidence on *Zakah* collecting agencies. As a result, people prefer to distribute *Zakah* personally and there is not much centralisation of funds.

**Clarity on the rules of distribution of *Zakah*:** It is necessary to determine the eligibility of *Zakah* beneficiaries. A person capable to work may be given what is needed to become a productive earner so that the basic needs can be fulfilled. This may include skills training or capital to start a business. On the other hand, persons able to work but not willing to work must not be given *Zakah* otherwise they remain dependent and parasitic. Refusal of *Zakah* acts as a pressure to force them to seek productive jobs. "Half-measures and handouts only serve to increase the trauma of need and create a whole community of dependents" (Gamielidien 2010 p. 47).

**Prioritization of the use of *Zakah* funds:** *Zakah* may be used to satisfy the basic and immediate needs of deserving beneficiaries. The first priority of *Zakah* funds should be to fulfilment of basic needs, elimination of hunger and nakedness. In case public utility services are provided, these may be for the use of all but non-deserving persons may be charged while the deserving may enjoy the benefits free of charge. Evidences have revealed that *Zakah* funds are used for celebrations of marriages and other areas of conspicuous consumption. Monitoring the use of these funds is important.

**Role of Government in collection and distribution of *Zakah*:** Even among Muslim countries, the role of the Government in collection and management of *Zakah* funds is not pivotal. It is mostly collected by religious centres, non-government organisations or disbursed individually. Dispersion of *Zakah* through individual efforts just provides income support and does not solve the problem of poverty in the long run.

Location of disbursal of funds: It is not mandatory to restrict the distribution of *Zakah* to the area from where it is collected. Scholars allow transferring *Zakah* to persons who need it more than those in its area.

*Zakah* as loan: Scholars have argued that *Zakah* can be given as grant as well as loan. It can be given to those who are temporarily poor and have the ability to return after a while. Undoubtedly, these loans are to be provided free of interest charges. In other words, *Zakah* funds can be utilized to provide interest free Islamic microfinance.

Since *Waqf* is voluntary, it is not subjected to many conditionalities, except that its objective should be righteousness. Certain societies have stressed on the perpetuality of *Waqf* while others include temporary *Waqf* as well. The main idea in *Waqf* is that whatever the founder decrees, it is binding as long as it does not violate the rulings of the religion (Ahmed, 2004). *Waqf* can be philanthropic, religious and private as may be assigned by the founder. There is a need to create awareness and interest among Muslim donors regarding *Waqf*. In the Muslim world as well as in countries like India, there are a large number of *Waqf* properties, other than religious structures like mosques. The original deeds of most of these properties are lost and their objectives are not known. Such properties can be used for reducing poverty among the community.

Since poverty is a result of diverse factors, three broad strategies for its reduction are suggested: Growth, distribution, and the development of socio-political institutions and arrangements dealing with the poor. Growth strategies should be effective in providing equitable opportunity so that sustainable poverty reduction policies can be devised (Sirageldin, 2000). These strategies would be in accordance with the Islamic system that is based on equity and discourages excessive consumption of present and future generations.

### Conclusion

Poverty is an evil with far reaching economic and social

consequences. The Islamic ethical system presents strategies of poverty elimination. Apart from various other social measures, the institutions of *Zakah* and *Waqf* reflect the role of individual commitment in poverty alleviation. However, Islam stresses the importance of individual freedom, human dignity along with a sense of responsibility. Scholars have opined that policies should not lead to institutionalization of poverty. Avenues for developing capabilities and access to equal opportunities may be provided so that policies not do develop dependency amongst its beneficiaries and make them non-productive. We may conclude that the poverty alleviation strategy supported by Islam endorses economic growth along with equity.

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## Sustainable Bad debt Management Through Islamic Tenets of Borrowing And Lending

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### **ABSTRACT**

*Why bad debts occur? Is it due to business failure, (unintentional), or it is due to corruption, (intentional). The approximate amount of bad debt in India is ranging between Rs 500 000 crores to Rs 10 00 000 crores. The Indian economy has been facing the challenge of bad debt management. A close look at the recent bad debt figures reveals that there is a sharp rise in the amount o bad debts. This paper is an attempt to analyze the reasons of bad debts in and also to suggest the Islamic tenets for sustainable bad debt management.*

**Keywords:** Sustainable, Bad Debts, borrowing, lending, day of judgement.

### **Introduction**

Debt is a sum of money that is owed or due. It is also the state of owing money. Bad debt is a debt that cannot be recovered.

According to the Reserve Bank of India the total lending to all borrowers in the Indian economy has been amounting to Rs. 75,20,000 crores as on 30<sup>th</sup> September 2016.

The Bad debt situation in Indian economy is very alarming. Indian economy has bad debt ranging between Rs. 5,00,000 crores to Rs. 10,00,000 crores. Of these around twenty percent are willful defaults and remaining eighty percent are not willful defaulters. It means that the strategy of doing business in India is so bad that the businesses are unable to pay the services and repay debts.

Are Indian business houses incompetent that they are unable to pay the debts, or the policies are not comprehensive to deal with such situations?

Indian economy is a Rs. 1.5 trillion of gross domestic product. The proportion of bad debts in the Indian economy is at least between 5% and 10% of gross domestic product (GDP).

The top 12 corporate houses in India have borrowed loans up to Rs 10,00,000 crores. Apparently assets providing backing for the loans worth Rs. 1,90,000 crores in these corporate houses are distressed, implying that the loans of such value are worthless in the books of lenders since the assets backing these loans are worthless. This implies that around 20% of these groups are bad debts.

In 2015, Central Bureau of Investigation (CBI) has

investigated around 150 specific cases of frauds involving over Rs. 20,000 crores, plus pyramid schemes involving Rs. 1,20,000 crores. Surprisingly this has happened under the eyes and ears of RBI, government and regulatory authorities.

If the 20% bad loans to the total loans in India are applied, then the amount comes to Rs. 15, 04,000 crores. For an economy that is worth Rs. 1.5 trillion GDP, the bad debt loans are around 12% of the size of the economy.

Can our economy sustain such write off? Already Indian fiscal deficit is around 6% of its GDP. It means that if recovered, such heavy bad debt of around 12%, can fund two years fiscal deficit of India.

There have been three main reasons for the sharp rise in the borrowings of the Indian firms. Firstly, as the interest rates have been increasing consistently, the firms faced a situation of higher cost and lower profits. It resulted into decline in the internal funds and the funds available for the investments. In order to meet the shortage of funds, the firms kept on borrowing even at the higher rate of interest. As a result the debt-equity ratio went up. The internal finances worsened, the firms find it very difficult to repay the loans. This resulted into bad debts. The small borrowers also faced the same problem.

Secondly, as the interest rates increased, the cost of capital increased and the firms became less profitable. With less profitability, their credit ratings declined. Some of the low performance companies, knowing that the rate of interest is high, kept on borrowing, as they needed money. They also tried to hide their performance decline. Some of these companies, even at the time of borrowings, knew that they might default. Conversely, the banks received higher premiums from these lower quality borrowers. This led to sharp increase in the lower quality borrowers. And this ultimately led in more bad debts. The third reason for the rise in bad debts is corruption. The close relationship between banks and the senior executives of the firms may lead to a situation where

the banks know that these loans would go bad. Here interest rate hardly matter.

### **Need of the hour**

The followings can be strategies for the sustainable bad debt management to curtail the amount of bad debts. First of all if there has been a big scam, then it should be investigated and the perpetrators be prosecuted. Secondly, the Reserve Bank of India must keep supervising all such borrowings which have even negligible chance of bad debts. Thirdly the government should vigil all the financial lending transactions to curtail such a loss in the name of bad debt.

### **Islamic tenets of borrowing and lending, a viable solution:**

Loan is the state of necessity. However, to not return the borrowed money is oppression and a sin. It is not a sin to take a loan in the state of necessity. The taking of a loan without necessity, is not something that a respectable individual would do, to create a burden upon him. When it is a necessity, then only people should seek loan.

Many economic and social problems result from loans can be solved if the etiquettes which Islam legislated for the debtor and the creditor be followed strictly.

### **The Virtue of Lending Money**

Sayyidina Anas bin Malik related that the Prophet (PBUH) stated: 'During the journey of Me'raj, I saw written on the door of Jannah: 'The one who gives charity is rewarded tenfold. The one who gives a loan is rewarded 18 fold.' I asked Jibrail : 'Why does the one who gives a loan get rewarded more?' Jibrail replied 'The one who gets charity (they usually possess a small amount already) and the one who seeks a loan only does so when he is in dire necessity.' (Sunan Ibn Majah, P175) Hakim Ul Ummah Shaykh Ashraf Ali Thanwi stated: 'In the Ahadith, the virtue of giving a loan is for those who are truly needy. If an individual seeks a loan



for wasteful spending and utilising it in sinful acts, then a loan should not be given to them.’ (Kamalate Ashrafiya, p102)

### **Rewards for lending-punishment for not lending**

The blessed Prophet of Allah (PBUH) said: “One who lends and gives him respite till he is capable of repaying it, the amount that he has lent is considered as Zakat and the Angels pray for him and seek Divine mercy for him till this (amount) is returned.”

The Messenger of Allah (PBUH) has also remarked: “If one lends, it is for his own (good). Every Dirham that he lends will qualify him for a reward equivalent to Mount Ohud (which is in Mecca) and Mount Sinai. And if he is lenient in collecting his debt he shall cross the bridge of Sirat like a stroke of lightning. “

And if a brother relates to his woes before a person and this person does not lend him any money, the heaven shall be denied to him on the day of re-compensating good doers.

The Holy Prophet (S) has said: “Your debtor is not permitted to delay in repaying the loan if he is capable to pay it. In the same way you are not permitted to pressurize him unduly when you know that he is not in a position to repay you immediately.”

### **Rules for debtors:**

#### **Debtor should repay The Loan in a Beautiful Manner:**

Sayyidina Abu Rafi related, the Prophet took a camel from an individual by way of a loan. The Prophet gave this individual back a camel better than that which he had taken from him. The Prophet stated: ‘The best person is he who repays his loan in a beautiful manner.’ (Sunan Abu Dawood, vol 2, p119) Sayyidina Ibn Umar took a loan of a few Dirhams from an individual by way of a loan. When he repaid this loan, he returned a greater amount to him. He (the creditor) stated: ‘You are giving

me back more than I gave you.’ Sayyidina Ibn Umar said: ‘I am aware of that, but I have given it to you out of happiness. You did not request it from me.’ (Muwatta Imam Muhammad, p355)

There are rewards that are promised for the one who lends. On the other hand, those who avoid this good deed have severe punishment in store. Sometimes it is obligatory to lend and not prohibited to lend. And sometimes it is Mustahab (recommended) to lend and Makrûh (detestable) not to lend.

Generally it is detestable to borrow but if the need to do so is genuine the detestability is scaled down. The magnitude of detestability is directly proportional to the actual gravity of the situation. In fact under some circumstances it is obligatory to borrow. For example it becomes obligatory to borrow to save one’s life or honour or business. If a person knows that he will not be able to repay the loan, then precaution demands that he should refrain from borrowing unless he is in dire need.

### **It is obligatory to have the intention of repaying ones debt**

The person who is not in a position to repay his debt must necessarily have the intention to repay it as soon as he is capable of doing so. This intention should have the first priority with him. In fact the intention to repay should be there right at the outset. A person who takes a loan without having the intention to repay it is considered a thief.

At the time of taking a loan, the borrower should be truly concerned to repay the loan within the stipulated contracted time. If the borrower cannot repay the loan in a lump sum, he should make it clear before hand, how he wishes to repay the loan. In this way there will be no difficulty placed upon the lender. The individual who takes his loan with these points in mind, his loan will be repaid within the stipulated time and he will be freed of this burden. Those who take a loan with a bad intention, Allah will cause him humiliation in this world and the hereafter. Sayyidina Abu Hurairah related that

the Prophet stated: 'The person who takes wealth from people with the intention of repaying it, Allah will assist him in the repayment of that loan. The person who takes wealth from people with the intention of squandering it, Allah will cause him destruction.' (Sahih Bukhari, Musnad Ahmed, vol 3, p285) Allamah Abdul Aziz Khawli writes: 'Beware, do not take a loan without necessity. If you ever have to take a loan, then keep the firm intention and make effort to repay it. Do not dare to take a loan from people without the intention of squandering their wealth and usurping it. This will only lead to your destruction and humiliation in this world and the next.' (Al Adab un Nabawi, p49)

There are such severe warnings in the Ahadith with regards to those who misuse the wealth of others. This is for those businessmen who run a business, take a bank loan to fill their pockets with insurmountable wealth and then declare bankruptcy, writing off all the money they have borrowed and stored away.

The debtor committing major sin by withholding repayment when sufficient funds are available:

Allah has stated in the Holy Qur'an: 'The Curse of Allah is on the Zalimun (Polytheist and wrong doers)' (s7, v44) Those people who, after having the means to repay a loan in full, do not do so, they are sinful of a major sin. The money obtained from this unclean saving will be accursed and as such will be a means of destruction in the debtor's temporary life in this world as well as the Hereafter. The Prophet stated: 'The individual who has the means to repay a loan but does not do so, this is oppression.' (Sahih Bukhari, vol 1, p323) The Prophet then stated: 'The debtor remains imprisoned in his grave until his debts are settled.' (Musnad Abi Yu'la, vol 3, p399)

### **The Debtor Whose Good Deeds are Given to the Creditor**

If the debtor is guilty of being lazy in repaying, or if he had taken the loan for an illegal purpose, or if he has delayed the repayment in spite of being capable of doing

so, and if after his death his debt has not been paid nor has the creditor condoned him. Then on the Day of Judgment, his good deeds equivalent to the loan amount shall be given to the creditor and if his good deeds are exhausted or insufficient to cover the amount, sins from the scroll of deeds of the creditor will be transferred to the scroll of the guilty debtor.

### **Amount of Compensation**

Exactly how many of the good deeds will be required to compensate for an unpaid debt is a matter known by almighty Allah and the Holy Prophet (PBUH). However, some traditions do mention some equivalents. For example in a tradition the Holy Prophet (PBUH) said that in lieu of each dirham 600 prayers of the debtor will be paid to the creditor.

### **Rules for creditors**

#### **The Creditor should be Lenient to the Debtor:**

Allah has stated in the Qur'an: 'And if the debtor is in a difficult situation, then grant him time until it is easy for him to repay, but it you remit it by way of charity, that is better for you if you did but know.' (S2, V280) It is clear from the above verse of the Qur'an that if the debtor is unable to repay a loan easily, to forgive him of repayment is a great form of Charity.

#### **The Incapable Debtor must be given Respite**

When the time of repayment is due, then the one who was kind and loaned some money should remember the Saying of Allah (which means): "And if someone is in hardship, then (let there be) postponement until (a time of) ease. But if you give (from your right as) charity, then it is better for you, if you only knew." (Quran 2: 280). In this verse, Allah enjoins patience and tolerance for the one who is poor and cannot repay on time and that the creditor should postpone the deadline. Two important points can be derived from the Quranic verse quoted above. One, it is obligatory to give respite to a debtor who is incapable of repaying the loan. Secondly,



it is more meritorious for the creditor to condone the loan completely.

In one narration, Prophet (PBUH) said: "He who gives respite to someone who is in straitened circumstances, or grants him remission, Allah will shelter him in the shade of His Throne, on the Day of Resurrection, when there will be no shade except His shade." [At-Tirmithi] Although it is allowed for a debtor to sell off his unnecessary belongings to repay his debts, the creditor is under divine obligation not to cause undue trouble. The creditor should give respite so that the loanee can easily repay the dues. Under these conditions if he condones his loan altogether, it will be considered a Sadaqah (Charity) which will remain with almighty Allah as his trust and he will continue to benefit from it forever.

### **Each Day of Respite Brings Rewards of Sadaqah (charity)**

For each day of respite that a person gives his debtor he receives divine reward equivalent to the spending of the loan amount as Sadaqah. Several traditions on this subject could be quoted but the ones mentioned should suffice.

### **Conclusion**

If debtor and creditor both strictly follow the Islamic tenets of lending and borrowings, and keep their intentions clear, then there are high chances that the rising bad debts can be curtailed to a great extent.

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## Green Accounting – A Path Towards Sustainable Development

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### ABSTRACT

*Green accounting refers to the identification, measurement and communication of the data on environmentally responsible performance of a business entity to facilitate economic decision-making. It identifies the resources used by a business and measures and communicates costs of its impact on the environment. Green accounting is all about bringing transparency in accounts as to environmental costs. It even tries to quantify – both in money terms as well as in physical units - the costs and benefits enjoyed by an organization because of its contribution towards environment related activities. In this paper, an attempt is made to evaluate the theoretical background of the concept of “Green Accounting” and discuss the theoretical foundation of environmental accounting and reporting practices with special reference to India.*

**Keywords:** *Green Accounting, Environmental Policy, Environmental Reporting, Sustainable Development*

A native American proverb states that – ***“When the last tree has been cut down, the last fish caught, the last river is poisoned, only then will we realize that you cannot eat money”.***

### Introduction

The issue of environmental responsibility and the sustainable industrial development has given to the birth of new branch of accounting, i.e. green/environmental accounting and reporting. Green accounting is relatively a recent entrant in the domain of accounting. Our Mother Nature has provided us with a prosperous gift in the form of Earth’s environment. It is wealthy enough to satisfy the need of everyone living in it but are we doing justice with the environment. The developmental activities undertaken by the present civilization generates huge amount of wastage with potential constituents. Over

the course of the last fifty years, India has lost over half its forests, 40 per cent of its mangroves and a significant part of its wet lands. At least 40 species of plants and animals have become extinct with several hundred more endangered.

The developing countries like India are facing the twin problem of protecting the environment and promoting economic development. A trade off between environmental protection and development is required. The concern of environmental responsibility and the sustainable industrial development has given birth to a new branch of accounting i.e. Green Accounting.



Green accounting refers to accounting practices incorporating the environmental costs, impacts and consequences. The costs include costs to clean up or remediate contaminated sites, environmental fines, penalties and taxes, purchase of pollution prevention technologies and waste management costs. It is about aggregation of data that links the environment to the financials of the company, which will obviously have a long-run impact on both economic and environmental policy of the organization. It is something more than merely undertaking social cost benefit analysis of various projects or activities of the company or valuation of environmental goods and services produced. It is an effort to identify and portray the exhausted resources and cost rendered by organizations in return, to the environment. Green accounting is all about bringing transparency in accounts as to environmental costs. It even tries to quantify – both in money terms as well as in physical units - the costs and benefits enjoyed by an organization because of its contribution towards environment related activities. Generally, green accounting involves the identification, measurement and allocation of environmental costs, integration of these costs into business, identifying environmental liabilities, and communication the results to the stakeholders of the company as part of financial statements.

A careful assessment of the benefits and costs of environmental damages is necessary to find the safe limits of environmental degradation and the required level of development. Responsibility towards environment has become one of the most crucial areas of social responsibility.

Today, the magnitude of environmental pollution is at an alarming level in many parts of the globe. The issues such as rapid climate changes, glacier meltdown, soil erosion, degradation of lands, deforestation, and pollution contributed towards increased awareness about the importance of protecting the environment. The business, in their role as corporate citizen, is also conscious about the environmental changes and the optimum utilization of resources. Thus, the responsibility towards environment has become one of the most vital areas of

corporate social responsibility. In “Green Accounting” approach national accounts are adjusted to include the value of nature’s goods and services. Mr. Jairam Ramesh, the former environment minister, advocated greening India’s national accounts by 2015 and encouraged policy makers to recognize the trade-off between pursuing high growth economic policies against the extensive impact they could have on India’s natural capital.

### Objectives of the Study

- To highlight the theoretical background of Green Accounting system.

### Forms of Green/Environmental Accounting:

Environmental accounting can be classified under three forms:

#### 1. Environmental Management Accounting (EMA)

Environmental management accounting focuses on material and energy from information as well as environmental cost information. It can be studied under the following sub classes:

(i) Segment environmental accounting: This is an internal environmental accounting tool that facilitates the selection of an investment activity, or a project which is environmental friendly from among all processes of operations. It also helps in evaluating the environmental effects of the project for a certain period.

(ii) Eco-balance environmental accounting: This is also an internal accounting tool to support the firm for sustainable environmental management activities.

(iii) Corporate environmental accounting: This is a tool to inform the public of relevant information compiled in accordance with the environmental accounting. It can be called as corporate environmental reporting and it uses the cost and effect of its environmental conservation activities.

#### 2. Environmental Financial Accounting (EFA)

Environmental financial accounting refers to the financial

accounting practice with special reference to the reporting of environmental liability costs and other significant environmental costs.

### 3. Environmental National Accounting (ENA)

Environmental National Accounting focuses on natural resources stocks & flows, environmental costs & externality costs etc.

### Dimensions of Green Accounting

The various environment related accounting items can be classified into four basic dimensions of green accounting such as, environmental assets, environmental liabilities, environmental expenditures/costs and environmental incomes/benefits.

#### ❖ Environmental Expenditures/costs

Companies have divided environmental costs into six broad categories such as capital investment, operating cost, research and development cost, environment administration and planning costs, expenses for remediation measures and recovery expenses

#### ❖ Environmental Assets

They represent the assets possessed by an organization as a result of environmental protection, regulations and/ or according to environmentally voluntary activities. In fact, such assets are part of man-made assets such as environmental protection equipment, pollution bonds...etc. it is worth mentioning that they might be fixed assets or current assets. Even that the same asset may be considered fixed in one organization while current in the other. All natural assets are environmental assets but not vice versa.

#### ❖ Environmental Liabilities

A liability is a present obligation to make expenditure or to provide a product or service in the future. It is a legally enforceable obligation, whether it is voluntarily entered into as a contractual obligation, or is imposed unilaterally, such as the liability to pay taxes. The different types of environmental liabilities include Compliance Obligations – reporting, record keeping,

treatment of air emission, release to surface water etc.; Remediation Obligations including cost of excavation, drilling, construction, pumping, soil and water treatment, and monitoring, and can include the response costs incurred by regulatory authorities.

#### ❖ Environmental Incomes/benefits

Environmental conservation benefit is measured in physical units and is the benefit obtained from the prevention, reduction and/or avoidance of environmental impact, removal of such impact, restoration following the occurrence of a disaster, and other activities. By assessing the economic value of environmental conservation benefits which are measured in physical units, results are described in monetary values by some cases. Currently, in the field of environmental economics, a number of valuation methods are being developed for the purpose of determining the environment's economic value. It includes Environmental conservation benefit associated with the inputs of resources into business operations, Environmental conservation benefit associated with environmental impact and waste emissions from business operations, Environmental conservation benefit associated with the goods and services produced by business operations and Environmental conservation benefit associated with transports and other operations

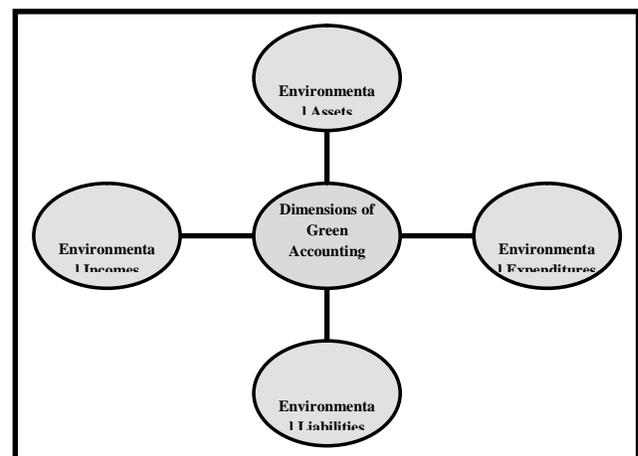


Fig. 1: Dimensions of Green Accounting



## Benefits of Green Accounting

1. Green accounting would enable governments to evaluate choices better without a bias against future generations, or a bias in favour of man-made assets as against natural assets. It would present in a different and holistic economic light choices such as conserving precious ecosystems rather than surrendering them at throwaway prices.
2. Green accounting is to adjust traditional measures of growth and to re-cast them as measures of sustainable growth. There it could be fair and true measure of the national wealth.
3. It would help in improving environmental performance, controlling costs and promote sustainability.
4. It would encourage the government as well as the corporate to investing in cleaner and efficient technologies.
5. It would facilitate forming informed decisions related to their business activities.
6. It would help in developing greener processes and products, pollution control, sustainable development

## Application of Environment Accounting and Reporting in Indian Companies

### Legal Framework for Environmental Accounting in India:

The environmental clearance from various government authorities has taken the centre of attraction with the abolishing of industrial licensing for all practical purposes. India has a Union Ministry of Environment with the motive of coordinating among the states and the various ministries, the environmental protection and anti-pollution measures. The country has also passed various legislations to ensure the protection of environment. The latest Companies Act, 2013 also incorporates a stress on green initiatives. The various laws pertinent to environmental protection in the country

are listed below under two different heads:

### 1. Directly related to the protection of environment

- Water (Prevention and Control of Pollution) Act, 1974
- Water (Prevention and Control of Pollution) Cess Act, 1977
- Air (Prevention and Control of Pollution) Act, 1981
- The Forest Conservation Act, 1980
- The Environment (Protection) Act, 1986

### 2. Indirectly related to the protection of environment

- The Provision in the Constitution (Article 51A)
- The Factories Act, 1948
- Hazardous Waste (Management and Handling) Rules, 1989
- Public Liability Insurance Act, 1991
- The Motor Vehicle Act, 1991
- Indian Penal Code
- The National Environment Tribunal Act, 1995
- Indian Fisheries Act, 1987

## Green Accounting Practices in Indian Companies

Green accounting is in the inception stage in India. In the context of requiring environmental related disclosures from business units on a periodic basis, the first public announcement was made by the Government of India in 1991, immediately after adopting the financial reforms that liberalized the economic policies of the country. The Ministry of Environment and Forests has proposed that "Every company shall, in the Report of its Board of

Directors, disclose briefly the particulars of steps taken or proposed to be taken towards the adoption of clean technologies for prevention of pollution, waste minimization, waste recycling and utilization, pollution control measures, investment on environmental protection and impact of these measures on waste reduction, water and other resources conservation.”

In 2011, the Securities and Exchange Board of India mandated listed companies to report on Environmental, Social and Governance (ESG) initiatives undertaken by them, according to the key principles enunciated in the “National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business”.

The Companies Act, 2013 emphasizes on corporate social responsibility that makes it mandatory for certain class of profitable enterprises to spend money on social welfare activities. It is mandatory for companies with net worth of more than Rs. 500 crores, or turnover of Rs. 1,000 crores to adopt a CSR policy. Also it provides that the companies are required to give more disclosures besides Company’s general state of affair and financial performance regarding conservation of energy and environmental protection.

Also, The Union Ministry of Environment and Forests has issued various instructions in to prepare environment statements. It is mandatory in the country to get an environmental clearance for all new projects that concerns both the Union Ministry of Environment and Forests and the corresponding State Government department of environment. There are various guidelines in this regard and all such projects are expected to obtain environmental and antipollution clearance before they are actually set up. It can be observed through their accounts that mainly the following set of information is disclosed.

- What type of devices are installed to control pollution
- The steps taken for energy conservation
- Steps taken for optimum utilization of resources

- Steps taken for decompose the waste water and production process waste
- Steps taken for improving the quality of product and services, production process etc.

A gazette notification on environmental audit has been issued by ministry of environment and forests on 3-3-1992 which was amended through a notification on 22-4-1993(India: Environment Statement, as a part of Environment Audit, Govt. of India, 1993) requires the submission of an environment statement to the Central Pollution Control Board. This notification is applicable to any person carrying out an industrial operation or process requiring consent to operate by under section 25 of the Water (Prevention and Control of Pollution) Act 1974, under section 211 of the Air (Prevention and Control of Pollution) Act, 1981 or both, or authorization under the Hazardous Waste (Management and Handling) Rules, 1989, issued under the Environment (Protection) Act, 1986. In this environment statement, the concerned industry is required to provide information on:

- Water and raw material consumption
- Pollution generated
- Impact of pollution control measures on conservation of natural resources
- Nature of hazardous and solid wastes produced and disposal practices adopted
- Measures taken for environmental protection, and
- Steps taken to popularize the benefits of environmental accounting and reporting among the corporate sector.

Also, environmental reports as contained in the Directors Report of three Indian Companies are as under:

- i. Asian Paints (India) Ltd, (1993-94): “Ecology and Safety: Samples of treated effluents are periodically checked for Compliance with standards”.
- ii. Goodlass Nerolac Paints Limited (1993--94): “Pollution: The company regularly monitors measures in force in accordance with the Pollution Control Act for the protection of environment and



for ensuring industrial safety. The company carries out improvements regularly to ensure full compliance with the statutory requirements.”

- iii. Maruti Udyog Limited (1993-94): “Environment: Modification of the existing effluent treatment plant was undertaken to take care of additional effluents generated due to capacity expansion”. Data on non-methane hydrocarbons in Paint Shop and Engine Testing shop, ambient air quality, stack emissions and effluents are being regularly monitored and the parameters are maintained well within prescribed limits. Development of green belt around gas turbine and R&D areas was further augmented by plantation of 3000 additional saplings.

### Challenges of Green Accounting and Reporting

Even though the environmental accounting and reporting practices are being attempted by many countries, the concept has certain obstacles in implementation. The major limitations are as follows:

1. Green accounting is an evolving science and still under study.
2. Environmental accounting lacks economic value.
3. There is no standard method of estimating the social value of environmental goods and services.
4. Social value given to environmental goods and services are changing so fast that the estimates are likely to be obsolete before they are available for use.
5. Environmental accounting is not a legal obligation except for few industries in India.
6. It is not possible to value every component of natural capital and human capital in an accurate manner
7. For valuation of natural resources consumed like decreasing forest cover, carbon gases emitted in the air, unbiased and true data would be required.

Sometimes official statistics may be rosy and may not reflect true picture.

8. Comparison between two companies and two countries is not possible due to change in the method of accounting.

### Conclusion

Green accounting is an important measure for understanding the role played by natural environment in the development of an economy. It provides data that contains the contribution of natural resources to economic well-being as well as the costs imposed by environmental pollution and resource degradation. In India, the level of environmental related disclosures in the corporate annual reports is poor. Green accounting must be viewed as a dynamic and ongoing process rather than a onetime activity. Green accounting is an emerging aspect of accounting science that will influence in the near future, the enterprises. The adoption of basic elements of green accounting will portray the role of environment in the economy as well as render easier the analysis of macroeconomic questions with the help of accounting information systems and thus, lead the economy to a viable path. Unless common people of India are made aware towards environmental safety, development of accounting in this regard is a little bit doubtful. It is the call of the time that corporates prepare a firm environmental policy, take steps for pollution control, comply with the related rules and regulations and mention adequate details of environmental aspects in the annual statements. For sustainable development of a country well defined environmental policies as well as proper follow-up and proper accounting procedure is a must.

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## Goods and Services Tax: The Introduction Process

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### ABSTRACT

*This paper focuses on the process of introducing the Goods and Services Tax (GST), bringing out the perspectives of different stakeholders and the contentious issues. The GST was expected to subsume a variety of taxes and simplify the indirect tax regime. The Empowered Committee (EC) was mandated in 2007, to bring about consensus among the States to move towards GST. The important stakeholders in the process were the Government of India (GoI), individual States, industry and the committees commissioned by the GoI or EC. However, the EC faced challenges since there were issues of control between the Centre and States, perceived loss of revenue by some States, extent of uniformity across various commodities and their tax rates, input credit mechanism and dispute settlement. The deadline for the introduction of GST kept getting postponed due to the slow resolution of the challenging issues. Finally, it was tabled in the Parliament as the 122nd Constitutional Amendment Bill (CAB) in December 2014.*

**Keywords:** GST, Constitutional Amendment, Indirect Tax, Federalism.

### Objective

- To study the various models of GST existing globally.
- To identify the possible alternative models for introduction of GST in India.
- To examine their various characteristics and assess their suitability in India's fiscal federal context.
- To identify the Central Taxes and State Taxes which possess properties to be appropriately subsumed under GST
- To suggest a model for the base and rate structure of GST.

### To constitute sub working groups Goods and Services Tax: The Introduction Process

On December 20, 2014, the Empowered Committee (EC) of the State Finance Ministers (FMs) agreed to support the 122nd Constitution Amendment Bill (CAB) if the States were adequately compensated for the loss of revenue. On December 19, 2014, the 122nd CAB was tabled in Parliament for the introduction of Goods and Services Tax (GST) that allowed a parallel levy of indirect taxes on the supply of goods or services or both by the Centre and State Governments (including

Union Territories). It introduced a dual taxation system subsuming the various indirect taxes levied then. The 122nd CAB was a culmination of the sustained efforts of the EC, which had been working since its constitution on July 17, 2000. According to the 122nd CAB,<sup>1</sup> the term ‘GST’ was defined by introducing a clause 12A in Article 366 of the Constitution of India, to mean “any tax on supply of goods or services or both except taxes on supply of the alcoholic liquor for human consumption.” „Services under the 122nd CAB means anything other than goods. „State with reference to articles 246A, 268, 269, 269A and article 279A includes a Union territory with the Legislature. Thus, all the supply of goods or services or both would attract Centre level Goods and Service Tax (CGST; to be levied by the Centre) and State level Goods and Service Tax (SGST; to be levied by State) unless kept out of the purview of GST. As GST would be applicable to ‘supply’, the erstwhile taxable events such as ‘manufacture’, ‘sale’ and ‘provision of services’ would lose their relevance. GST would enable a larger tax collection base and prevent cascading of taxes.

### Indirect Taxation Reforms in India

Charges levied by the State on consumption, expenditure, privilege, or right, but not on income or property are called Indirect Taxes (Exhibit 3). There was an effort to reform indirect taxes with the formation of an Indirect Taxation Enquiry Committee (ITEC) in 1976 (Annexure 1). The ITEC submitted its report in 1978. After a decade of submission of the report by ITEC, a Long Term Fiscal Policy report (Annexure I) was presented along with the Union Budget of 1985-86 under VP Singh, the then Union FM. Accepting its recommendations, a Modified Value Added Tax (MODVAT) was introduced on a few commodities on March 1, 1986. A Tax Reforms Committee with Raja J Chelliah as its Chairman was formed on August 29, 1991. The committee gave its recommendations to introduce VAT at the manufacturing level covering all goods in December 1991. The recommendations were accepted and introduced partially by the Government of India (GoI) in the Budget of 1993-94.<sup>3</sup> On November

16, 1999, it was decided by Yashwant Sinha, the then Union FM in a meeting of State Chief Ministers (CMs) to take steps for introduction of nationwide State level VAT in order to avoid the cascading effect of taxes. MODVAT was renamed as Central level Value Added Tax (CENVAT) w.e.f April 1, 2000, which introduced new CENVAT Credit Rules. The EC formed was to supervise the implementation of VAT and to monitor the phasing out of the sales tax based incentive schemes. These Rules sought to introduce simplified CENVAT provisions and procedures for allowing credit of duty paid on specified inputs and capital goods used in or in relation to manufacture of specified final products. CENVAT Credit Rules were introduced w.e.f March 1, 2002. The new rules contained complete provisions for taking credit of duty paid on inputs and capital goods.<sup>4</sup> A Task Force on Indirect Taxes, formed in July 2002 under the chairmanship of Vijay Kelkar, Adviser to Minister of Finance and Company Affairs, gave its view that “VAT is a major reform in the indirect tax system of India.”<sup>5</sup> The EC had been working for the execution of State level VAT dealing with inside (State demands) and outside (industry, exporters and other stakeholders) pressures.

### Structure of GST

The Working Group submitted their detailed recommendations on the three issues which provided a structure of GST. They submitted their report on November 11, 2009. The report favored a dual GST system. The dual system implied that tax was to be levied concurrently, both at the Centre and at the State level called CGST and SGST respectively. In the meantime, Sukumar Mukhopadhyay, former member of the Central Board of Excise and Customs (CBEC) called the dual GST system as the best solution for a country like India in June 2009. A single GST system was also not agreed upon by the States, fearing revenue loss because a single system of tax would be levied by GoI alone.

On June 29, 2009, Govinda Rao, then a member of Union FM’s Economic Council had urged PM



Manmohan Singh to delay the implementation of new tax rules till the Centre and the States reached a consensus. The FM of Tamil Nadu, K Anbazhagan had also shared the same viewpoint. The new Union FM Pranab Mukherjee, while presenting the Budget on July 6, 2009 reiterated that GST would come into effect from April 1, 2010. A FICCI-Technopak report on Fast Moving Consumer Goods (FMCGs) was released in July 2009. This report suggested that the GoI needed to rapidly implement GST to replace the multiple indirect taxes currently levied on FMCGs. This would lead to reduced prices and increased tax collections. In September 2009, the States reached a consensus on a two rate system as suggested by Asim Dasgupta. This system implied a concessional rate for essential items and a standard rate for other goods. The two rate system proposed by the states also had a special GST for precious metals and a list of exempted items. In the same month, Asim Dasgupta also announced that a Joint Working Group would be formed to decide the framework of the dual tax system and issues relating to special rates. The committee was mandated to submit its report in two months time. Chattisgarh, Haryana, Tamil Nadu, Rajasthan and Madhya Pradesh expressed their reservations on the introduction of GST.

On October 17, 2009, Sushil K Modi, then Deputy CM of Bihar demanded adequate compensation from the Centre. In his view, Bihar would lose Rs 600 cr since entry tax would get merged with GST and another Rs 260 cr as service tax from the Centre would be subsumed under GST. At that time, entry tax was imposed by the States and service tax was levied by the Centre and distributed to the States. Following this, on October 26, 2009, Rajnath Singh, President of BJP, opposed the GST regime stating.

### **Towards Constitutional Amendment**

On August 4, 2010 the State CMs met for scrutinizing the CAB drafted by the Centre in order to introduce the GST. To pass the bill with two thirds majority, 362 members of Lok Sabha and 161 members of the Rajya Sabha had to give assent to the draft bill. The States

rejected the draft bill based on two reasons.<sup>15</sup> the draft bill provided for a GST Council consisting of State FMs, the Union FM, and the Union Minister of State (MoS) for Revenue to make recommendations with respect to GST. In matters where a consensus could not be reached, the Union FM had a veto over the State FMs. The States opposed this provision.

The draft bill also empowered Parliament to establish a GST Dispute Settlement Authority (GDSA), an executive body. This Authority would adjudicate disputes referred to it by a State or GoI and the final appeal lay with the Supreme Court of India (SC). The States viewed this provision as interference of the executive and the judiciary in legislative provenance. After this meeting, the EC asked for a Second Discussion Paper. This move made it clear that the draft bill could not be introduced in the monsoon session of the Parliament.

On August 9, 2010, GoI discussed the draft bill with BJP, the main opposition party. Following this, on August 16, 2010, Pranab Mukherjee gave the BJP a revised draft bill removing the veto power of the Union FM. The BJP convened a meeting of eight FMs of the NDA ruled states (Karnataka, Madhya Pradesh, Gujarat, Chhattisgarh, Himachal Pradesh, Uttarakhand, Bihar and Punjab) to build consensus over the draft bill. At the meeting convened on August 18, 2010, no consensus was reached. The States decided to individually present their views to the EC.

On August 31, 2010, Revenue Secretary Sunil Mitra announced that DTC would come into effect from April 1, 2012. This would bring down the revenue for the Centre by Rs 53,172 cr. He mentioned that this loss could be made up for, only with the simultaneous introduction of GST. On September 13, 2010, the DTC bill was introduced in the Parliament. On October 31, 2010, the Finance Ministry clarified that the demand of EC for altering the basic structure of the GST including removing GST Council and GDSA was not acceptable. NDA ruled States and Uttar Pradesh (UP) continued their opposition. On February 5, 2011, Nandan Nilekani

submitted the TAGUP report to the FM.16 TAGUP was asked to make detailed recommendations regarding the technological architecture of five IT intensive projects including GST.

It was also asked to address and make recommendations regarding human resources to co-ordinate projects among GoI, State and local governments and between government and other organizations. The key recommendations of TAGUP were (i) setting up National Information Utilities (NIU) to handle IT systems for five projects, including GST and (ii) putting in place a Mission Execution Team with a dedicated mission leader to coordinate projects between governments and other organizations. On February 13, 2011, Pranab Mukherjee decided to call for a meeting with State FMs during the recess<sup>17</sup> of the budget. The purpose of this meet was to build a consensus over the third version<sup>18</sup> of the draft GST bill that was presented on January 28, 2011. The FM clarified that GoI wanted to introduce the GST bill in the second half of the budget session that was to take place between April 4 and April 21, 2011. The third draft empowered the Parliament to set up a GST council. The earlier drafts had endorsed the setting up of the GST council by a Presidential order.

### Impact on GST

GST would be one of the most significant fiscal reforms of independent India. GST is expected to result in major rationalization and simplification of the consumption tax structure at both Centre and State levels. It is expected to replace all indirect taxes, thus avoiding multiple layers of taxation that currently exist in India. Depending on the final GST base and rate, there will be a significant redistribution of tax across different goods and services. Goods currently subject to both Centre and State taxes should experience a net reduction in tax, with positive impact on consumer demand. Besides simplifying the current system and lowering the costs of doing business, GST will call for a fundamental redesign of supply chains. It will affect how the companies operate their businesses, presenting significant opportunities for long-term revenue and margin improvement.

### Suggestion

- Union government need to coordinate with 30 states for “input credit” due to transfer of credit in SGST.
- State tax officials training and development before implementation of GST.
- Effective credit mechanism is essential for GST. Owing to CENVAT it is not a problem but for states again it is a major challenge.
- Analysts say that real estate market will be cramped by GST and it may result in 12% down turn in demanded of new houses because of increased cost up to 8%. (A study commissioned by Curtin university of technology)
- Competitive edge of India in Asian giants will decrease and domestic industry may be wrecking.
- Tax evasion and smuggling will increase.
- Regressive nature of indirect taxes will badly affect the purchasing power of poor people which will have negative impact on human development index.

### Finding

- Wider tax base, necessary for lowering the tax rates and eliminating classification disputes
- Elimination of multiplicity of taxes and their cascading effects
- Rationalization of tax structure and simplification of compliance procedures
- Harmonization of center and State tax administrations, which would reduce duplication and compliance costs
- Automation of compliance procedures to reduce errors and increase efficiency.



## Conclusion

To conclude, though the positive impacts referred above are dependent on a neutral and rational design of the GST, balancing the conflicting interests of various stakeholders, full political commitment for a fundamental tax reform with a constitutional amendment, the switchover to a 'flawless' GST would be a big leap in the indirect taxation system and also give a new impetus to India's economic change. It is also noted that, buoyed by the success of GST, more than 140 countries have introduced GST in some form or other and is fast becoming the preferred form of indirect tax in the Asia Pacific region.

Due to dissilient environment of Indian economy, it is demand of time to implement GST. Consumption and productions of goods and services is undoubtedly increasing and because of multiplicity of taxes in current tax regime administration complexities and compliance cost is also accelerating. Thus, a simplify, user -friendly and transparent tax system is required which can be fulfilled by implementation of GST. Its implementation stands for a coherent tax system which will colligate most of current indirect taxes and in long term it will lead to higher output, more employment opportunities and flourish GDP by 1-1.5%. It can also be used as an effective tool for fiscal policy management if implemented successfully due to nation-wide same tax rate. It execution will also results in lower cost of doing business that will make the domestic products more competitive in local and international market. No doubt that GST will give India a world class tax system by grabbing different treatment to manufacturing and service sector. But all this will be subject to its rational design and timely implementation. There are various challenges in way of GST implementation as discussed above in paper. They need more analytical research to resolve the battling interest of various stake holders and accomplish the commitment for a cardinal reform of tax structure in India.

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## Impact of Information Communication Technology On Teaching and Training Process

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### ABSTRACT

*The rapid transformations brought about by the change in technologies have a significant impact on the way people live and work. Innovations in the technologies have challenged the traditional process of teaching and learning. Use of newer technologies is vital in order to facilitate better education in almost all the disciplines. Present paper is an attempt to investigate the impact of information and Communication Technology (ICT) in teaching and training. It involves mapping of studies that shed light on the importance of ICT in education. There have been several studies in this area, still certain issues require further investigation. Extensive examination of the literature reveals that higher education institutions have given more attention to pedagogy without realizing the full power of ICT in enhancing the teaching and learning practices. This paper proposes a need to understand the technological innovations along with pedagogical challenges to enhance the quality of knowledge and skills.*

**Keywords:** *Technology, Pedagogy, Teaching, Training.*

### Introduction

The information and communication technology is an amalgamation of the greatest innovation in the 20th century in the field of electronics and communication. During a very short span of time the ICT has become an important aspect in all aspects of human life. Most of the premier higher education institution in the country are found to be adaptive towards changes and advancement in the educational technologies and

multimedia systems. But there are a larger number of institutions that are still dependent on the traditional teaching and learning methods. The use of ICT in education provides an opportunity for operating, storing, manipulating and retrieving the information. This instrument has the capability of engaging the students and helping them solve complex problems and enhance their cognitive skills (Jonassen & Reeves, 1997).

ICT has been defined as technologies use for

communication in order to create, manage and distribute information that may include computers, internet, telephone, radio and television (Pernia, 2008). The issues in ICT for teaching and training are more critical today than ever before as the innovations in technology is triggering transformation in the delivery of education (Pajo & Wallace, 2001). Web technologies can advance the teaching and learning process by bringing the learning peers around the world together (Lee, 2010). In the past decade, a large number of studies and reports have discussed on the issue of ICT and its impact in education. Literature reflects that corporations and universities have started recognizing the impact and significance of ICT in transforming people, performance, knowledge and skills acquired (Henry, 2002).

Duncan (1979) explains that learning is a process within an organization through which knowledge and environment relationship is developed. Rowley, Stickgold & Hobson (1998) in work mentions that a learning organization facilitates the learning of all its members and continuously transforms itself. But the relationship between media deployment has been under continuous debates. Clark (1993) argues that the comparison studies on media deployment does not suggest for any learning differences. Kozma (1991) presented his view through his work suggesting media deployment and learning as a complementing process. He further explains that some learners might learn irrespective of the medium of instructions but others would take advantage of the characteristics of the medium of instruction. Sharma & Patterson (1999) have suggested that universities are learning organizations where an environment of collaborative learning is created. He suggests extending the focus of learning from classroom to wider organizations for creating and disseminating knowledge that can transform the university as an organization. The introduction of newer technologies has brought extensive changes in the last three decades (Valentine, 2000). In the present era, technology monitors, controls and evaluates all the organizational activities (Zuboff, 1988). ICT can play a major role in transforming and enhancing the quality of higher education and research.

### **Importance of ICT in Teaching Learning Process**

Various studies have emphasised on the importance of ICT for providing opportunities to students towards effective and informed learning. Yelland, (2001) mentions in his work that traditional education system does not prepares the learners suitable enough for today's workplace and society. The organisations that would not incorporate the technological changes would not be able to prepare the students to survive in the 21<sup>st</sup> century. Grimus, (2000) supports and mentions that ICT based teaching and learning process prepares the students to face the future developments. Jones & Knezek, (1993) bring out that ICT is applied to serve as a means of developing efficiency in the overall educational process. Research work of Dede, (1998) highlights that ICT in education helps to improve memory retention & motivates deeper understanding. Collaborative learning like role plays, group activities and peer learning is also promoted via ICT (Forcheri & Molfino 2000). Interconnections and rich network relations are established through ICT (Rifkin 2000). Capabilities are extended and the role and rules of classroom teaching can be transformed effectively through the ICT (Breuleux, Laferriere & Bracewell, 1998). In various organizational theories, it is found that technology has always been a central phenomenon in research and practice. Technology based teaching and learning process provides relevant examples and prepares learners for employment (Miller, Martineau, & Clark, 2000). It provides for flexible delivery and increased access. Lau & Sim (2008) mentions that deeper understanding for learners and flexible response facility to educators is the key benefit of ICT in education. Hence, ICT supported teaching and learning process could be an extremely constructive approach.

Tondeur, Valcke & Van (2008) have examined computer competence as the ability to handle a wide range of computer applications that may be used for various purposes. The computer competence of a teacher/ trainer helps in predicting the integration of ICT in teaching and learning. Literature reflects that the teachers who



reported negative/ neutral attitude towards ICT integration into teaching and learning process did not possess adequate ICT competence & they were less likely to make informed decision (Bordbar, 2010).

Research work of Peralta & Costata (2007) emphasizes that teachers who were more experienced with computers had great ability towards effective usage of ICT in teaching and learning process. Lack of adequate ICT knowledge creates fear of failure and hence teacher may experience lack of confidence. Teachers self-efficacy influences the ICT use in teaching and learning process (Knezek & Christensen, 2002).

ICT increases opportunities for interactions that are useful for problem solving and resource sharing. It also enhances face to face contacts (Chickering & Ehrmann, 1996). Difficult concepts can be illustrated through animations or videos and through simulation and gaming techniques the exercises can be explained with greater details. These technologies provide new information, various search methods, academic interchange with just-in-time approach (Guttormsen & Krueger, 2000). The greatest boon of ICT is its availability. The educators and learners can work collaboratively anytime almost anywhere. The classrooms are no longer limited to physical space. The concepts of virtual classrooms through the aid of ICT has provided for better and collaborative learning environment (Schank, 2001).

In most of the cases ICT has preserved and in some cases added to the advantage of traditional face-to-face learning (Collins & Berge, 1996). With the help of technology, the educators can provide detailed feedback via creative and interactive ways. Teaching methods based on web technology provide greater degree of flexibility that is not possible with mass lectures (Lueddeke, 1997).

## Conclusion

There have been remarkable changes in the 21<sup>st</sup> century with respect to technological advancements. This has

greatly affected ICT adoption by teachers and its integration in the teaching and learning process. These practices pose a challenge to teachers and administrators. Present discussion in the paper highlight the importance of ICT and suggest that successful integration of ICT in the teaching and learning process would enhance the quality of higher education. Teachers should become regular users of ICT for better skills. Training of teachers in the pedagogical issues must be given more importance and the value of using ICT in their teaching and learning process should be emphasized. Information and Communication Technology has brought about tremendous change in education field, but there is still a lot to be done in order to achieve the desired level of IT utility in higher education. The utilization of these opportunities arising from the diffusion of ICTs in higher education brings various challenges with itself still it has become an indispensable support system for higher education. ICT can influence the students learning process and it would also enable development of collaborative skills as well as knowledge creation skills.

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## Importance of Ecotourism towards Sustainable Tourism Development

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### ABSTRACT

*Globally almost every country is working towards conserving the biodiversity and maintaining the ecological impacts. One of the fast emerging effective measures over the last couple of decades is Ecotourism. Ecotourism has the primary focus on appreciating conserving and experiencing the nature. Mass tourism brings a permanent loss to the local environment due to various tourism activities. Present paper brings out the importance of ecotourism towards sustainable tourism development. It also highlights the role of ecotourism towards neutralizing the loss caused by mass tourism and promoting nature conservation. The paper also highlights the ecotourism policy status in the Indian context and its contribution towards Wealth Creation and Income Generation.*

**Keywords:** *Ecotourism, Tourism Industry, Sustainable development*

### Introduction

Ecotourism offers a sustainable model with the potential to transform the tourism industry, through environmental and social-economic benefits to the communities and meaningful experiences to the travelers. Ecotourism is a new concept in tourism, which was originally sparked off by the idea of making harmonious co-existence with nature a reality once again. Ecotourism interest a lot of tourism planners and marketers. There are various assumptions associated with the potential of this sector. Ecotourism is the fastest growing sector of global tourism industry (Roberts and Thanos, 2003). The literature and research on ecotourism reflects that it is a growing

phenomenon (Honey, 1999).

Looking at the importance of Ecotourism; there is a need to look at it in the form of a strategy that would enhance sustainable development. Ecotourism is not a remedy but it has the potential to promote sustainable development in the area of tourism. There has been tremendous growth in the ecotourism sector over the past two decades, but there are various concept related to ecotourism that are complex and need immediate attention (Weaver, 1999).

Ecotourism describes anything in relation to nature and is completely different from conventional tourism



(Honey, 1999). There are different arguments related to different types of ecotourism such as “hard” vs “soft”, “deep” vs “shallow” or “active” vs “passive” ecotourism (Stem, 2003). Literature does not provide for a concrete definition of ecotourism but there are a few that have helped to form a clear picture about it. Ecotourism is a form of tourism inspired primarily by the natural history of the area and its indigenous culture. The eco-tourist visits the undeveloped areas with a sense of appreciation, participation and sensitivity. Benefit to the local residents is their main agenda. The idea is to generate economic benefit to them as well as work towards conservation of nature (Conservation International, Ziffer, 1989).

The World Conservation Union (IUCN, Brandon, 1996) defines ecotourism as a responsible travel that would promote keeping the natural areas undisturbed. It also emphasizes on social and economic development of the local people in that area. Ecotourism is a travel to fragile, pristine and usually it is a protected area that strives to be low impact and it is usually small scale. The idea is to educate the traveller and empower the local (Martha Honey, 1999). Ecotourism is defined as responsible travel to natural areas that conserves the environment and sustains the well-being of the local residents (International Ecotourism Society, 2004). Ecotourism still has a long way to go as a global phenomenon. David Weaver points out, that ecotourism is moving at a higher level and there are various emerging indicators to it (Weaver, 2001).

## Literature Review

The literature on various aspects of ecotourism is quite extensive. In order to find out major developments that took place in ecotourism, a brief review of existing literature on different aspects of ecotourism is made in this section. Hetzer (1965) in his work first mentioned about ecotourism and described about four major pillars of responsible tourism (Blamey, 2001). Authors have also suggested that emergence of ecotourism is due to two major factors. First, factor is mentioned as the environmental movement of the 1970's and 1980's. Second factor is the great dissatisfaction

that the tourists had due to over development and pollution (Honey, 1999; Orams, 1995). Eco-tourism is nature based tourism with a special emphasis on education and interpretation of natural and cultural environment.

It is an instrument for natural protection and at the same time assures sustainable economic benefits for the local people. (Hall & Brown 2000). Ecotourism explains the mutual relations established between tourists, environment and culture which brings important benefits to the local economy and ensures the condition for long term development and maximum recreation satisfaction for the tourists. (Hodur, Leistriz and Wolfe, 2005).

The key aspects for ecotourism are involvement of local community, activation of financing resources and realizing the environment resources. The various aspects which need attention at operational level for sustainable management of ecotourism are assessment of carrying capacities, better transportation managements, conservation and adaptations, design and control of developments, marketing effects in tune with the sustainability concept, local community involvement while planning eco tourist destinations (Cater, 1993). If ecotourism projects are not planned and managed, it can inflict damage to natural environment. In addition, spread effects will be confined to the immediate community surrounding the tourist destination resulting in islands of affluence in a sea of poverty (Diaz, 1997). On the other hand, researchers on ecotourism have opined that participation of local people is to be ensured in the process of planning as they are assumed to have greater knowledge in the usage and effective management of the resources through application of traditional and customary practices. According to Maheshwar Rao (2002) ecotourism came into prominence as a strategy for reconciling conservation with development in ecologically rich areas. He points out that ecotourism comprises a number of inter-related components all of which should be present for authentic ecotourism to occur. Stephen Page (1996), on ‘Tourism-An Epitome of Incentives’ explains that to decrease financial leakages in tourism, it would

## Importance of Ecotourism towards Sustainable Tourism Development

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be important to increase local ownership of tourism-related business, building up tourism infrastructure using local investors and avoiding purely foreign investment.

V. Santhi & Arunkumar (2011) in their study hold the view that ecotourism in the Indian context has significant implications for nature and culture conservation, rural livelihoods and conservation education. Jennifer Hill & Tim Gale (2000) stated that ecotourism provides a direct return of a reasonable share of the revenues generated by the business to the local people and to the conservation of the local environment. There are two conflicting views about the impact of ecotourism. The authors mention the tourists as powerful economic force. In this concept, the revenues from the tourists in the form of entrance fees, domestic airfares, hiring charges of the guide, accommodation and food, sale of local goods such as handcrafts and souvenirs and tax revenue levied on the above are distributed among the population that is most likely to exploit the natural areas. Hence such a transfer of revenue establishes a direct linkage between conservation and personal income. The complex economic linkages transmit the impacts from those who sell goods and services to others in the local economy.

Payments for the goods and services enter the economy influencing the incomes of local agents who may or may not have a direct connect with the tourists. These agents, in turn, stimulate new rounds of local expenditure that influences the incomes of still more local agents. Praveen Sethi (2005) in his book 'Millennium Trends in Travel and Tourism' opines that earnings from international tourism represent an visible export. They are the result of selling the country's tourism product to tourists from abroad. Expenditure on tourism is the opposite. They represent an invisible import.

The residents are buying a tourism product from elsewhere. In the book 'Sustainable Tourism-A Geographical Perspective', Hashim Tyabi (2008) describe, "Ecotourism is environmental friendly and sustainable tourism, which also benefits the local

community". But in fact, many ecotourism ventures destroy the very ecosystems they claim to protect. With poor planning, ecotourism ends up in environmental degradation. K. Sasikumar & Binu. R (2006), conducted an outstanding study about Ecotourism and Himalayas. According to them, "it is necessary to develop Himalayas in order to improve the standard of living of the local people and to promote further growth of national economies of this region". The solution lies in carrying out all this development in a new era of heightened co-operation without disturbing the ecosystems of the Himalayas. Thus there lies a tremendous scope for future research studies in the area of ecotourism.

### **Guidelines of the Ministry of Tourism, India**

The National Ecotourism Policy and Guidelines of the Ministry of Tourism after considering the national policy on tourism has identified the following cardinal principles for the development of ecotourism:-

1. It should involve the local community and lead to the overall economic development of the area.
2. It should identify the likely conflicts between resource use for tourism and the livelihood of local inhabitants and attempt to minimise such conflicts.
3. The type and scale of tourism development should be compatible with the environment and socio cultural characteristics of the local community and,
4. It should be planned as a part of the overall area development strategy, guided by an integrated land use plan while avoiding inter-sectorial conflicts and ensuring sectorial integration, associated with commensurate expansion of public services.

### **Importance of Eco Tourism policy towards Wealth Creation and Income Generation**

Various aspects of ecotourism policy that highlight its



importance towards Wealth Creation and Income Generation, has been identified and briefly described in the following points.

- Steps taken by the Ministry of Tourism to boost tourism and subsequently enhance the employment opportunities in the country include Human Resource Development, Hunar Se RozgarTak, Central Financial Assistance to all States/UTs for over all development of Tourism in the country, other facilitation like E-Tourist Visa etc.
- Under Human Resource Development in order to bridge the huge skill gap existing in Hospitality Industry, Ministry of Tourism has adopted a multipronged strategy to strengthen institutional infrastructure for training and education. At present, there are 21 Central Institutes of Hotel Management (CIHMs), 15 State Institutes of Hotel Management (SIHMs), 7 Food Craft Institutes (FCIs) and 5 Indian Institutes of Tourism and Travel Management (1 Head Quarter and 4 Functional Centres). Apart from these, 15 new SIHMs and 15 FCIs have been sanctioned.
- In Hunar Se RozgarTak Program the Ministry of Tourism launched a special initiative called Hunar Se RozgarTak (HSRT) in the year 2009-10 for creation of employable skills amongst youth. This initiative is fully funded by the Ministry of Tourism. The features common to the training programs under the HSRT are: the trainees should be in the age group of 18-28 years; each training program is of short duration – 6-8 weeks; and no fee is chargeable to the trainee. Over 1.94 lakh persons have been trained under the program up to 31/03/2015.
- In 2013, the total contribution of Travel & Tourism to employment, including jobs indirectly supported by the industry, was 7.7% of total employment (35,438,500 jobs). This is expected to rise by 2.7% in 2014 to 36,409,000 jobs and rise by 1.9% pa to 43,837,000 jobs in 2024 (7.9% of total).

- In 2014 the total foreign exchange earnings from tourism is 1, 23,320 crore with the annual growth rate of 14.5%. In 2013 Travel & Tourism directly supported 22,320,000 jobs and in 2014 it rose by 2.5% to 28,081,000 jobs.

Thus the above mentioned figures reflect that the Indian tourism facilitates creation of wealth and employability which is very essential for the growth of any developing country.

### Conclusion

There are various countries that have policies in existence for managing and promoting ecotourism. Growing tourism and the huge demand for second homes has already put a pressure on maintaining and preserving the natural environment. The small island country- New Zealand has a remarkably growing tourism industry that supports ecotourism and sustained development (Higham, Carr, & Gale, 2001). The future generation would be greatly affected by the changing landscape and the environment. The world has already experienced the fury of Tsunami in the absence of mangroves and there are numerous human interventions that can act as catalysts to the calamities. Hence it becomes extremely important to conserve the natural environment in every possible manner. Ecotourism has the potential to benefit the local residents, tourists and the environment if each stakeholder plays an active role towards sustainable development.

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## Green Marketing in India and Sustainable Development

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### ABSTRACT

*Green revolutions, going green, environmental protection, sustainable life style, sustainable development, protecting our earth and many more have become a natural phenomenon in our everyday life. Green Marketing is a tool used by many companies in various industries to follow this trend. Green Marketing has gained momentum in the context of global warming and climate change and this, in turn, has forced many companies to incorporate the principles of Green Marketing. Recently, Green Marketing has drawn the attention of government and this has forced them to introduce environment-friendly policies. As resources are limited and human needs and wants are unlimited, resources have to be utilized economically and in an environment friendly way. Green Marketing will play an important role in sustainable development. Every firm needs to adopt innovative methods to sustain itself in the competitive environment, thus Green Marketing becomes an important aspect which every firm will have to implement in near future, so why not start practicing it immediately. The Government in near future is going to adopt stringent policies to enable sustainable development. The marketers should realize this and head on towards Green Marketing. The paper focuses on the present trends of Green Marketing in India and describes the reason why companies are adopting it, future of Green Marketing and also explain the various challenges of Green Marketing in India and environmental problems facing the world today in order to bring about sustainable development.*

**Keywords:** *Green Marketing, Environmental Marketing, Sustainable development etc.*

### Introduction

Today, it seems that every company has a “green” story. And no wonder not only does the development and offering of “green” products and services positively impact consumer and investor perceptions of a company; it can also improve the bottom line. So it’s only natural that businesses in almost every industry are touting the “green” aspects of their products and services every chance they get. But embarking on an uninformed and poorly prepared “green” advertising initiative can

severely backfire, exposing a company to investigations and penalties by federal and state agencies, false advertising lawsuits by competitors, and perhaps worst of all, charges of “green washing” from the media and the blogosphere. Any one of these consequences can harm corporate identity and brand value, effectively eliminating any benefits that a Green Marketing campaign may have conveyed.

According to the American Marketing Association, Green Marketing is the marketing of products that are

presumed to be environmentally safe. Green Marketing has evolved over a period of time.” According to Peattie (2001), the evolution of green marketing has three phases. First phase was termed as “Ecological” Green Marketing, and during this period all marketing activities were concerned to help environment problems and provide remedies for environmental problems. Second phase was “Environmental” Green Marketing and the focus shifted on clean technology that involved designing of innovative new products, which take care of pollution and waste issues. Third phase was “Sustainable” Green Marketing. It came into prominence in the late 1990s and early 2000. Sustainable marketing is a more radical approach to markets and marketing which seeks to meet the full environmental costs of production and consumption to create a sustainable economy Green Marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. Yet defining green marketing is not a simple task where several meanings intersect and contradict each other. Other similar terms used are Environmental Marketing and Ecological Marketing. Indian Government has already introduced Environment Protection Act in 1986 and Environment Audit in 1992, the marketers have to realize that with increasing amount of environmental harm caused due to industrialization and economic development, the Government is going to apply stringent policies to save environment and is going to be even more strict with regards to the development which will cause a severe threat to the environment. The environmental harm which is mainly due to greenhouse gas emissions has caused a severe threat to the climatic conditions and the result of which can be seen in the form of droughts, scarcity of drinking water, floods ruining the agricultural produce etc.

### Objectives of the Study

1. To study Green Marketing in India
2. To study the present status and trends of Green Marketing in India
3. To study the various challenges of Green Marketing in India.

### Methodology of the Study

The study is based on secondary source of data collected through various books, articles and research papers published in various national, international journals and websites.

### Present trends in Green Marketing in India

Organizations perceive environmental marketing as an opportunity to achieve its objectives. Firms have realized that consumers prefer products that do not harm the natural environment as also the human health. Firms marketing such green products are preferred over the others not doing so and thus develop a competitive advantage, simultaneously meeting their business objectives. Organizations believe they have a moral obligation to be more socially responsible. This is in keeping with the philosophy of CSR which has been successfully adopted by many business houses to improve their corporate image. Firms in this situation can take two approaches namely use the fact that they are environmentally responsible as a marketing tool and become responsible without prompting this fact. Governmental Bodies are forcing Firms to become more responsible. In most cases the government forces the firm to adopt policy which protects the interests of the consumers. It does so in following ways:

- Reduce production of harmful goods or socially undesired goods.
- Modify consumer and industry’s use and/or consumption of harmful goods; or ensure that all types of consumers have the ability to evaluate the environmental composition of goods.
- Competitors’ environmental activities pressure firms to change their Environmental Marketing Activities. In order to get even with competitors claim to being environmentally friendly, firms change over to green marketing. Result is green marketing percolates entire industry. Cost factors associated with waste disposal or reductions in material usage force firms



to modify their behavior with cost cutting becoming part of the strategy of the firms it adopts green marketing in relation to these activities. It may pursue these as follows:

- A Firm develops a technology for reducing waste and sells it to other firms.

### **Green Marketing and sustainable Development**

Majority of people believe that Green Marketing refers solely to the promotion or advertising of products with environmental characteristics. Terms like Phosphate Free, Recyclable, Refillable, and Ozone friendly and environmental friendly are some of the things consumers most often associate with Green Marketing. While these terms are Green Marketing claims, in general Green Marketing is a broader concept, one that can be applied to consumer goods and industrial goods and services (Polonsky, 1994). The misconception of Green Marketing by majority of people makes its definition very critical, yet defining Green Marketing is not a simple task. Indeed the terminologies and definitions used in this area are varied. The terminologies include; Green Marketing, Environmental Marketing and Ecological Marketing (Polonsky, 1994). Therefore, there is no universally accepted terminology and definition of green marketing up to today. In regard to this paper the term green marketing will be used. According to the American Marketing Association green or ecological marketing refers to “the study of the positive and negative aspects of marketing activities on pollution, energy depletion and non-energy resource depletion” (Henion and Kinnear 1976 b, 1). According to *Herbig et al* (1993) Green Marketing refers “to products and packages that have one or more of the following characteristics; they are less toxic; are more durable; contain reusable materials and/or are made of recyclable materials”. These two definitions are narrow in scope as they focus on a narrow range of environmental issues. Green Marketing needs to be broadly defined. Polonsky (1994) defines Green Marketing as “consisting of all activities designed to generate and facilitate any exchanges intended to satisfy

human needs, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment”. This definition is much broader and incorporates much of the traditional components of the conventional marketing definition and also includes the protection of natural environment. For the purpose of this paper Polonsky's definition will be used. Sustainable development requires “sustainable marketing” that is marketing efforts that are not only competitively sustainable but are also ecologically sustainable (Polonsky et al, 1997). Indeed, marketing's role in the development process is well recognized (Kinsey, 1982; Riley et al, 1983; Dholakia, 1984; Carter 1986; Kotler, 1986). Much of the economic activity is triggered by the marketing process that offers and stimulates consumption to satisfy human needs and wants. However, marketing's critical role in development will only be appreciated when, through sustainable marketing, it meets the needs of the present without compromising the ability of future generations to meet their own needs (Polonsky et al, 1997). In response to the challenge of advancing simultaneously in economic development and environmental protection as the sustainable development demand companies and academicians have developed and/or adopted Green Marketing strategies and other corporate strategies. Among the key strategies are; green product strategies, green logistic strategies, green pricing strategies, green promotion strategies, changing consumers from consumption culture to ecologically concerned consumers, adoption of eco-marketing orientation as a business philosophy, Government intervention, lifecycle inventory analysis and teaming up for success (Polonsky et al, 1997; Ottman, 1997; Willum, 1998; Charter et al, 1999). Green marketing focus on undertaking all marketing activities while protecting the environment. On the other hand sustainable development demands that the future generations inherit the natural environment in the same state or better as inherited by the previous generations. This calls for the protection and improvement of the environment. Therefore, sustainable development is a dependent variable of green marketing and other factors. According to the framework organization through the conventional finance and

accounting; production processes and technology, general management practices, marketing, human resources management; research and development and other variables contribute to environmental concerns facing the world today. In addition macro-environmental factors, economic, socio-cultural, technological, demographic, political-legal and individuals also contribute to environmental concerns today. The model further proposes that marketing through Green Marketing intervention strategies can respond to the environmental concerns challenge. Other business functional areas can also intervene through various strategies to provide solutions to the environmental problems. These intervention strategies will result in improved organizational performance and better physical environment, which in turn will result in sustainable development.

### Challenges of Green Marketing

Although environmental issues influence all human activities, few academic disciplines have integrated green issues into their literature. This is especially true in marketing. As society becomes more concerned with the natural environment, businesses have begun to modify their behavior in an attempt to address society's "new" concerns. Some businesses have been quick to accept concepts like environmental management systems and waste minimization, and have integrated environmental issues into all organizational activities. Smart business houses have accepted Green Marketing as a part of their strategy. Though our understanding about Green Marketing still in the stage of infancy, in this paper the author is trying to identify key ideas in relation to promote green product that may be most relevant to both scholars and the practitioners of Green Marketing. This paper will attempt to introduce – the terms and concept of Green Marketing, the importance of Green Marketing, examine some reasons that make the organizations interested to adopt Green Marketing philosophy, it highlights the positive and negative aspects, social responsibilities and opportunities of Green Marketing. Finally it concludes with some problems that organization may face to implement Green Marketing.

Implementing Green Marketing is not going to be an easy job. The firm has to face many problems while treading the way of Green Marketing. Challenges which have to be faced are listed as under:

- Green Marketing encourages green products/ services, green technology, green power/energy; a lot of money has to be spent on R&D programmes. Thus practicing green marketing initially will be a costly affair.
- The customers may not believe in the firm's strategy of Green Marketing, the firm therefore should ensure that they convince the customer about their green product, this can be done by implementing Eco-labeling schemes. Eco-labeling schemes offer its "approval" to "environmentally less harmless" products have been very popular in Japan and Europe. In fact the first eco-label programme was initiated by Germany in 1978.
- Initially the profits will be very low since renewable and recyclable products and green technologies are more expensive. Green Marketing will be successful only in long run.
- Many customers may not be willing to pay a higher price for green products which may affect the sales of the company.
- The firm may give up on Green Marketing concept or be forced to practice unfair means to cut cost to sustain in the competition and thus the entire idea of going green will be a farce.
- The firms practicing Green Marketing have to strive hard in convincing the stakeholders and many a times there may be some who simply may not believe and co-operate.
- It is found that only 5 per cent of the marketing messages from "Green" campaigns are entirely true and there is a lack of standardization to authenticate these claims. There is no standardization to authenticate these claims. There is no standardization



currently in place to certify a product as organic. Unless some regulatory bodies are involved in providing the certifications there will not be any verifiable means. A standard quality control board needs to be in place for such labeling and licensing.

- Indian literate and urban consumer is getting more aware about the merits of Green products. But it is still a new concept for the masses. The consumer needs to be educated and made aware of the environmental threats. The new green movements need to reach the masses and that will take a lot of time and effort. By India's ayurvedic heritage, Indian consumers do appreciate the importance of using natural and herbal beauty products. Indian consumer is exposed to healthy living lifestyles such as yoga and natural food consumption. In those aspects the consumer is already aware and will be inclined to accept the green products.
- The investors and corporate need to view the environment as a major long-term investment opportunity, the marketers need to look at the long-term benefits from this new green movement. It will require a lot of patience and no immediate results. Since it is a new concept and idea, it will have its own acceptance period.
- The first rule of Green Marketing is focusing on customer benefits i.e. the primary reason why consumers buy certain products in the first place. Do this right, and motivate consumers to switch brands or even pay a premium for the greener alternative. It is not going to help if a product is developed which is absolutely green in various aspects but does not pass the customer satisfaction criteria. This will lead to green myopia. Also if the green products are priced very high then again it will lose its market acceptability.

## Conclusion

Now this is the right time to select "Green Marketing" globally. It will come with drastic change in the world of business if all nations will make strict roles because

Green Marketing is essential to save world from pollution. From the business point of view because a clever marketer is one who not only convinces the consumer, but also involves the consumer in marketing his product. Green Marketing should not be considered as just one more approach to marketing, but has to be pursued with much greater vigor, as it has an environmental and social dimension to it. With the threat of global warming looming large, it is extremely important that green marketing becomes the norm rather than an exception or just a fad. Recycling of paper, metals, plastics, etc., in a safe and environmentally harmless manner should become much more systematized and universal. It has to become the general norm to use energy-efficient lamps and other electrical goods. Marketers also have the responsibility to make the consumers understand the need for and benefits of green products as compared to non-green ones. In Green Marketing, consumers are willing to pay more to maintain a cleaner and greener environment. Finally, consumers, industrial buyers and suppliers need to pressurize effects on minimize the negative effects on the environment-friendly. Green Marketing assumes even more importance and relevance in developing countries like India. Green Marketing covers more than a firm's marketing claims. While firms must bear much of the responsibility for environmental degradation, the responsibility should not be theirs alone. Ultimately Green Marketing requires that consumers want a cleaner environment and are willing to "pay" for it, possibly through higher priced goods, modified individual lifestyles, or even governmental intervention. Until this occurs it will be difficult for firms alone to lead the green marketing revolution. The industrial buyer also has the ability to pressure suppliers to modify their activities. Thus an environmental committed organization may not only produce goods that have reduced their detrimental impact on the environment, they may also be able to pressure their suppliers to behave in a more environmentally "responsible" fashion. Final consumers and industrial buyers also have the ability to pressure organizations to integrate the environment into their corporate culture and thus ensure all organizations minimize the detrimental environmental impact of their activities. Thus green marketing should look at mini-

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mizing environmental harm, not necessarily eliminating it. Green is quickly becoming the standard by which products are measured, and success in Green Marketing will be the measure of success for many organizations.

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## Challenges in Management in the New Millennium – HR Limitations of Interview as a Tool for selecting Mr. Right

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### **ABSTRACT**

*After an initial euphoria of selecting Mr. Right in the vacant post, Company soon realizes the mistake and the very same person, just appointed, turns to be Mr. Wrong. What then was the reason behind appointment of an unsuitable candidate? Blame it on interviews. Companies venture too deep into the aspects of Recruitment and Selection with a view to strengthen the Organizational Values and Culture by appointing a 'RIGHT' candidate for the vacant post, especially in higher position. Companies often outsource the job of Recruitment and Selection to a professional agency. Than too the appointed candidate miserably falls, short of expectations. Then the question arises about the limitations of the process of famous tool of Recruitment and Selection, known as 'Interviews' used for selecting Mr. Right. No wonder Interviews are often described as 'tossing the coin'. The research has also proved that in most of the cases the interviewers takes the decision of selecting or not selecting a particular candidate in just few seconds, even before candidate opens his mouth. This paper attempts to find pitfalls of the process of conducting interviews, if any, and the ways and means which would supplement the process of interview to select Mr. Right.*

**Keywords:** *Vacancy, employment, recruitment, selection, test interview and satisfaction.*

### **Introduction**

Walk in Interview, Online Interview, Telephonic Interview, Structured and Unstructured Interview, Group Interview, Stress Interview, Formal and Informal Interview are some of the types of interviews used by an employer or his agent as an important tool for selecting Mr. Right for the present or ensuing job.

Interview has become a final destination of any process of recruitment and selection. In fact the whole process of recruitment and selection is sometimes done away with barring the interview. Hence interview becomes the synonymous of the whole process of R & S. The employer finds it difficult to find the right type of interviewers and on the other side; the prospective employee is tensed with the thought of his performance

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at the interview. So much importance to 'INTERVIEW'. Is it that worth? Is interview sacrosanct? If it is so, there should be no possibility of interview failing the employer. But it does happen. Interview, sometimes, miserably fails the employer.

### **Present Scenario**

The employers are attempting to come to the terms that the time, money and energy that had gone behind the process of interview have resulted into the sheer wastage. The matter of concern is not only that the whole process of appointing a person shall start afresh, but even after another attempt, a big question still remains: What next? and Who next? The right candidate often misses the bus and Mr. Wrong is selected even after best attempts of the employer to bring professionalism into the selection of an employee.

### **Review of Literature**

Eric Garner in his book 'Recruitment and Selection – Hiring the people you want' says "The interview has traditionally been the overwhelming favoured method of selecting staff. Few people set a job without one. However, research shows that assessing people by means of a face-to-face discussion can be a poor way to assess them. This is because we are subjectively influenced by whether we like someone or not. We may admire things at interview – for example, a bubbly personality – that are not necessary for the job. Interviews need to be structured to work well and to focus on information needed in the job." Then he suggests that the following skills should be present in the prospective employee: a persuasive non coercive management style, high energy leadership, action through partnership, an ability to abstract, and excellent presentation skills.

According to K. Aswathappa, ".....interview is considered to be an excellent selection device. Its popularity stems from its flexibility. Interview can be adapted to unskilled, skilled, managerial and professional employees. It allows a two way exchange of information, the interviewers learn about the applicant, and the applicant learns about

the employer." He further adds that "However, interviews do have shortcomings. Absence of reliability is one limitation. No two interviewers offer similar scoring after interviewing an applicant. Lack of validity is another limitation. This is because, few departments use standardised questions upon which validation studies can be conducted. Finally, biases of interviewers may cloud the objectivity of interviews."

C. B. Mamoria, in his book *Personnel Management* (Himalaya Publishing House) talks about Defects and Pitfalls in Interview. Author says that "Certain common defects have been studied in employment interviews:

1. Interviewers have difficulty in establishing rapport with the applicants.
2. Interviewers do not have a clearly defined technique developed but tend to flounder looking for clue or opening.
3. Many interviewers do too much of the talking in an attempt to put the applicant at ease.
4. Many interviewers lack skill in bringing the interview to a close.

The interviewers often forget the fact that an individual fits into a pattern in one characteristic is no measure that his other interests follow a given pattern." The author further suggests certain points to be kept in mind in conserving the appointment of personnel.

### **Objectives of the Study**

1. To know the extent of usefulness of interview as a tool for selecting Mr. Right.
2. To analyse the extent of employer satisfaction after selecting the candidate for the job.
3. To verify the possibility of using some additional technique as an effective tool which can be used in selecting the candidate.



4. To suggest the measures to make candidate selection process more successful with lesser dependence on interview.

### Research Methodology

The research study is based on primary and secondary data. Primary data has been collected from employers and senior employees. Secondary data has been collected from various sources of information viz. Newspapers, Magazines, Reference Books, Reviewing Literatures and Websites related to the topic.

### Hypothesis

- Selection of an employee through interviews is not always successful.
- The process of interview has its own limitations.
- The Managements, in its own interest are ready to use additional techniques for selecting the right candidate for job.
- There are differences in the perception as to what constitutes the right selection method and/or right selection of an employee.

### Limitations of the Study

Few employer respondents in the study had little educational background. Again the respondents were at times not very responsive to the need of bringing changes in the system. Also they were generally of the opinion that the system of interview would continue for ages to come and they don't see any serious need to change it. Whatever conclusion is arrived at is from the small sample size and hence it could not be called a thorough conclusion. The findings of the study may only be indicative in nature.

### Major Findings & Discussions

The number of employees in each firm that the researcher visited was as under:

**Table No. 01**

No. of Employees in the Firm	No. of Firms
Up to 5	02
Up to 10	08
Up to 20	07
More than 20	03
Total	20

The firms visited by the researcher were also classified on the basis of the nature of the work they were engaged in:

**Table No. 02**

Nature of work the firm was engaged in	No. of Firms
Educational Institutions	05
Logistic Management	01
Authorised Car Service Centres	02
Hospital Owner (Doctor)	02
Chartered Accountants	04
Hardware Firms	01
Engineering Companies	03
Showrooms	02
Total	20

Following was the response when asked whether the firm followed Formal Process of Recruitment and Selection.

**Table No. 03**

Formal process of recruitment & selection is followed for selecting an officer and higher grades	No. of Respondents
Yes	14
No	06
Total:	20

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By formal process what the respondents meant was advertising the post, getting applications, studying, short listing, interviews, medical tests and selection and in some cases written tests before conducting the interviews. Those who did not follow formal process mostly got the employees by reference and the researcher found a good level of satisfaction in those who employed this method of selection.

Respondents were asked to state whether they outsourced the job of recruitment & selection.

**Table 04**

The job of recruitment & selection is outsourced	No. of Respondents
Yes	05
No	15
Total	20

Most of the small sized business firms and middle sized firms i.e. 75% followed the practice of in house process of Recruitment and Selection as against 25% who followed the practice of outsourcing the job of R & S.

On the question of method adopted for advertising the post, the response was as under:

**Table No. 05**

Method of Advertising the Post	No. of Respondents
Internal	02
Newspaper	08
Professional Journal	02
Ask for Reference	06
Online Jobsites	02
Total	20

People still relied upon the Newspaper as the method of advertising the vacancy and that too, mostly through

classified advertisement in two newspapers, one English and one in Hindi / Marathi / Gujarati. But the second best method for them was employment through reference. Even those who advertised the post relied heavily upon the reference.

Respondents were asked to state whether sufficient number of applications were received for the job.

**Table No. 06**

Receive sufficient number of Applications	No. of Respondents
Yes	08
No	12
Total	20

Whatever the method of advertising the vacancy, there was an overall grievance that the sufficient number of applications was not received.

Respondents were asked to state whether written test was conducted before the interview.

**Table No. 07**

Written Test conducted before Interview	No. of Respondents
Yes	03
No	17
Total	20

Only 15% firms conducted written test/s before the interview and the questions were generally framed by the departmental heads.

The ratio of rejection of candidature after written test and before the interviews:

**Table No. 08**

Respondents	Ratio of rejection of candidature after written test and before the interviews
Respondent 1	3:10
Respondent 2	5:10
Respondent 3	7:10

Those rejected after written tests were not called for the interview but if the company failed to get the right candidate after the interviews, Respondent No. 2 and Respondent No. 3 recalled the failed candidates and conducted their interviews. Respondent No. 3 said that they have selected few candidates after they failed in written tests and in most of the cases the candidates have performed well. Hence they did not believe in total and permanent rejection of candidates who failed in the written tests.

The designation of the Interviewers who conducted interviews was as under:

**Table No. 09**

Normally the interview is conducted by	No. of Respondents
Owner / Director	05
Head of the Department	07
Panel of Top Officers	04
Agency	04
Total	20

This depended on the size of the firm and how qualified were the departmental heads.

The respondents were asked to specify whether they used any other tests in addition to interview for selecting the candidates:

**Table No. 10**

Tests apart from Interview used for selecting the Candidate	No. of Respondents
Yes	07
No	13
Total	20

35% firms who conducted other tests included Job Knowledge Tests, Personality Tests and Physical Ability Tests. One firm also believed in conducting Work Samples and Simulations Test. On the question of formal training after selection, following was the response:

**Table No. 11**

Is employee formally trained after selection	No. of Respondents
Yes	04
No	16
Total	20

Those who are not giving formal training were ready to change their policy and were also ready to provide for necessary budget for training the newly appointed candidates provided they get the correct guidance for the same.

Respondents were asked to give information on number of employees recruited in last two years:

**Table No. 12**

No of Appointments made in last two years	No. of Respondents
Less than 4	10
4 to 8	07
9 to 13	02
14 to 18	01
Total	20

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The respondents were asked to rank the employees on the scale of 10 to (-) 5 on the basis of their performance after appointment:

**Table No. 13**

After Appointment the performance of Candidate was found to be	No. of Respondents
Very Good – Like 9 points on the scale of 10	04
Good – Like 7 points on the scale of 10	08
Bad – Like 3 points on the scale of 10	04
Very Bad – Like 0 points on the scale of 10	02
Miserably Bad – Like -5 points on the scale of 10	02
Total	20

While only 20% respondents were happy after the appointment, about 40% were fine with it. Another 40%, who gave only 3 marks on the scale of 1 to 10 were still continuing with the selected candidate with the hope that the candidate shall learn in the due course, while keeping the option open to replace the existing candidate with the new one, if available, for which they see a very little chance. They said that they would not experiment with replacement unless a full proof candidate was available.

The respondents replied to the query as to whether Company changed the method of interview and / or added any other Tests of selecting an employee in last two years.

40% companies made some changes in method of selecting the candidates. The rests are still relying upon the same old methods of interview.

**Table No. 14**

Company changed the method of interview and / or added any other Tests of selecting an employee in last two years	No. of Respondents
Yes	08
No	12
Total	20

Respondents were asked if new Appointments were made after introducing new Tests of selection.

**Table No. 15**

Appointments made after introducing new method of selection	No. of Respondents
Yes	08
No	12
Total	20

The Success ratio after introducing new Tests for Selection was as under:

**Table No. 16**

Success ratio after introducing new Test/s for Selection	No. of Respondents
Less than 50%	03
More than 50%	05
Total	08

The firms did get some success after introducing new Test/s but are not cent percent sure that the success was attributable to the new Test/s for testing the candidates. Respondents were asked whether Training can change the performance of newly recruited, towards their duty:

**Table No. 17**

Training can change the performance of newly recruited towards their duty	No. of Respondents
Training to be given only if it was pre decided and not otherwise	04
Training may transform employee	06
Training definitely transforms	04
Training cannot transform	02
Attitude / Approach is a natural trait	04
Total	20

20% respondents said that training was not the solution for making up wrong selection. Hence, training for making good any defect was not acceptable. They contended that the training should be given only if it was pre decided and not for making good any other deficiency in the candidate. 30% believed that training may transform the selected candidate. Another 20% believed that training definitely makes the impact. 10% believed that performance of fresh candidates appointed cannot be changed by training. Another 20% believed that attitude and approach decided the performance of the employee and it cannot be changed as it was a natural trait.

Following was the response, when asked to comment on Ways and Means to motivate fresh selected candidate with the help of monetary / non-monetary incentives:

**Table No. 18**

Ways and Means to motivate fresh selected candidate with the help of monetary / non-monetary incentives	No. of Respondents
Recognition and Rewards	02
Monetary benefits	11
Training	04
Training with monetary motivation	02
Not sure	01
Total	20

55% respondents believed that monetary benefits alone can change the performance of the fresh appointed candidates.

### General comments of the Respondents

Following are the Comments of the Respondents on the whole process of recruitment & selection in general and interview in particular:

- Interview is not a full proof method of selecting a candidate.
- Interview is not at all a proper method of selection.
- Interview does not reveal anything related to job capabilities of an employee.
- Interview is a not sufficient but then too, a reliable tool for selecting a candidate.
- With whatever limitations, interview seems to be the best tool for selecting a candidate.
- Those shortlisted after written test should alone be subjected to interview.
- Those failing in written test by few points / marks should get the benefit of doubt and should be interviewed.
- Candidate's smartness does not help in written test and hence written test should be heavily relied upon.
- In depth interview is the best method of selecting a candidate.
- Informal interview is good only for those candidates who belong to inner circle and are very likely to be selected.
- The departmental head in whose department the candidate is to be appointed should be given free hand to finally take the decision from the shortlisted candidates.
- Written test/s should always precede the Interview.

### Recommendations

- The departmental head should be given blanket authority and full responsibility both, to select the

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candidate as well as to get the work done from the selected candidate.

- b. Psychological Tests should be strictly administered to all the candidates, before rejecting any one through written test and / or interview.
- c. Interview should be used only as facilitating tool and should not be solely depended upon.
- d. Interview should always be structured.
- g. The candidate with reliable reference is far better than the candidate selected by any other method.
- h. Smart at interview has nothing to do with satisfactory performance of the selected candidate.
- i. There should be at least three interviews for all the short listed applicants before the written tests, if any, and all applicants irrespective of their performance at the interview, should get the chance of appearing for written tests, without declaring the results of interview. Then again at least three rounds of interview should be conducted for each and every candidate, irrespective of their performance in earlier interviews and written tests. Two of the interview post written test should be in depth interview and integrity test.

### **Conclusion**

The full-fledged research is required to be conducted in the area of selection of candidates because existing methods / techniques / tests are not full proof to appoint Mr. Right. The recent example of big business conglomerate showing the door to its CEO is a concrete example where the selection panel, of a very high calibre worked for at least two and a half years for finding a suitable successor to the aging CEO but ultimately miserably failed in getting Mr. Right. Whoever is succeeding in selecting a right candidate at present for the higher post are lucky to have it, either by putting in the serious efforts or just by chance. The process of selecting Mr. Right in the higher post shall always remain a tense, vulnerable and controversial exercise till in depth research throws some new thinking on this aspect.

### **Acknowledgement**

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## Changing Geopolitics and Geo-economics - *The need for a paradigm shift in corporate decision making*

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### ABSTRACT

*There are dangers inherent in feeling too safe; especially when the world is in throes of numerous potential conflicts. Doing business in these dangerous times is a challenge in itself. Corporate leaders need to understand geo-politics and geo-economics to face the uncertainties at national, regional and international level. If 26/11 is repeated in India then it can have some grave outcomes which can potentially impact all businesses. Clearly, the changing security scenario is constantly redefining the economic and business scenario. Business environment has changed and is ever changing as never before making risks more and more complex to grasp and handle. Radical changes in security scenario and international relations can radically alter economic scenario which can cause confusion and instability. Being caught unawares has its costs. CEOs need their finger on the pulse of these changes. This paper discusses the issues of geopolitics and geo-economics and how they impact corporate decision making. It also provides solutions as to how corporate leaders can take effective steps to respond and not just react helplessly to these powerful forces which can rock the boat of their business.*

**Keywords:** *Geo-economics, geopolitics, strategic decision making, globalisation, terrorism, regional conflicts, security scenario, business environment*

***“I never think of the future. It comes soon enough.”***

**-Albert Einstein**

### Introduction

The geopolitical and geostrategic and geo-economic scenario is heavily impacting the business environment all over the world. Recent studies and surveys have found that CEOs of leading companies view geopolitical threats as a major issue affecting growth of the business and the economies all over the world. The political-

strategic uncertainty and confusing trends are impinging heavily on their strategic decision making. No one had predicted that there will be 9/11 or the Arab Spring, the rise of ISIS, the oil crisis and all. The rise of terrorist organisations as powerful ‘non-state actors’ is a matter of global worry. The ecological issues such as climate change add to this complexity.

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In such fluid condition of global geo-economic and geo-strategic scenario, the corporate leadership needs to keep its finger on the pulse of these changes which definite the stability and certainty of the global business environment.

Corporate leaders need to understand geo-politics and geo-economics to face the uncertainties at national, regional and international level. CEOs need to factor in the strategic security scenario for strategic planning. If 26/11 is repeated in India then it can have some grave outcomes which can potentially impact all businesses. What after American withdraws from Afghanistan is an important issue. China is increasingly going ballistic with neighbours. Clearly, the changing security scenario is constantly redefining the economic and business scenario Being caught unawares has its costs.

### **It is dangerous to feel too safe!**

CEOs need their finger on the pulse of these changes. This insightful understanding enables strategic decision making as forces like national and international security, terrorism and threats from non-state actors which redefining economic and business environment are factored in the strategic policy.

The just concluded US Presidential elections reveal the deeply divided American society. The victory of Republican Party's Donald Trump has sent shock waves in global markets. His avowed anti-migration policies, his open resistance to shifting of jobs from America, his tax policies, his strategic vision and policies have created consternation in many countries. The IT sector in India that earns some 100 billion US dollars is already worried. The US Presidential election is a clear example of how internal policies are impacting the foreign relations of a country. Globalisation has assumed new dimensions and it is being resisted in many countries. The recent withdrawal of the UK the European Union – the Brexit has created new dimensions in global economy. Indian

corporate leaders were and are worries about the possible fall out of this globe-shaking event on Indian economy. The recent down slide of the Chinese economy that is witnessing falling growth rates is another global concern. One country's fall is another country's opportunity. It is now amply clear that economy has defeated geographic barriers, political boundaries, trade barriers, etc. Francis Fukuyama in his celebrated work 'The End of History' had already proclaimed the final victory of democratic free market capitalist economy and the permanent defeat of communism. Then there are theories of clash of civilizations emanating from theorists such as Samuel Huntington and others.

One lesson learnt the hard way and repeatedly that nothing can be predicted in clear concrete and credible way. The media in the US and almost all over the world had predicted the clear victory of Hillary Clinton and now we have Trump as the President-elect. The media is discredited while Artificial Intelligence algorithms have proved to be accurate.

The rise of China and its bold challenges to the West, particularly to America to whom China views as a decadent and crumbling democracy is an issue of concern for the world. Think of your business in the world dominated by China, weakening dollar, turmoil in Arab world, terrorism posing grave threats. Critical, insightful understanding of potential treats will play a key role in this strategy. When a country is threatened all in that country are threatened. A massive cyber attack can cripple any economy.

**The rise of the non-state actors** – Terrorism and others Terrorism has emerged as a hugely powerful, organised non-state actor. The most vicious form of it is ISIS who has emerged as a state in itself with huge resources of land, money and manpower and most significantly, with a definite ideology to inspire and lead its people under certain institution and systems. The UN, appearing more and more politicised and weakened, cannot stop



unilateral actions by the state. We in India face the scourge of the thousand-cuts proxy war waged by our nuclear power neighbour-Pakistan who has reared many terrorists organisations. It is increasingly evident that Pakistan with its nuclear weapons is a failed state and poses untold challenges to not only the South Asian region but the whole world. There is a real worry that the nuclear weapons in Pakistan may fall in hands of terrorist organisations. In an upcoming book by our former National Security Advisor Shri.Shivshankar Menon has warned that the real threat to nuclear weapons of Pakistan is more from the radicalised Pakistani armed forces than the terrorists..Recently in Washington the Nuclear Security Summit concluded that expressed grave concerns regarding terrorists organisation getting hold of weapons of mass destruction such as nuclear, chemical, and biological.

### **The need to factor in geopolitics and geo-economics in management decision making**

Understanding current trends is critical for strategic business policy making. CEOs have to factor in various new forces which are shaping the world economic scenario. The recent survey by leading global consultancy majors such as McKinsey, PriceWaterhouseCoopers and Davos (World Economic Forum) show that as never before CEOs are worried about emerging global, regional and local instabilities and uncertainties which damage socio-political and invariably economic stability which in turn impacts the business environment.

The key trends are:

- Confidence in global economy falls by 10 points
- Concerns about geopolitical uncertainty increase sharply
- Revenue prospects decline in major economies
- 90% are changing how they use technology to assess and deliver on customer and other stakeholder expectations

Just over a quarter (27%) believe global growth will improve over the next 12 months, a decline of 10 points on last year. With heightened concerns about geopolitics, two thirds of CEOs (66%) now see more threats facing their business today than there were three years ago. As in most years the spectre of over-regulation is seen as the top threat to companies' growth prospects, with 79% of CEOs citing this – the fourth year in a row that concerns about regulation have risen. However geopolitical uncertainty has jumped from fourth in CEO concerns last year to second this year, cited by 74% of business leaders. As a result, concerns about availability of key skills have dropped from second to fourth, but remain a concern for nearly three quarters (72%) of CEOs. Worries about exchange rate volatility are in third place (73%).Cyber security is also a worry for 61% of CEOs, representing threats to both national and commercial interests. Concern is highest amongst CEOs in the US, Australia and the UK (74%+) and in the banking, technology and insurance sectors.

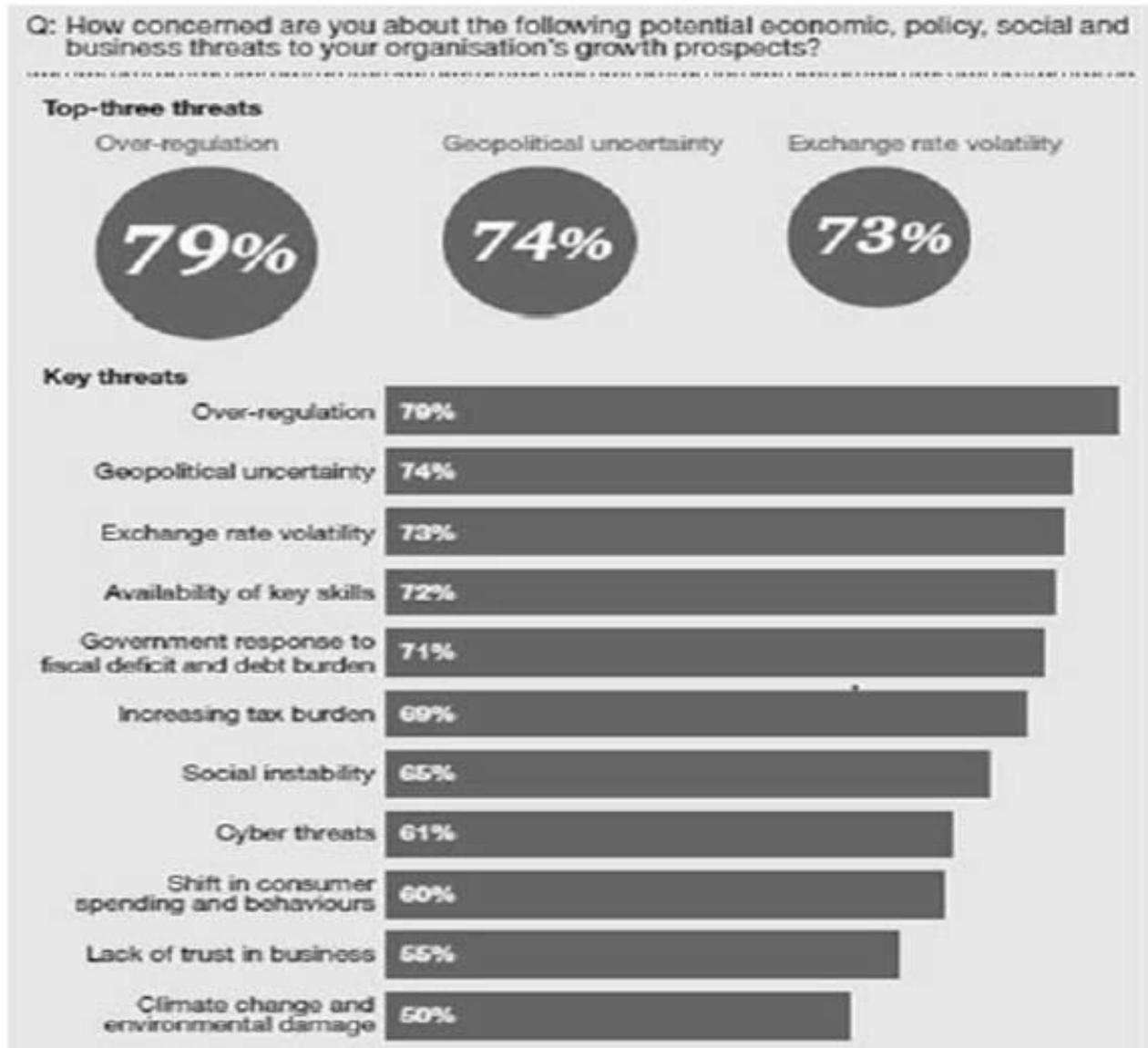
CEOs cite various reasons for their gloominess. Two-thirds of CEOs (66%)see more threats facing their businesses today than they did three years”The global marketplace is getting more and more global, and things are changing more and more rapidly, “ sad Susanna Campbell, CEO of RAtos AB. She added that, “It’s a very exciting time to do business. It’s a very difficult time to do business. The past is no longer a good predictor of the future.”

### **Peace - a vital business infrastructure**

Mere size of the economy of a nation, rising middle class, growing demand for goods and services, etc are not enough parameters. Peace as exists in the prevailing and potential socio-political environment is a vital factor that needs to be factored in all investment decisions. Companies in South Asia, especially India realise this. Another attack on Mumbai as happened in 26/11 will be a major disaster. The recent surgical strikes caused

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**Source: PriceWaterhouseCooeprs Survey 2016**

by terrorists attacks from organised actively backed by Pakistan's armed forces has shown the gravity of the situation. The way the SAARC – South Asian Association for Regional Cooperation formed with a vision of boosting regional economic cooperation and eventually regional economic integration as an antidote

to conflicts has evaporated and the SAARC seems to have become ineffective.

The key question is: How companies cope with the radically changing geo-political/ego-economic scenario?

The clear lesson is that the world cannot be understood



in the ways of conventional wisdom. There are no simple rules. One key solution for companies to cope with all these uncertainties is to take geo-politics seriously. Oil and mining companies generally do this. for example, Royal Dutch Shell has run a profitable business in Nigeria for more than 50 years despite a dangerous and violent environment. Companies in India can learn lessons here.

Clearly, companies cannot avoid being caught up in political battles and regional conflicts. Companies must factor in political risks, geo-political changes, changes in the international relations in overall management decision making.

One solution is to listen to what country managers have to say. Appearance of stability should be taken with a handful of salt. As the Economist warned, the rapid collapse of Egypt's autocracy should be food for thought for companies. Betting big on China (with its appearance of order) can have some shocking surprises. Some companies keep themselves prepared to face changes. For e.g. Chrysler escaped a wave of nationalization in Peru with their strategy of diversification. They picked up signals of changes in internal political scenario which kept redefining the economic scenario and when radical changes came they could respond well and minimized risk and even profited from it.

### **The need for new decision making paradigm**

Corporate leaders are trained through regular MBA programs. These are heavily related to the economic scenario and do not include geo-economics and geo-politics. Management education such as MBA, PGDM, etc need to introduce a dedicated module on geopolitics and geo-economics. India has solid institutional infrastructure with sound expertise to embed this knowledge into regular management education.

Today's management programs woefully lack in geo-economic and geopolitical aspects. That is why CEOs hardly understand why the US is suddenly not interested in the Middle East as before and what are the consequences of China replacing the US in the Middle East. They hardly understand the threatening analysis of security hawks when they say that Russia is preparing for the Third World War and that the new Cold War has already begun.

One major solution could be that corporate boards can appoint retired armed forces officers, ambassadors and strategic analysts who can guide the CEOs on changing geo-political and geo-economic scenario. A terrorist attack can unsettle all corporate plans and visions.

CEOs need to be aware of new ideas such as the concept of the Comprehensive National Power (CNP) that has gained currency in the last two decades. The CNP of a nation is a product of its strategic culture; its economic strength; its military power, including the state of its preparedness for war; its strategic partnerships and diplomatic influence; its internal cohesion; its ability to deliver good governance and justice; the capability of its human capital; its advancement in science and technology and innovation; its knowledge and information base; the advantages of geography and natural resources that it is endowed with; the firmness of its national will; the resolve of its leadership; and, the attractiveness of its soft power and the projection of it.

### **Resources available**

There are many credible institutions and other knowledge resources in form of think tanks, Foundations, analysts, observers and commentators from within and outside India. Institutions such as IDSA – Institute of Defence Studies and Analyses, ORF – Observer Research Foundations are some examples. Various university departments conduct workshops, organise seminars and

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conferences where experts share their latest analysis which is easily accessible to corporate decision makers. These experts could be hired on a regular or need-to-know basis.

It is necessary to factor in the threats to national, regional and global peace as peace is now the most basic infrastructure for progress and prosperity. The targets of GDP and other growth will wither away if there are conflicts threatening to explode. International economy is deeply and directly impacted by international security. Global economy driven by a number of factors that are global in nature and have the potential to adversely impact on both regional and international security. The corporate sector can play a vital role in forging regional economic cooperation which can even mitigate tensions and bring people together. The way the European Union evolved holds vital, illuminating lessons for us all in South Asia which needs to be made into a co-prosperity zone. Peace is possible through trade. No wonder, many leading companies all over the world have experts from international relations, international security, environment and sustainable development, sociology and even history as policy analysts and advisors.

It is essential to be prepared for what is coming within the country and outside. One way of this preparation is to pay keen attention to politics and social movements. The age of peaceful opportunism is clearly gone. There are new players even more powerful than markets. India in over 120 districts Naxalites pose a serious threat to everything including business. Business managers need to pay attention to socio-economic issues, recognise and understand the complexities. The age of simplistic generalizations has gone. There is a clear need for business intelligence on socio-economic and strategic forces.

Some of the trigger points are given below:

- Demographic forces will continue to exert great,

disruptive socio-political pressures. The angry youth all over the world is in quest for better quality of life and are willing to fight for it. The coming decade seems to be a dangerous, defining decade. For example, the bulging, aspiring yet unemployed, unprepared for the future youth will bulge in countries failing tottering states like Pakistan and other countries.

- The aging populations will pose serious socio-economic problems. Energy, food, water and sustainable development security will cause acute friction among states and if these implosions are happening in the oil/mineral rich states it will have grave consequences for the whole world. (The rising oil prices due to the Arab uprising are an example).
- The world is moving to new Asian hemisphere. Companies are shifting their innovation capabilities to emerging markets. Premium initiatives are coming to the Chinese markets before entering Europe or the US. Sales in developed markets are slowing markets.
- Experts have identified over 20 brewing flash points which can blow into devastating conflicts not to mention the current raging conflicts. While peace and stability have become the most basic infrastructure for development and growth, the threats of potential conflicts disrupting the socio-economic stability and peace are of grave concern for business leaders.

India is facing a serious water resource problem and as trends suggest, it is expected to become 'water stressed' by 2025 and 'water scarce' by 2050. The Chinese economy has seen lowest growth rates in 25 years and the myth that China can never have business cycles is busted. No wonder, CEOs are keeping close eye on China.



## **Conclusion**

The ability to foresee major events and their effects might seem a tall order, but for global businesses to thrive in a hyper-connected world CEOs need insightful understanding of geopolitics and geo-economics for better strategic decisions. Feeling to safe for doing business in today's world is indeed dangerous.

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## Moble Banking – Trends, Regulation and Evaluation

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### ABSTRACT

*Technology has transformed the functioning of banks. The operations of banks including delivery of services, remittances and payments have changed radically through the adoption of technology. From computerization of back end operations in 1980's to the adoption of Core Banking Solutions (CBS), alternative delivery channels such as Any Time Banking (ATM), Debit and Credit cards, Internet and Mobile banking, speedy payments and remittances through Electronic Fund Transfers, Banks have come a long way. Mobile banking is considered to be a biggest innovation in banking along with CBS and ATM. While CBS and ATM are useful in providing any time banking, they have not succeeded in expanding the reach of banking to the unbanked. This limitation can be overcome with mobile banking<sup>1</sup> as it facilitates customers to execute banking functions at their convenience without visiting banks. Mobile banking is being promoted by regulators world over as an appropriate tool for extending banking facilities to the unbanked at a low cost. In India too, the Government and the Reserve Bank of India took initiatives in framing regulations and promoting it as a tool of financial inclusion. Given the huge telecom subscriber base and presence in rural areas, there exists a huge potential for the growth of mobile banking. But it has not realized its potential as mobile banking customers are very few in number. The present study makes an attempt to examine the trends in mobile banking, evolution of regulations, understand the pros and cons in order to make suggestions to contribute to its improvement.*

**Keywords:** *Financial inclusion, alternative delivery channels, mobile handsets, short messaging services, unstructured supplementary service data.*

### Introduction

Access to banking is considered to be an important factor in alleviation of poverty and income disparities. India has a huge population of unbanked or under banked, especially in rural areas. Most important constraint in the spread of banking facilities is the cost of establishment of bank branches in rural and remote areas

and in servicing small value transactions at low cost. Illiteracy, geographical distance also prevents people from accessing banks.

Mobile banking has proved to be a great tool in the spread of branchless banking and in facilitating anytime, anywhere banking at a very low cost. It is considered to be important in promoting financial inclusion.



## Concept and Definition

The use of mobile phones for the conduct of banking transactions is referred to as mobile banking. As per RBI Guidelines, 2008:

“Mobile banking is defined as undertaking banking transactions using mobile phone by bank customers that would involve credit/debits to their accounts”.

Mobile banking services includes the following:

- **Account information:** Mini-statement and account history, alerts on accounts activities, monitoring term deposits, access to loan and/or card statements, insurance policy management.
- **Fund transfer:** Between customer-linked accounts, transfer to other accounts, bill payments, credit card payments.
- **Investment:** Portfolio management, real-time stock quotes, personalized alerts and notifications on security prices.
- **Support services:** Cheque book and card requests, complaint filing and tracking

## Objectives of the Study

- i. To examine the need for promotion of mobile banking in India
- ii. To study the evolution of regulations relating to mobile banking.
- iii. To study the trends, channels and process adopted for mobile banking
- iv. To examine the pros and cons of mobile banking
- v. To suggest measures for improvement, if any.

## Need for Promotion of Mobile Banking

Mobile banking is one of the initiatives adopted by the RBI for promotion of financial inclusion.

It is being viewed as an important tool of accessing unbanked population, especially in rural areas for the following reasons. The statistics relating to bank branches is dismal in rural areas and penetration of bank branches is very low. There are only 37953 bank branches servicing 83.3 Crore rural population, while there are 64390 bank branches in urban areas whose population is 37.7 Crore. That is, each branch in rural areas serves 22000 people, whereas in urban areas, each branch serves 6000 people. Banks find it uneconomical to serve large number of small accounts, hence started viewing technology driven delivery models such as mobile banking favorably from the view point of affordability and accessibility<sup>1</sup>.

On the telecommunications side, the rural urban divide is not so visible. India has a huge subscriber base for mobile applications. There are 870 million mobile subscribers in the country of which 350 million are located in rural areas while the rest in urban areas. Subscribers having Internet connection is 143 million. This represents a huge potential to reach the unbanked population through the use of mobile phones.<sup>2</sup>

Customers are more tuned to technology based services on account of the emergence of e-commerce, e-governance. India's demographic dividend also augurs well for the adoption of technology based banking services. Its population in the age group of 15 to 60 years is expected to be 900 million by 2025 and median age is expected to be 29 years by 2020<sup>3</sup>.

Electronic benefit transfers and remittances account for almost 4 per cent of GDP in India. In February 2012, the Government of India released a task force report on unified payments infrastructure that proposes electronic

<sup>1</sup> Harun R. Khan, (2012). *Customizing Mobile Banking in India – Issues and Challenges*. Sept. 5, 2012.

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<sup>3</sup> KPMG.(2015). *Role of Digital Banking in furthering Financial Inclusion* .KPMG, August, 2015, p 2.

payments for government-to-people (G2P) payments as a means to cut costs and bring added convenience to welfare recipients. For this purpose, The Government proposes a provision for a mobile and Aadhaar-linked account by banks. This is expected to increase the reach of mobile based financial inclusion<sup>4</sup>.

According to TRAI, though there is proliferation of mobile phones including smart phones, the number of mobile banking transactions is quite low<sup>5</sup>.

Thus, there is a need to evolve appropriate regulations, create awareness about its advantages, address the safety and security concerns so as to promote the growth of mobile banking.

### Regulations

Many different models are being followed in countries around the world with varying degrees of success depending on the availability of infrastructure and other facilities. India has adopted bank led model for providing mobile banking services As mobile banking is viewed as a tool of financial inclusion, the objective is to provide a combination of banking services such as deposit facilities, credit facilities, remittances and micro insurance through the device of mobile phones. Banks are in a better position to offer all these facilities compared to any non-banking entity. Hence, regulations permitted banks to offer mobile banking services. Banks are to work in collaboration with Mobile Network Operators/Telecom service providers for the required technology to augment the banking services. They are responsible for operating and maintaining “no frills bank accounts” through which mobile banking services are to be provided, take care of customer vetting, compliance with Know Your Customer norms.

The RBI published its first regulations on Mobile banking operations in the year 2008. Subsequently,

several guidelines have been issued on account of rapid growth of this segment of banking.

#### **Regulations 2008:**

With a view to ensure customer protection while executing transactions through mobile banking, certain Technology and Security standards were laid down and Customer complaints and grievances mechanism was established. Banks were required to seek one time approval for offering mobile banking services. All transactions were to be encrypted irrespective of value. A daily cap of Rs. 5,000 per customer for funds transfer and Rs. 10,000 per customer for transactions involving purchase of goods and services was imposed.

#### **Regulations 2009:**

Daily cap for transactions and for purchase of goods and services raised to Rs.50,000 per customer. Transactions up to Rs.1,000 can be permitted without end to end encryption. Banks were further permitted to provide remittances to recipients through ATMs, BC outlets subject to a limit of Rs.5,000 per transaction and Rs.25,000 per month per customer.

#### **Regulations 2011:**

Transactions up to Rs.5,000 permitted without end to end encryption. Transaction cap of Rs.50,000 per customer, per day removed. Banks may place their own limits based on the risk perception. Ceiling on remittances has been raised to Rs.10,000 per transaction subject to existing cap of Rs.25,000 per month per customer.

Guidelines have evolved over time to promote customer enrolment and resolve technical issues. RBI also instituted Immediate Payment Service (IPS) under the NPCI which provides centralized inter-bank settlement service for mobile banking transactions. Cross border transfers or remittances are not allowed. Banks were permitted to transfer funds domestically from one bank

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<sup>4</sup> Venkatesan, M., Gaurav, K. (2013). *The Mobile Money Revolution: Financial Inclusion Enabler*. ITU-T Technology Watch, May 2013.

<sup>5</sup> RBI.(2014). *Report of the Technical Committee on Mobile Banking*.RBI, February 7, 2014, p.59



to the other through mobile phones. In respect of such transfer of funds, there is no restriction on the amount transferred which is left to the risk perception of individual banks.

### Mobile Banking Channels:

The following channels are available for deployment of mobile banking services.

- Interactive Voice Response (IVR)
- Short Messaging Service (SMS)
- Wireless Access Protocol (WAP)
- Unstructured Supplementary Service Data (USSD)
- Using SIM Tool Kit (STK)

Channels such as IVR, SMS, USSD are accessible on all handsets, hence are considered more suitable. Mobile Banking (Quality of Service) Regulations, 2012, mandated every service provider to facilitate the Banks to use IVR, SMS and USSD for providing mobile banking services. Banks started using these channels for a variety of purposes.

In view of cost of operations and risk of misuse, IVR channel is used for only simple operations such as balance enquiry, mini-statement, cheque book request, complaint booking.

SMS is of single instance type and cannot be used for continuous sessions. Message has to be typed by the subscriber and is exchanged in 7 seconds, once it is sent. The limitation for the use of SMS channel is that message gets stored and hence gives rise to security concerns and confidentiality issues.

USSD is interactive and menu based. The message need not be typed by the subscriber and it takes shorter duration of 2 seconds for it to be transferred. Since the message is not stored in the handset, USSD is preferred from the view point of security. However, the limitation is that a subscriber needs to memorise the USSD codes for each bank in which he has an account. To overcome this problem, RBI has instituted National Uniform USSD Platform under NPCI which provides a single USSD platform for all the banks. A common USSD code \*99#

is prescribed, which is to be dialed by the customer to access USSD gateway.

### Mobile Banking Process:

Banks are required to obtain necessary permissions from the Department of Payments and Settlements Systems, RBI to be permitted to offer mobile banking services. Currently, 97 banks in India are offering mobile banking transactions. Mobile banking services are not restricted to smart phones. The National Payments Corporation of India offers mobile banking services on a National Unified USSD platform through a short code \*99#. Mobile banking service is available on any phone/handset. No application is required to be downloaded and the service uses an interactive menu with voice connectivity.

Customers having a mobile phone and a Bank account are the end users for mobile banking services. To activate mobile banking services, following are required:

- **Customer registration:** The mobile phone of a customer is to be registered with a bank. The process of such registration varies from one bank to the other.
- **M-PIN generation:** M-PIN is to be generated by the respective bank to enable the customer to transact business and is to be transmitted to the customer. Some banks provide M-PIN via SMS, postal mail, IVR, ATM, Internet banking.
- **One Time Password (OTP):** Every bank offers OTP on SMS request to facilitate payments. Customer makes payment through mobile phone using M-PIN and OTP.

**Mobile Banking Trends:** The following table provides trends in mobile banking during the period 2010-11 to 2014-15:

From 2010 to 2012, the number of mobile banking services grew by 277.68% (from 5.96 million to 22.51 million) and the value grew by 875.6% (from Rs.6.14 billion to Rs.59.90 billion) indicating that mobile banking

## Moble Banking – Trends, Regulation and Evaluation

**Table 12: trends in Mobile Banking**

Year	No of Users (million)	Volume (million)	Value (Rs. billion)
2010-11	5.96	6.85	6.14
2011-12	12.96	25.56	18.21
2012-13	22.51	53.30	59.9
2013-14	Not available	95	60
2014-15	Not Available	171	1 Trillion

Source: Mobile banking – report of the technical committee, RBI 2014, RBI Annual Reports.

operations are growing at a high rate. For the years 2013-14 and 14-15, the value of transactions is more impressive with around 60 billion and 1 trillion rupees. Though the number of mobile subscribers are very high 350 to 500 million as in 2014, the number of mobile banking customers were only 22 million indicating a very low customer base.

As per the mobile transaction data released by RBI, top five banks account for 92% of the value of mobile banking transactions in the country. These banks are SBI (36%), ICICI (21.5%), HDFC (17.8%), Axis (12.8%) and Kotak Mahindra (4.7% market share)<sup>6</sup>. This implies that though as many as 97 banks are offering mobile banking services, they are not promoting it aggressively.

### Advantages of Mobile Banking

Mobile banking offers following advantages to the customer as well as the banks. For the customer, banking services are affordable and accessible at all times. Customer need not travel to far off locations to reach the bank branch, need not spend any waiting time at the branch, need not incur loss of pay due to visit to the bank during fixed banking hours.

For the banks, it is a cost effective option compared to the cost involved in establishing branches in remote and inaccessible areas. The cost of servicing small, frequent and low value transactions is very low, paper work involved is minimum, provide easy access to credit and other products, no need to incur fixed establishment

costs on manning and establishing branches.

Mobile banking uses the network of service providers and does not need internet. Hence, it can be used to provide banking facilities even in remote areas where internet connectivity is low.

It can be used for providing a variety of banking facilities such as payment of bills, transfer of funds, checking account balances, place request for check book, etc.

It is considered to be more secure and risk free than internet banking as it is less susceptible to hacking.

Payment and receipt of funds is instantaneous and is not subject to delays by the banks clearing system.

### Disadvantages of Mobile Banking

Though it is more secure than internet banking, customers may fall prey to fake SMS asking them for details of bank accounts.

If mobile phone is stolen or lost, the customer may suffer losses if his password or pin for accessing bank account is known to others.

While sophisticated bank applications are available on advanced phones such as smart phones, only basic operations may be provided on less advanced mobile devices. Thus, all applications are not available uniformly on all phones.

<sup>6</sup> MayurShetty (2016). Top five Banks generate 92% of mobile banking value. *The Economic Times*, March 22, 2016.



Regular use of mobile banking facilities may lead to extra charges being levied by banks.

Mobile phones have limited battery life and processing speeds. This acts as a barrier to mobile banking<sup>7</sup>.

### Suggestions

The target group of customers for financial inclusion through mobile devices are the low income, semi-literate citizens with limited knowledge of technology operations. They would be able to read simple menus and use simple operations. Such customers would prefer a mobile phone which is user friendly, does not require them to download the software, involves minimum investment and has a low cost of operation

It can be viable and attract large volumes if mobile banking services are offered in combination with other products and services such as emergency credit facility, saving, insurance products.

Banks should work in collaboration with telecom service providers. Any disputes relating to revenue sharing agreements or area of operations need to be smoothed out quickly without affecting the quality of service to the customer.

As mobile banking is a novel product, customer should be made aware of its usage, safety, security, accessibility and affordability. Customer should know whom to approach in case of failed transactions and how speedily their grievances can be addressed.

There are certain hindrances in mobile banking such as absence of standardized communication structures, encryption requirements, difficulty in downloading applications, time lag in activation, lack of awareness, etc. It can be viewed as a delivery channel with great potential if security and cost aspects are addressed as it has to service large number of small transactions.

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## Improved Ratio estimator with New Linear combination of coefficient of variation and standard deviation

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### ABSTRACT

*This paper proposes modified ratio estimator by introducing a new linear combination of coefficient of variation and standard deviation. Mean square error of the proposed estimator is obtained and compared with the existing estimators. Theoretical result is supported by numerical illustration. The percent relative efficiency of the proposed estimator to the existing estimator is also worked out which verifies the performance.*

**Keywords:** Ratio type estimator, Coefficient of variation, Standard deviation, Bias, Mean Square Error, Efficiency.

### Introduction

In survey research, there are situations when the information, on every unit in the population, is available. If a variable that is known for every unit of the population and is not a variable of direct interest but instead employed to improve the sampling plan or to enhance the estimation of the variables of interest. When information is available on the auxiliary variable that is positively correlated with the study variable, the ratio estimator is a suitable estimator to estimate the population mean.

Consider a finite population  $U = \{U_1, U_2, U_3, \dots, U_N\}$  of  $N$  distinct and identifiable units. Let  $Y$  be the study variable with value  $Y_i$  measured of  $U_i$ ,  $i = 1, 2, 3, \dots, N$

giving a vector  $Y = \{Y_1, Y_2, Y_3, \dots, Y_N\}$ . The objective is to estimate population mean  $\bar{Y} = \frac{1}{N} \sum_{i=1}^N Y_i$  on the basis of a random sample. The mean ratio estimator for estimating the Population mean,  $\bar{Y}$ , of the study variable

$$\hat{\bar{Y}}_r = \frac{\bar{y}}{\bar{x}} \bar{X} \tag{1}$$

The bias, related constant and the mean squared error (MSE) of the ratio estimator Cochran(1977) are respectively given by

$$B(\hat{\bar{Y}}_r) = \frac{(1-f)}{n} \frac{1}{\bar{X}} (RS_x^2 - \rho S_x S_y) \quad R = \frac{\bar{Y}}{\bar{X}} \quad MSE(\hat{\bar{Y}}_r) = \frac{1-f}{n} (S_y^2 + R^2 S_x^2 - 2R\rho S_x S_y) \tag{2}$$



Sisodia & Dwivedi (1981) and Singh et al. (2004) utilized coefficient of variation of the auxiliary variable. Further improvements are achieved by introducing a large number of modified ratio estimators such as Subramani and Kumarpandian, (2012 a, 2012b, 2012c and 2012d).

### Existing Ratio Estimators

Kadilar and Cingi (2004) suggested ratio type estimators for the population mean in the simple random sampling using some known auxiliary information on coefficient of kurtosis and coefficient of variation. They showed that their suggested estimators are more efficient than traditional ratio estimator in the estimation of the population mean.

$$\begin{aligned}\hat{\bar{Y}}_1 &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{\bar{x}} \bar{X}, & \hat{\bar{Y}}_2 &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x} + C_x)} (\bar{X} + C_x), & \hat{\bar{Y}}_3 &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x} + \beta_2)} (\bar{X} + \beta_2), \\ \hat{\bar{Y}}_4 &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}\beta_2 + C_x)} (\bar{X}\beta_2 + C_x), & \hat{\bar{Y}}_5 &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}C_x + \beta_2)} (\bar{X}C_x + \beta_2),\end{aligned}\quad 3$$

The biases, related constants and the MSE for Kadilar and Cingi (2004) estimators are respectively as follows:

$$\begin{aligned}B(\hat{\bar{Y}}_1) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_1^2, & R_1 &= \frac{\bar{Y}}{\bar{X}}, & MSE(\hat{\bar{Y}}_1) &= \frac{(1-f)}{n} (R_1^2 S_x^2 + S_y^2 (1-\rho^2)), \\ B(\hat{\bar{Y}}_2) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_2^2, & R_2 &= \frac{\bar{Y}}{(\bar{X} + C_x)}, & MSE(\hat{\bar{Y}}_2) &= \frac{(1-f)}{n} (R_2^2 S_x^2 + S_y^2 (1-\rho^2)), \\ B(\hat{\bar{Y}}_3) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_3^2, & R_3 &= \frac{\bar{Y}}{(\bar{X} + \beta_2)}, & MSE(\hat{\bar{Y}}_3) &= \frac{(1-f)}{n} (R_3^2 S_x^2 + S_y^2 (1-\rho^2)), \\ B(\hat{\bar{Y}}_4) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_4^2, & R_4 &= \frac{\bar{Y}}{(\bar{X}\beta_2 + C_x)}, & MSE(\hat{\bar{Y}}_4) &= \frac{(1-f)}{n} (R_4^2 S_x^2 + S_y^2 (1-\rho^2)), \\ B(\hat{\bar{Y}}_5) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_5^2, & R_5 &= \frac{\bar{Y}}{(\bar{X}C_x + \beta_2)}, & MSE(\hat{\bar{Y}}_5) &= \frac{(1-f)}{n} (R_5^2 S_x^2 + S_y^2 (1-\rho^2)).\end{aligned}\quad 4$$

### Proposed Modified Ratio Estimators

Motivated by the above estimators in Section 2, we propose new modified linear regression ratio type estimator using the linear combination of coefficient of variation and population standard deviation as

$$\hat{\bar{Y}}_{mj} = \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}C_x + S_x)} (\bar{X}C_x + S_x).\quad 5$$

## Improved Ratio estimator with New Linear combination of coefficient of variation and standard deviation

The bias, related constant and the MSE for proposed estimator can be obtained as follows:

$$B(\widehat{Y}_{pj}) = \frac{(1-f)}{n} \frac{S_x^2}{\bar{Y}} R^2, \quad R_{pj} = \frac{\bar{X}C_x}{\bar{X}C_x + S_x} \quad MSE(\widehat{Y}_{pj}) = \frac{(1-f)}{n} (R^2 S_x^2 + S_y^2 (1-\rho^2)). \quad 6$$

### Efficiency Comparisons

In this section, the efficiency conditions for the proposed ratio estimators have been derived algebraically with usual ratio estimator and existing ratio estimators.

$$\begin{aligned} MSE(\widehat{Y}_{pj}) &\leq MSE(\widehat{Y}_i), \\ \frac{(1-f)}{n} (R_{pj}^2 S_x^2 + S_y^2 (1-\rho^2)) &\leq \frac{(1-f)}{n} (R_i^2 S_x^2 + S_y^2 (1-\rho^2)), \\ R_{pj}^2 S_x^2 &\leq R_i^2 S_x^2, \\ R_{pj} &\leq R_i, \end{aligned} \quad 7$$

Where  $j = 1$ , and  $i = 1, 2, 3, 4, 5$

### Empirical Study

The Population is taken from Singh and Chaudhary (1986).

$$\begin{aligned} N &= 34 & n &= 20 & \bar{Y} &= 856.4117 & \bar{X} &= 208.8823 & \rho &= 0.4491 \\ S_y &= 733.1407 & C_y &= 0.8561 & S_x &= 150.5059 & C_x &= 0.7205 \end{aligned}$$

Estimators	Constant	Bias	MSE
$\widehat{Y}_r$	4.294	4.940	10960.76
$\widehat{Y}_1$	4.294	10.002	17437.65
$\widehat{Y}_2$	4.278	9.927	17373.31
$\widehat{Y}_3$	4.272	9.898	17348.62
$\widehat{Y}_4$	4.279	9.930	17376.04
$\widehat{Y}_5$	4.264	9.865	17319.75
$\widehat{Y}_{pj}$	0.499	0.135	8912.37



**Percentage relative efficiency (PRE) of proposed estimator with existing estimators**

Estimators	$\widehat{Y}_r$	$\widehat{Y}_1$	$\widehat{Y}_2$	$\widehat{Y}_3$	$\widehat{Y}_4$	$\widehat{Y}_5$
$\widehat{Y}_{pj}$	122.98	195.65	194.93	194.65	194.96	194.33

**Conclusion**

Hence the new linear regression ratio type estimator has been developed by using the linear combination of coefficient of variation and standard deviation and obtain their MSE as well as Bias. The proposed estimator has been compared with the existing estimators. By this comparison we found that our estimator is more efficient than the classical and the existing estimators. Hence it is recommend to use the proposed estimator.

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## A Family of Improved Ratio type of estimators for the Estimation of Population Mean in survey sampling

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### ABSTRACT

Statisticians are in search of making such estimators which are efficient both at design and estimation stage than the classical and already existing estimators. In this paper we propose a family of ratio type estimators for estimating the population mean by using the auxiliary information of population standard deviation, median and quartile deviation of the auxiliary variable. Mean square error (MSE) and bias are calculated and compared with the classical and existing estimators. It was found that the proposed family of estimators are more efficient than the classical and existing estimators.

**Keywords:** Standard deviation; Median; Quartile deviation; Ratio-type estimators; Mean square error; Bias; Efficiency.

### Introduction

In survey sampling, statisticians often come across the study of variables which have highly skewed distributions, such as income, expenditure etc. In such situations, the estimation of median deserves special attention. Kuk and Mak (1989) are the first to introduce the estimation of population median of the study variable  $Y$  using auxiliary information in survey sampling. Francisco and Fuller (1991) have also considered the problem of estimation of the median as part of the estimation of a finite population distribution function. Later Singh *et al* (2001) have dealt extensively with the problem of estimation of median using auxiliary information on an auxiliary variable in two phase sampling.

Consider a finite population  $U = \{U_1, U_2, U_3, \dots, U_N\}$  of  $N$  distinct and identifiable units. Let  $Y$  be the study variable with value  $Y_i$  measured of  $U_i$ ,  $i = 1, 2, 3, \dots, N$  giving a vector  $Y = \{Y_1, Y_2, Y_3, \dots, Y_N\}$ . The objective

is to estimate population mean  $\bar{Y} = \frac{1}{N} \sum_{i=1}^N Y_i$  on the basis of a random sample. The mean ratio estimator for estimating the Population mean,  $\bar{Y}$ , of the study variable is defined as  $\hat{Y}_r = \frac{\bar{y}}{\bar{x}} \bar{X}$  1

The bias, related constant and the mean squared error (MSE) of the ratio estimator are respectively given as



$$B(\hat{Y}_r) = \frac{(1-f)}{n} \frac{1}{\bar{X}} (RS_x^2 - \rho S_x S_y) \quad R = \frac{\bar{Y}}{\bar{X}} \quad MSE(\hat{Y}_r) = \frac{1-f}{n} (S_y^2 + R^2 S_x^2 - 2R\rho S_x S_y) \quad 2$$

Cochran(1940) suggested a classical estimator for the estimation of finite population mean using one auxiliary variable under simple random scheme. Further improvements are achieved by introducing a large number of modified ratio estimators with the use of known coefficient of variation, kurtosis, skewness, median, coefficient of correlation, deciles (see, Subramani and Kumarpandiyam, (2012 a,b and c)).

### Existing Ratio Estimators

Kadilar and Cingi (2004) suggested ratio type estimators for the population mean in the simple random sampling using some known auxiliary information on coefficient of kurtosis and coefficient of variation. They showed that their suggested estimators are more efficient than traditional ratio estimator in the estimation of the population mean.

$$\hat{Y}_1 = \frac{\bar{y} + b(\bar{X} - \bar{x})}{\bar{x}} \bar{X}, \quad \hat{Y}_2 = \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x} + C_x)} (\bar{X} + C_x), \quad \hat{Y}_3 = \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x} + \beta_2)} (\bar{X} + \beta_2), \quad \hat{Y}_4 = \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}\beta_2 + C_x)} (\bar{X}\beta_2 + C_x),$$

$$\hat{Y}_5 = \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}C_x + \beta_2)} (\bar{X}C_x + \beta_2), \quad 3$$

The biases, related constants and the MSE for Kadilar and Cingi (2004) estimators are respectively as follows:

$$B(\hat{Y}_1) = \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_1^2, \quad R_1 = \frac{\bar{Y}}{\bar{X}} \quad MSE(\hat{Y}_1) = \frac{(1-f)}{n} (R_1^2 S_x^2 + S_y^2 (1 - \rho^2)),$$

$$B(\hat{Y}_2) = \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_2^2, \quad R_2 = \frac{\bar{Y}}{(\bar{X} + C_x)} \quad MSE(\hat{Y}_2) = \frac{(1-f)}{n} (R_2^2 S_x^2 + S_y^2 (1 - \rho^2)),$$

$$B(\hat{Y}_3) = \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_3^2, \quad R_3 = \frac{\bar{Y}}{(\bar{X} + \beta_2)} \quad MSE(\hat{Y}_3) = \frac{(1-f)}{n} (R_3^2 S_x^2 + S_y^2 (1 - \rho^2)),$$

$$B(\hat{Y}_4) = \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_4^2, \quad R_4 = \frac{\bar{Y}}{(\bar{X}\beta_2 + C_x)} \quad MSE(\hat{Y}_4) = \frac{(1-f)}{n} (R_4^2 S_x^2 + S_y^2 (1 - \rho^2)),$$

$$B(\hat{Y}_5) = \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_5^2, \quad R_5 = \frac{\bar{Y}}{(\bar{X}C_x + \beta_2)} \quad MSE(\hat{Y}_5) = \frac{(1-f)}{n} (R_5^2 S_x^2 + S_y^2 (1 - \rho^2)). \quad 4$$

### Proposed Modified Ratio Estimator

Motivated by the mentioned estimators in Section 2, we propose new family of linear regression ratio type estimators using the linear combination of population standard deviation, Median and Quartile deviation.

## A Family of Improved Ratio type of estimators for the Estimation of Population Mean in survey sampling

The proposed estimators are given below:

$$\begin{aligned} \hat{Y}_{p1} &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}M_d + S_x)} (\bar{X}M_d + S_x), & \hat{Y}_{p2} &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}S_x + M_d)} (\bar{X}S_x + M_d), \\ \hat{Y}_{p3} &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}QD + S_x)} (\bar{X}QD + S_x), & \hat{Y}_{p4} &= \frac{\bar{y} + b(\bar{X} - \bar{x})}{(\bar{x}S_x + QD)} (\bar{X}S_x + QD). \end{aligned} \tag{5}$$

The bias, related constant and the MSE for proposed estimator can be obtained as follows:

$$\begin{aligned} B(\hat{Y}_{p1}) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_1^2, & R_1 &= \frac{\bar{X}M_d}{\bar{X}M_d + S_x}, & MSE(\hat{Y}_{p1}) &= \frac{(1-f)}{n} (R_1^2 S_x^2 + S_y^2 (1-\rho^2)), \\ B(\hat{Y}_{p2}) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_2^2, & R_2 &= \frac{\bar{X}S_x}{\bar{X}S_x + M_d}, & MSE(\hat{Y}_{p2}) &= \frac{(1-f)}{n} (R_2^2 S_x^2 + S_y^2 (1-\rho^2)), \\ B(\hat{Y}_{p3}) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_3^2, & R_3 &= \frac{\bar{X}QD}{\bar{X}QD + S_x}, & MSE(\hat{Y}_{p3}) &= \frac{(1-f)}{n} (R_3^2 S_x^2 + S_y^2 (1-\rho^2)), \\ B(\hat{Y}_{p4}) &= \frac{(1-f)}{n} \frac{s_x^2}{\bar{Y}} R_4^2, & R_4 &= \frac{\bar{X}S_x}{\bar{X}S_x + QD}, & MSE(\hat{Y}_{p4}) &= \frac{(1-f)}{n} (R_4^2 S_x^2 + S_y^2 (1-\rho^2)). \end{aligned} \tag{6}$$

### Comparison with usual ratio estimator

The proposed ratio estimators are more efficient than that of the usual ratio estimator if

$$\begin{aligned} MSE(\hat{Y}_{pj}) &\leq MSE(\hat{Y}_i), \\ \frac{(1-f)}{n} (R_{pj}^2 S_x^2 + S_y^2 (1-\rho^2)) &\leq \frac{(1-f)}{n} (R_i^2 S_x^2 + S_y^2 (1-\rho^2)), \\ R_{pj}^2 S_x^2 &\leq R_i^2 S_x^2, \\ R_{pj} &\leq R_i, \end{aligned} \tag{7}$$

Where  $j = 1,2,3,4$  and  $i = 1,2,3,4,5$ .

### Empirical Study

The Population is taken from Singh and Chaudhary (1986).

$N = 34$	$n = 20$	$\bar{Y} = 856.4117$	$\bar{X} = 199.4412$	$\rho = 0.4453$
$S_y = 733.1407$	$C_y = 0.8561$	$S_x = 150.2150$	$C_x = 0.7531$	
$\beta_2 = 1.0445$	$\beta_1 = 1.1823$	$QD = 89.375$	$M_d = 142.50$	



Estimators	Constant	Bias	MSE
$\hat{Y}_1$	4.294	10.002	17437.65
$\hat{Y}_2$	4.278	9.927	17373.31
$\hat{Y}_3$	4.272	9.898	17348.62
$\hat{Y}_4$	4.279	9.930	17376.04
$\hat{Y}_5$	4.264	9.865	17319.75
$\hat{Y}_{p1}$	0.99474232	0.534464745	9291.46342
$\hat{Y}_{p2}$	0.995266026	0.535027656	9291.945504
$\hat{Y}_{p3}$	0.991643242	0.531139727	9288.615836
$\hat{Y}_{p4}$	0.997025635	0.536921164	9293.567126

#### Percentage relative efficiency of proposed estimator with existing estimators

Estimators	Proposed estimators			
	P1	P2	P3	P4
$\hat{Y}_1$	187.67	187.66	187.73	187.63
$\hat{Y}_2$	186.98	186.97	187.03	186.93
$\hat{Y}_3$	186.71	186.70	186.77	186.67
$\hat{Y}_4$	187.01	187.00	187.06	186.96
$\hat{Y}_5$	186.40	186.39	186.46	186.36

#### Conclusion

From the above tables, we observe that our proposed family of estimators considered by using the auxiliary information of population standard deviation, median and quartile deviation performs better than the existing estimators as their MSE and bias is lower than the existing estimators and hence can be preferred for practical applications.

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## Financial Inclusion Through Mahatma Gandhi National Rural Employment Guarantee Scheme — An Empirical Study

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### ABSTRACT

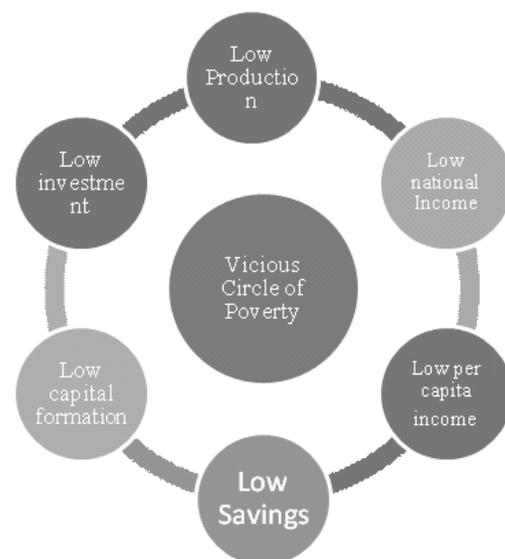
*Inclusive growth is the growth that not only creates new economic opportunities but also ensures equal access to the opportunities created for all segments of society, particularly for the poor. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is one of the powerful instrument for inclusive growth in rural India due to its impact on livelihood security, social protection and democratic governance. Financial Inclusion is an important step towards inclusive growth. Financial Inclusion is the availability of banking services, insurance services and other financial services at an affordable cost to the disadvantaged and low income groups. Mere extension of banking services is not enough. Insurance coverage in India is highly urban centric. Savings bank account scheme and Rural Postal Life Insurance scheme of India Post are used by people in the rural areas that cannot get access to banks and other financial institutions. But it has limited access. Through this article an attempt is made to explore some suggestions for better financial inclusion.*

**Keywords :** Poverty alleviation, Financial Inclusion, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Rural Postal Life Insurance.

### Introduction

According to Census 2011, 68.84% people live in rural areas. Poverty is a major old problem in India. 30% people in rural areas live below poverty line. The biggest challenge is to take the levels of growth to all sections of the society and all parts of the country. The operation of vicious circle of poverty has trapped people into miseries of poverty.

A diagrammatic representation of vicious circle of poverty is given below.



## **Financial Inclusion through Mahatma Gandhi National Rural Employment Guarantee Scheme: An Empirical Study**

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The Government has undertaken several measures to empower the people in rural areas. The Ministry of Rural Development, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) with effect from 2<sup>nd</sup> February, 2006 aims at providing livelihood security to households in rural areas by providing at least one hundred days of guaranteed wage employment in a financial year to every adult who volunteer to do unskilled manual work. The Act was implemented in the phased manner. All rural districts are covered under MGNREGA. MGNREGA is the first law that guarantees wage employment. It has improved the standard of living of people in rural areas and controlled migration to a great extent.

### **Review of Literature**

(Malakar, 2013) in his article , “Role of Indian Post in Financial Inclusion”, argued that India Post can reap the benefits of its huge network, low cost of operations and at the same time it will chalk out the plan to contribute towards the national objective of financial inclusion.

(A.C.Anbudevi, T.C.Suriyanarayaprabhu, 2013) in their article, “Financial Services to all Indians through India Post under Private Public Partnership”, attempted to study how India Post can provide financial services using core banking and mobile technology.

(Niharika Kumari, 2015) in her article, “Implementation of MGNREGA in Bihar” pointed out that MGNREGS is a hope for the poor and this scheme has improved their economic condition.

(Ganesan Parimalarani, 2013) in his article,” Post Office Financial services: Is it lure in India ?” had explained how the income of the people has been increasing over the years and people’s opt to use insurance and small chit funds in the rural areas.

(Dr. Minaj uddin Barbhuiya, 2014) in his article, “Impact of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) on Household welfare in Cachar District of Assam” had explained that the

households have utilized MGNREGS as subsidiary occupation during the non-agricultural period. Thus MGNREGS has lessened rural poverty and seasonal unemployment.

### **Research Gap**

Although a good number of research works are available in literature to see the benefits of MGNREGS and financial inclusion of rural workers, there is hardly any thorough research available on the mechanism of spreading the awareness of insurance amongst the rural masses and the need thereof. There is hardly any research available to explore the fact whether banking services are provided at an affordable cost to the disadvantaged sections of the society. This study tries to access the barriers.

### **Objectives of the Study**

1. To take an overview of MGNREGS and Rural development in Thane district.
2. To study the reasons for financial exclusion in rural areas.
3. To analyse the current status of financial inclusion in India.

### **Research Methodology**

This study is based on both primary and secondary data. The primary data has been collected through questionnaire and interviews were also conducted with the theme of research work. The secondary data is collected from various sources like journals, books, research articles, reports of Ministry of Rural Development, annual reports of Thane district and various websites. The size of sample is 250 MGNREGS workers of rural areas situated in Thane district. Primary data is analyzed by using percentage method.

### **MGNREGA And Rural Development In Thane District**

MGNREGA was notified on 7<sup>th</sup> September 2005. It was



launched in 200 rural districts in its first phase of implementation with effect from 2<sup>nd</sup> February 2006 and extended to additional 130 rural districts in FY 2007–08. The remaining districts were notified under MGNREGA with effect from 1<sup>st</sup> April 2008.

There are seven taluka in Thane district namely Thane, Kalyan, Murbad, Bhiwandi, Shahapur, Ulhasnagar and Ambernath. MGNREGS works started in Thane district with effect from F.Y. 2007-08. For administration purpose of MGNREGA, there are five blocks in Thane district namely Ambernath, Bhiwandi, Kalyan, Murbad and Shahapur. There are no villages in Thane and Ulhasnagar taluka.

**Table 1: Villages & Gram Panchayat in the Thane District**

Sr. No.	Block	No. of Villages	No. of Gram Panchayat
1	Ambernath	76	36
2	Bhiwandi	194	118
3	Kalyan	101	64
4	Murbad	207	127
5	Shahapur	228	110
	Total	806	455

Source: Annual Report, Thane District. 2014-15

The above table exhibits that there are large number of villages in Shahapur taluka i.e. 228 and maximum number of Gram Panchayat in Murbad taluka i.e. 127.

**Table 2: Job cards issued and active workers in Thane District**

Sr. No.	Block	No. of job Cards issued	Active Workers				
			SCs	STs	Others	Total workers	Women
1	Ambernath	5117	57	508	1171	1736	624
2	Bhiwandi	15129	144	2537	3565	6246	2779
3	Kalyan	7267	74	609	2336	3019	1266
4	Murbad	28739	301	3035	7782	11118	4359
5	Shahapur	34844	214	3810	4816	8840	4117
	Total	91096	790	10499	19670	30959	13145

Source: [www.nrega.nic.in](http://www.nrega.nic.in)

From the above table it is clear that maximum numbers of job cards are issued in Shahapur taluka and minimum number of job cards in Ambernath taluka. The highest number of active workers of SCs, Others & women category are in Murbad taluka and STs in Shahapur taluka.

The Collector of Thane district has successfully implemented the works related to water harvesting, water

conversation, watershed management. As a result of this large number of farmers are engaged in vegetable cultivation and they came out of the claws of poverty. According to one report published in the newspaper "Sakal", on 14<sup>th</sup> January, 2016, 3,228 farmers suicide cases noticed in Maharashtra in the year 2015. But no suicide case was noticed in Thane district in the year 2015.

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### Financial Exclusion And Financial Inclusion

Financial exclusion means lack of banking facilities to people with low or non-income, lack of awareness on financial services and products and inability to decide between alternate financial services and products. The excluded section consists of landless laborers, marginal farmers, workers of unorganized sector, urban slum dwellers, socially excluded groups, and women in rural areas. Financial illiteracy and lack of awareness are the major causes of Financial Exclusion.. Financial education enables people to take proper decisions and explains the basic management of money i.e. budgeting, spending, saving, investing and insuring.

Financial inclusion would help to prevent the exploitation of the poor by the informal money lenders. Financial inclusion aims to outreach to the underserved and unserved population in terms of financial initiatives by the government and provide financial services and products at a reasonable cost.

### Current Status of Financial Inclusion in India

Hon. President Pranab Mukherjee, while addressing the joint sitting of both houses at the start of the budget session 2015-16 described “Inclusive growth covering the poorest of poor” as the Government’s top priority. The primary role of the World Bank is poverty alleviation i.e. reaching out and improving the lives of the world’s poor. The India Post has the power to deliver development to “the last mile.” Today, India has the largest network of Post Offices in the world with 154,822 Post Offices of which 1,39,086 i.e. 89.84 % are in rural areas and 15,726 i.e. 10.16% in urban areas. On an average, a Post Office serves rural population of 5682. (India Post, 2014-15) India Post obtained Payment Bank license from Reserve Bank of India. India Post Payment Bank will play a major role in Financial Inclusion.

The banking network as on 31.03.2015 consists of 1,15,082 banks out of which 62% banks are in urban

areas and only 38% banks are in rural areas. The Insurance network consists of LIC, GIC’s four subsidiaries, India Post and other private insurers. The insurance industry was opened up to the private sector in August, 2000.

Insurance penetration and insurance density was very less in India. There is a need to cover a large population with life insurance. This requires more Foreign Direct Investment in Insurance sector. The union cabinet in July, 2014 approved a proposal to raise Foreign Direct Investment (FDI) limit in the domestic insurance sector to 49% from the previous 26% to bring capital and investment into the insurance sector.

Jan Dhan Yojana, Pradhan Mantri Jeevan Jyoti Beema Yojana and Pradhan Mantri Jeevan Suraksha Yojana and Atal Pension Yojana have been introduced by the Central government for providing security net in the country. But these schemes have limited access in rural areas compared to urban areas.

In order to enhance Financial inclusion in India, Govt. of India has introduced Rural postal Life Insurance schemes through India Post with effect from 24<sup>th</sup> March, 1995 mainly because of the vast network of post offices in the rural areas and low cost of operations.

Indian Postal Department has launched various plans of life insurance such as Gram Suraksha, Gram Suvidha, Gram Santosh, Gram Sumangal, Gram Priya, Children plans etc. The main speciality of RPLI is low premium and high bonus. RPLI offers minimum insurance cover Rs. 10,000 and maximum insurance cover Rs. 5, 00,000. Minimum and maximum age limit to purchase a RPLI policy is 19 years and 55 years respectively.(age as on next birthday). RPLI offers all the facilities that any other insurer offers. But it also provides passbook facility. Since the date of inception, RPLI has shown significant growth in the number of policies and investment and played an important role towards Financial inclusion in rural area. But it has limited access to informal sector workers in rural areas.



## Financial Inclusion Through Wage Transfer

Since inception of MGNREGA in Thane district, 86,166 accounts are opened in post offices and about 25,000 accounts are opened in banks. All the wages are being

paid through these channels. This has resulted in financial inclusion and has significantly reduced the possibility of financial misappropriation by vested interests. The rural poor have been brought into the organized sector and now have access to other benefits of banking sector.

## Analysis

Some vital observations from the sample survey of 250 respondents are mentioned below.

Variables		Male (%)	Female (%)	Total (%)
Respondents		138 (55.2)	112 (44.8)	250(100)
Education	Literate	106 (76.81)	75 (66.96)	181 (72.40)
	Illiterate	32 (23.19)	37 (33.04)	69 (27.60)
Marital Status	Married	97 (70.29)	95 (82)	192 (76.80)
	Unmarrid	41 (29.71)	17 (15.18)	58 (23.20)
Source of Income other than MGNREGS works	Agricultural	96 (69.57)	62 (55.36)	158 (63.20)
	Agri .related	16 (11.59)	19 (16.96)	35 (14.00)
	Others	22 (15.94)	8 (7.14)	30 (12.00)
	None	4 (2.90)	23 (20.54)	27 (10.00)
Age Group (Age in Years)	18-25	18 (13.04)	16 (14.29)	34 (13.60)
	25-35	37 (26.81)	36 (32.14)	73 (29.20)
	35-45	49 (35.51)	44 (39.29)	93 (37.20)
	45-55	24 (17.39)	12 (10.71)	36 (14.40)
	55 and above	10 (7.25)	4 (3.57)	14 (5.60)
		138 (100)	112 (100)	250 (100)
Monthly Income	Up to RS.5000	45 (32.61)	63 (56.25)	108 (43.20)
	Rs. 5001-10000	89 (64.49)	49 (43.75)	138 (55.20)
	Above Rs. 10000	4(2.90)	0(0)	4 (1.60)
Financial Inclusion awareness (Banking services)	Yes	116 (84.06)	72 (64.29)	188 (75.20)
	No	22 (15.94)	40 (35.71)	62 (24.80)
Delay in payment of wages through Post office Accounts	Yes	106 (76.81)	79 (70.54)	185 (74)
	No	32 (23.19)	33 (29.46)	65 (26)
Delay in payment of wages through Bank Accounts	Yes	24 (17.39)	22 (19.64)	46 (18.40)
	No	114 (82.61)	90 (80.36)	204 (81.60)
Payment opted through Bank due to delay in Post offices	Yes	87 (63.04)	52 (46.43)	139 (55.60)
	No	51 (36.96)	60 (53.57)	111 (44.40)
Knowledge of RPLI	Yes	17 (12.32)	13(11.61)	30 (12.00)
	No	121 (87.68)	99 (88.39)	220 (88.00)
RPLI take up	Yes	8 (5.80)	3 (2.68)	11 (4.40)
	No	130 (94.20)	109 (97.32)	239 (95.60)
Knowledge of insurance Products (LIC and other)	Yes	12 (8.70)	5 (4.46)	17 (6.80)
	No	126 (91.30)	107 (95.54)	233 (93.20)
Other insurance Products take over	Yes	6 (4.34)	0 (0.00)	6 (2.40)
	No	132 (95.66)	112 (100.00)	244 (97.60)

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Trust in India Post and RPLI	Yes	115 (83.33)	96 (85.71)	211 (84.40)
	No	23 (16.67)	16 (14.29)	39 (15.60)
Awareness of Security net	Yes	11 (7.97)	4 (3.57)	15 (6.00)
	No	127 (92.3)	108 (96.43)	235 (94.00)
Security net take up				
PMJJBY	Yes	2 (1.45)	0 (0.00)	2 (0.80)
	No	136 (98.55)	112 (100.00)	248 (99.20)
PMSBY	Yes	5 (3.62)	2 (1.79)	7 (2.80)
	No	133 (96.38)	110 (98.21)	243 (97.20)
APY	Yes	0 (0.00)	0 (0.00)	0 (0.00)
	No	138 (100.00)	112 (100.00)	250 (100.00)
Need of Micro Insurance Products	Yes	83 (60.14)	66 (58.93)	149 (59.60)
	No	55 (39.86)	46 (41.07)	101 (40.40)

### Findings

- (1) MGNREGS offers equal wages for women. In this study, there are 44.80% are women respondents. By getting equal wages feel gender equality and get status in the family as well as in the society.
- (2) Responsibility of procuring Rural Postal Life Insurance business and payment of wages of MGNREGS lies with Gramin Dak Sewaks who are neither motivated nor properly trained for procuring business.

### Suggestions

#### (1) Financial Literacy :

Financial Literacy is a pre condition for insurance inclusion. People will buy insurance products on understanding its benefits and significance. Gramin Dak Sevaks in rural areas can contribute in this regard. Understanding the need of people and suggesting those appropriate insurance products will persuade them to buy insurance products.

#### (2) Women Empowerment :

The women empowered through MGNREGS should come forward and share the responsibility of Financial Inclusion and ultimate goal of Rural Development. Empowering women enhances their ability to influence other women and society at large and helps to create a better society.

#### (3) Gram Sabha :

Gram Sabha plays an important role in the rural development. Gram Sabha should be conducted at regular intervals. The concept of Financial Inclusion should be explained in the Gram Sabha.

#### (4) Delivery Channel for Insurance Cover :

India Post should use the delivery channels such as school curriculum, adult education, self help groups, Panchayat Raj system, social marketing, helpline and various medias of advertising i.e. radio, television, newspapers for canvassing of schemes of Rural Postal Life Insurance.

#### (5) Payment of Wages :

The government authorities have to ensure that the payment of wages should effected timely and as per correct days of work and there should not be delay in payment of wages. India Post should access all the barriers that come in the ways of payment of wages. It should make efforts to win the trust and confidence of the people and will assure timely payment of wages as soon as Fund Transfer Order received for payment.

#### (6) Pradhan Mantri Suraksha Beema Yojana :

PMSBY should be made compulsory to all active MGNREGS workers, The subscription of Rs. 12 should be auto debited at the time of first payment to each MGNREGS workers in the financial year. In this context, India Post can play an important role. India



post should devise a suitable action plan.

## Conclusion

One of the greatest challenge before the Government is to ensure inclusive growth based on upliftment of socially and economically weaker section. The main objective of MGNREGA is to provide employment to people in rural areas on demand. We should make efforts to achieve 100% financial literacy. Financial inclusion is an essential pre-condition to reap the benefits of economic growth. Opening of branches of post offices in rural areas and increasing accounts of MGNREGS are not sufficient. Insurance coverage is equally important to ensure social security. The government with the aid of India Post should introduce suitable schemes of RPLI , Group Insurance Scheme and Micro Insurance according to the requirement of rural areas. Focus on banking and insurance inclusion is essential for financial inclusion in India.

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## Challenges in Human Resource Management in Banks

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### ABSTRACT

*The banking industry in India has a huge canvas of history, which covers the traditional banking practices from the time of Britishers to the reforms period, nationalization to privatization of banks and now increasing numbers of foreign banks in India. Therefore, Banking in India has been through a long journey. Banking industry in India has also achieved a new height with the changing times. The use of technology has brought a revolution in the working style of the banks. Nevertheless, the fundamental aspects of banking i.e. trust and the confidence of the people on the institution remain the same. The majority of the banks are still successful in keeping with the confidence of the shareholders as well as other stakeholders. However, with the changing dynamics of banking business brings new kind of risk exposure.*

*This paper analyses the challenges faced by the Indian banks and the solutions to the problems.*

**Keywords:** *Banking, Retention, Economic Reforms, Financial Inclusion, Challenges*

### Introduction

In recent time, we have witnessed that the World Economy is passing through some intricate circumstances as bankruptcy of banking & financial institutions, debt crisis in major economies of the world and euro zone crisis. The scenario has become very uncertain causing recession in major economies like US and Europe. This poses some serious questions about the survival, growth and maintaining the sustainable development.

However, amidst all this turmoil India's Banking Industry has been amongst the few to maintain resilience. The

tempo of development for the Indian banking industry has been remarkable over the past decade. It is evident from the higher pace of credit expansion, expanding profitability and productivity similar to banks in developed markets, lower incidence of non-performing assets and focus on financial inclusion have contributed to making Indian banking vibrant and strong. Indian banks have begun to revise their growth approach and re-evaluate the prospects on hand to keep the economy rolling.

The main challenges faced by Banks in our country are the role played by financial instrumentation in different



phases of business cycle, the emerging compulsions of the new prudential norms and benchmarking the Indian financial system against international standards and best practices. There is a need for introduction of new technology, skill building and intellectual capital formation.

### **Objectives of the Study**

1. Challenges Faced By Indian Banking Industry
2. To find the solution to the challenges faced.

### **Challenges faced by Indian Banking Industry**

Developing countries like India, still has a huge number of people who do not have access to banking services due to scattered and fragmented locations. Since, foreign banks are playing in Indian market, the number of services offered has increased and banks have laid emphasis on meeting the customer expectations. Now, the existing situation has created various challenges and opportunity for Indian Commercial Banks. In order to encounter the general scenario of banking industry we need to understand the challenges of banking industry of India.

#### **1. Rural Market**

Banking in India is generally fairly mature in terms of supply, product range and reach, even though reach in rural India still remains a challenge for the private sector and foreign banks. In terms of quality of assets and capital adequacy, Indian banks are considered to have clean, strong and transparent balance sheets relative to other banks in comparable economies in its region. Consequently, we have seen some examples of inorganic growth strategy adopted by some nationalized and private sector banks to face upcoming challenges in banking industry of India.

#### **2. Management of Risks**

The growing competition increases the competitiveness among banks. But, existing global banking scenario is seriously posing threats for Indian banking industry. We

have already witnessed the bankruptcy of some foreign banks.

According to Shrieves (1992), there is a positive association between changes in risk and capital. Research studied the large sample of banks and results reveal that regulation was partially effective during the period covered. Moreover, it was concluded that changes in bank capital over the period studied was risk-based

#### **3. Growth of Banking**

It was found in the study of Goyal and Joshi (2011a) that small and local banks face difficulty in bearing the impact of global economy therefore, they need support and it is one of the reasons for merger. Some private banks used mergers as a strategic tool for expanding their horizons. There is huge potential in rural markets of India, which is not yet explored by the major banks. Therefore ICICI Bank Ltd. has used mergers as their expansion strategy in rural market. They are successful in making their presence in rural India. It strengthens their network across geographical boundary, improves customer base and market share.

#### **4. Market Discipline and Transparency**

According to Fernando (2011) transparency and disclosure norms as part of internationally accepted corporate governance practices are assuming greater importance in the emerging environment. Banks are expected to be more responsive and accountable to the investors. Banks have to disclose in their balance sheets a plethora of information on the maturity profiles of assets and liabilities, lending to sensitive sectors, movements in NPAs, capital, provisions, shareholdings of the government, value of investment in India and abroad, operating and profitability indicators the total investments made in the equity share, units of mutual funds, bonds, debentures, aggregate advances against shares and so on.

#### **5. Human Resource Management**

Gelade and Ivery (2003) examined relationships between human resource management (HRM), work climate, and organizational performance in the branch network of a retail bank. Significant correlations were found between

work climate, human resource practices, and business performance. The results showed that the correlations between climate and performance cannot be explained by their common dependence on HRM factors, and that the data are consistent with a mediation model in which the effects of HRM practices on business performance are partially mediated by work climate.

### 6. Global Banking

It is practically and fundamentally impossible for any nation to exclude itself from world economy. Therefore, for sustainable development, one has to adopt integration process in the form of liberalization and globalization as India spread the red carpet for foreign firms in 1991. The impact of globalization becomes challenges for the domestic enterprises as they are bound to compete with global players. If we look at the Indian Banking Industry, then we find that there are 36 foreign banks operating in India, which becomes a major challenge for Nationalized and private sector banks.

### 7. Financial Inclusion

Financial inclusion has become a necessity in today's business environment. Whatever is produced by business houses, that has to be under the check from various perspectives like environmental concerns, corporate governance, social and ethical issues. Apart from it to bridge the gap between rich and poor, the poor people of the country should be given proper attention to improve their economic condition. The study suggested that this requires new regulatory procedures and de-politicization of the financial system.

### 8. Employees' Retention

The banking industry has transformed rapidly in the last ten years, shifting from transactional and customer service-oriented to an increasingly aggressive environment, where competition for revenue is on top priority. Long-time banking employees are becoming disenchanted with the industry and are often resistant to perform up to new expectations. The diminishing employee morale results in decreased revenue. Due to the intrinsically close ties between staff and clients, losing those employees completely can mean the loss of

valuable customer relationships. The retail banking industry is concerned about employee retention from all levels: from tellers to executives to customer service representatives because competition is always moving in to hire them away. The competition to retain key employees is intense. Top-level executives and HR department spend large amounts of time, effort, and money trying to figure out how to keep their people from leaving.

### 9. Customer Retention

Levesque and McDougall (1996) investigated the major determinants of customer satisfaction and future intentions in the retail bank sector. They identified the determinants which include service quality dimensions (e.g. getting it right the first time), service features (e.g. competitive interest rates), service problems, service recovery and products used. It was found, in particular, that service problems and the bank's service recovery ability have a major impact on customer satisfaction and intentions to switch.

### 10. Environmental Concerns

It is quite clear from the recently formed Copenhagen Climate Council (CCC) that there is a severe need for environmental awareness among all the countries of the world. CCC published Thought Leadership Series on Climate Change which is a collection of inspirational, concise and clearly argued pieces from some of the world's most renowned thinkers and business leaders on climate change. The objective of the pieces is to assist in enhancing the public and political awareness of the actions that could have a significant impact on global emissions growth and to disseminate the message that it is time to act. The Thought Leadership Series was aimed at explaining and spreading awareness of the key elements in the business and policy response to the climate problem. The rationale for the Thought Leadership Series was to change the focus of people.

### Meeting HR Challenges

The banking sector has been growing at a very fast pace in India not only in the terms of its size but also in terms



of the services being provided. With banks reaching the remote areas in the country one can anticipate positive things like financial aid to farmers and increased financial awareness. However, with the increase in size and activities of banks, the number of banks in private sectors has also increased thereby posing challenges like cost-efficiency, technological advancement, and credibility related issues. The task before the HR is to develop strategies that help banks in gaining competitive advantage and encourage innovation in its products and services.

### **Managing Human Resource**

Considering the above HR challenges which our Indian banking industry is facing, we can manage the human resources by proper Planning like —

- Hiring the right person for the right job
- Retaining and Developing
- Managing people/ conducting exit interviews

### **Hiring the Right person for the Right Job**

In assessing whether the “right person” has been selected for the “right job”, the most prominent theoretical concept that emerges is the concept of “fit”. Different writers emphasize different types of fit. Sekiguchi (2004: 179) in a review of literature on person-environment fit discusses two types of fit that emerge as the most prominent types of fit: person-job fit and person-organization fit. In pursuing person-job fit, companies seek to match the job holder’s knowledge, skills and abilities to the requirements of the job. Companies can ascertain person-organization fit by focusing on how well the individual fits with the culture or values of the company and the individual’s capacity to work well with other company employees. Banks will have to plan for the following:

- A steady, carefully calibrated recruitment programme,
- As rapid technological changes transform business – continuous skill up-gradation.
- A new generation of the workforce will be working alongside an older generation as a team. Banking,

in my opinion is a team work and this new situation will require cultural adjustments and therefore, change management.

### **Retaining and Developing Employees**

We may be able to get the most suited people for our work but then the challenge is to retain these people and to develop them. There are several dimensions to this issue such as training/ re-skilling of employees, performance measurement, promotion policy, transfer policy, talent management, communication, etc. few are mentioned below:

### **Training and Development**

With drastic growth of banks it calls for efficient and well trained staff members to handle/deal with the consumer needs. Banks are shaping up as financial hub for their clients to grow in size and well recognized in the world market. To pull consumers banks are offering traditional with advance services like SMS banking, ATM, internet banking, priority banking, demat. So we can say that it caters to the need of the bottom to the highest class of society providing something to everyone. Universal banks have become modern day’s supermarket extending almost every facility of banking under one roof.

### **Performance Management**

Banking service is one sector where a great degree of attention is being paid to performance appraisal system. Several of the nationalised banks have changed their performance appraisal system or are in the process of changing them. In most of the banks that follows the traditional system, their officers are being assessed on the following characteristics:

- General Intelligence
- Job Knowledge
- Initiative and resourcefulness
- Supervision
- Business Capacity
- Ability to assess sound

## Challenges in Human Resource Management in banks

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Several of the banks also have self-appraisal as a part of performance appraisal, although mostly such self-appraisal is more of a communication of achievements. A fair, transparent and objective mechanism for performance management is a must for all banks because an effective Performance Management System is the key to talent management and succession planning.

### Conclusion

To conclude, Organizations all over are rushing to implement the latest ideas on management, sometimes to the point of overuse. The major challenge now for banks as well as any other organization is therefore how to develop their social architecture that generates intellectual capital as the quintessential driver of change. Developing the individual or human capacity is an integral element of building capacity and, in fact, capacity building initiatives are now increasingly becoming almost an index of institutional quality. Taking the banking industry to the heights of excellence, especially in the face of the a forehead-detailed emerging realities, will require a combination of new technologies, better processes of credit and risk appraisal, treasury management, product diversification, internal control and external regulations and, not the least, human resources. Over the years, it has been observed that clouds of trepidation and drops of growth are two important phenomena of market, which frequently changes in different sets of conditions. The pre and post liberalization era has witnessed various environmental changes which directly affect the aforesaid phenomena. It is evident that post liberalization era has spread new colors of growth in India, but simultaneously it has also posed some challenges.

### Suggestions

As per the above discussion, we can say that the biggest challenge for banking industry is to serve the mass market of India. Companies have shifted their focus from product to customer. The better we understand our customers, the more successful we will be in meeting their needs. In order to mitigate above mentioned

challenges Indian banks must cut their cost of their services. Another aspect to encounter the challenges is product differentiation. Apart from traditional banking services, Indian banks must adopt some product innovation so that they can compete in gamut of competition. Technology up gradation is an inevitable aspect to face challenges.

The level of consumer awareness is significantly higher as compared to previous years. Now-a-days they need internet banking, mobile banking and ATM services. Expansion of branch size in order to increase market share is another tool to combat competitors. Therefore, Indian nationalized and private sector banks must spread their wings towards global markets as some of them have already done it. Indian banks are trustworthy brands in Indian market; therefore, these banks must utilize their brand equity as it is a valuable asset for them. With liberalisation of activities within the banking sector, for example, more emphasis on consumer and house finance and personal loans, etc. Banking has turned itself into a more market based business where banks have expanded their reach more to customer's door step in a big way making banking more practical. This has further highlighted the need for proper development of man power to run bank efficiently.

Smart banks have realized this need and have taken steps to keep their workforce motivated through proper encouragement like man of the month award, repeat get-together, conferences, sports events, dinners, company sponsored travel, reunions, etc.

In spite of all these facilitations there still exist several lacunas in the HRM practices in banking industry. Some of the suggestions are given as follows:

- There should be a balanced compromise between organizational need and individual need.
- While there must be rewards for performance, non-performance must be punished/ reprimanded. Promotions must be only on merit.
- There must be uniform, impartial and balanced "employee performance review system." This system in fact needs a total review.



- Enthusiastic and pleasant behaviour of staff to the customer is necessary.
  - There must be a clearly defined system of succession planning and career growth planning in banks.
  - In order to become HRD conscious, the Public Sector Banks should allow independent functioning of HRD section, where the top person should be himself a good successful banker, a real HRD person free from any biases.
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## A study on employees' attrition issues and retention challenges in Indian IT Sector

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### **ABSTRACT**

*Existence and survival of any organisation depends upon human resource. It is the only resource on which efficient and effective utilisation of all others resources depend. In this competitive world it has become extremely important for business firm to be adequately staffed. As the organisations continue to become global, there is competition not only with same unit or industry in national level but at global level. How to obtain good brain and to retain the pool of talented employees in the organisations is the biggest question before employer. The biggest challenge for the organisation is not only recruiting talented employees but also retaining them who can become future leaders and an asset for the organisation. Attrition is one of the most important problem that organisation are facing nowadays besides others challenges. It is never-ending problem which every firm is facing due to many reasons.*

*This article would provide an insight into various reasons of attrition and to suggest measures for controlling attrition and the challenges that are being faced by organisations in retaining employees in current scenario in India.*

**Keywords:** *Attrition, retention, challenges and competition.*

### **Introduction**

Human resource considered to be the centre of all growth and development process of any organisation. It represents the collective expertise, innovation, leadership, entrepreneurial and managerial skills endowed in employees of the any organisation. Each and every organisation tries to recruit, maintain, develop and retain the pool of talented employees inside the organisation for its growth and survival. But due to globalisation an organisation has to face many challenges. One of the stiff challenges faced by most of the organisation in the

present times is the ever increasing attrition rate. It adversely affects the organisational performance, morale and mission & vision. The term attrition finds its first instance of use in 1540 with its extraction from Latin word attritionem (normative, attritio) which literally means an "abrasion, a scraping and to destroy, waste. When it comes to applying the same in human resource perspective, attrition may take the garb of wearing-down of intellectual. Employee attrition may emanate as a resultant of super-annuation, death, discharge and voluntary retirement. Voluntary reduction of employees from an organisation may result from dissatisfaction with



the job content, working condition, employer, pay-packages etc. Attrition is one of the major problems faced by human resource managers in the industry in recent times. How to address this ever-increasing rate of attrition is the main issue before human resource professional so as to retain good brain inside the organisation.

Attrition Rate can be calculated through following formula:

(no. of employees who left in the year" average employees in year)  $\times$  100

### Literature review

Sharmistha Banerjee and Sumana Guha (2010) have conducted a study to examine factors that influence attrition in an engineering firm named DCIPS (Development Consultant Private Limited) and to suggest measure for controlling attrition. Research method was adopted to know the cause was exit document of engineering managers leaving the organisation over ten years period (1999-2008). They have found that there is attrition because DCIPS does not provide growth and career advancement opportunity to employees. Pooja Wadhwa and Saroj Koul (2012) have undertaken a study to examine the factors that affect retention in IT Industry and the extent to which these factors are crucial for employee retention. The methodology used was structured questionnaire each measured by seven-point likert scale .They have found that job promotion and salary increment are vital that affect retention in IT Industry. They have suggested that there are two strategies that will come handy in managing attrition is to provide salary at par with industry and to recruit those who has long term orientation's. Babita Singh Yadav and Varsha Rokade (2013) have conducted a study to examine serious causes and problem of attrition in HDFC Standard Life Insurance Company and to suggest measure to deal with the rising issue of attrition. The methodology adopted was pre-tested structured questionnaire and convenience sampling method on 50 employees of HDFC Standard Life Insurance Company

who have left organisation including existing staff. They have identify salary increment, appraisal system, incentives and nature of job, the factors with which majority of employees are not satisfied in HDFC Standard Life Insurance Company. While, company career growth opportunity and working condition of organisation are good and motivates the employees. They have concluded that HDFC should give due consideration while framing salary, incentives and appraisal policies for the employees in order to retain best brain in the organisation. Sorasak Tangthong et al (2013) have carried out an empirical study to investigate the effect of HRM practices on employee attrition in Thailand Manufacturing Industry .Data were collected from 224 top management, Human Resource Managers and line managers and tested by using AMOS Of a path analysis modelling approach. They have found that HRM practices have and indirectly significant and positive effect on firm performance with employee attrition through employee motivation as mediating factors. Sanjeev Kumar Mathur and Sunil Kumar Gupta (2012) an exploratory study have been conducted by authors on Global attrition management. They have stated that organisation facing menace of high attrition have to understand that only high salary and big name in industry are not enough to retain employees. There are numerous other reasons which firm need to check and maintain such as hygienic factors to keep up faith of employees and to keep attrition at bay. .Kumudha and Saranya (2012) an empirical study on attrition with special reference to Flow Link system private limited, Coimbatore. Have been carried out by authors Data were collected 150 employees of company through questionnaire and stratified disproportionate random sampling method was used. They have found that majority of employees are satisfied with workload, lead-time and working environment of company while employees are dissatisfied with training and development and salary structure of organisation. They have concluded that management can revise salary by considering cost of living index in order to retain good brain inside the company. James and Faisal (2013) have conducted an empirical study to examine the critical factors which lead to high attrition in BPO Industry in Karnataka and

Kerala. Structured questionnaire, factor analysis and multiple regression analysis were used to collect and analysed data respectively. Study reveals the employee's salary is most critical factor for high attrition in both the States. Santripat Shukla and Ambika Sinha (2013) this study was carried out with the aim to identify the factors and the extent to which these factors make impact on employee turnover in banking sector. Self-administered questionnaire were used for collection of data. It has been found by authors that work environment is single high most important factor responsible for employee turnover in Industry followed by job stress, compensation, employee relation with management and career growth.

### Objective of study

- 1) To explore the main causes of job switching or quitting.
- 2) To study the recent trend in attrition rate in Indian industry.
- 3) To study and provide suggestion for controlling attrition and to develop retention strategy for retaining the employees.

### Research gap:

From foregoing of the review of literature it is clear that there are plethora of study conducted on different aspect the employee attrition .Nevertheless it is found that there is a still dearth of research study focussing on employees' retention issue and challenges. The present study has been taken up against this backdrop.

### Research Methodology

The nature of data for the above study will be a secondary data. The data employed in the study consists of comprehensive review of existing literature from published and unpublished sources. Which includes books, journal, newspapers, magazines, reports, record maintained by government, studies undertaken by

research institution and surveys done by various agencies to know present situation of employees' attritions in India

**Causes of attrition in Indian industry:** These are the some of the vital causes which leads to attrition in Indian industry:

**Work pressure:** High work pressure and high expectation of employers from employees compels many employees to look at the other options available in the industry

**Salary and incentives:** one of the most important and most talked reasons so as to why an employee leaves the organisation is the salary and incentives. An employee joins a particular organisation to earn his/her livelihood and if it's very first requirement is not fulfilled obviously they will leave the organisation.

**Career growth and advancement opportunity:** if an organisation fails to provide better career growth and advancement opportunity to its employees in comparison to other organisations it will likely to lose good employee. This study has also been supported by literature

**Employee relationship with employer:** if an employee's relation is not congenial with employers then employees are most likely to leave the organisation and join other organisation. Social needs of an employee must be fulfilled in order to retain the employees since man lives in the society like to be treated and valued like man.

**Employees' relation with immediate supervisor:** in 2012 a study came up with very surprising but interesting finding. If you are losing good people, look to their immediate supervisor more than any other single reason. A person leaves the managers not the companies. So if an organisation have turnover problem it should first look to manager and supervisor than any other single reason.



### Recent trend of attrition in Indian IT Industry:

A survey carried out by Dream Orbit a software product engineering company with its headquarter in Bangalore in 2013 which measure attrition rate in Indian industry. This shows recent trends of attrition in the industry

Attrition Rate can be calculated through following formula:

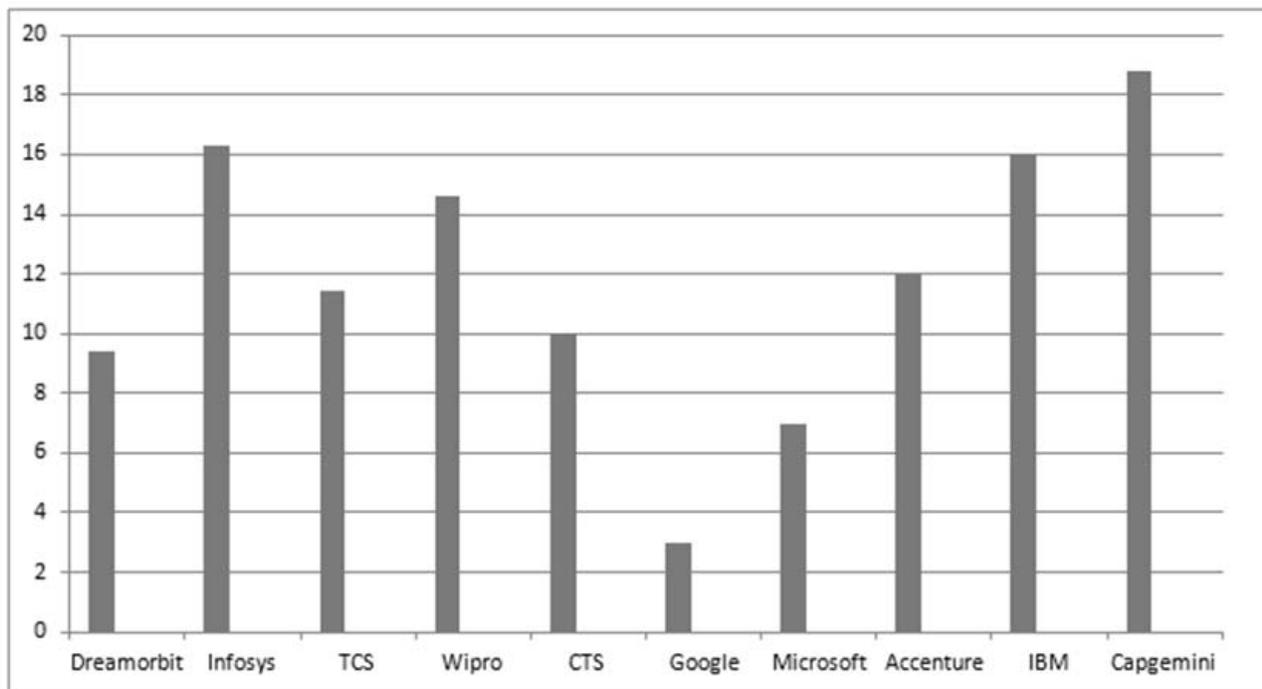
(no. of employees who left in the year” average employees in year)  $\times$  100

- Number of attritions = 8
- Number of actual employees = 54
- Number of employees newly joined = 31

So accordingly, the attrition rate per annum =  $(8 \times 100) / (54 + 31) = 9.41\%$

NAME OF THE ORGANIZATION	ATTRITION RATE PER ANNUM (IN %)
1. DREAMORBIT	9.41
2. INFOSYS	16.3
3. WIPRO	14.6
4. TCS	11.4
5. GOOGLE	3.00
6. MICROSOFT	7.00
7. CAPGEMINI	18.8
8. ACCENTURE	12
9. IBM	16

### Graphic presentation of data



Suggestion for controlling attrition in Indian industry: In order to contain employee attrition and manage it in a best possible way. Organisation should first tries to select right people on the board and thereafter best human resource policies may be adopted keeping in mind stiff competition outside the market. These are the some of the suggestion which can prove fruitful for the firm in managing employee attrition.

**Competitive pay package:** Many researchers found that salaries do play significant role in making employees loyal to the organisation. In order to contain employee attrition in organization, Firm should offer an attractive, competitive and comprehensive pay packages beside this outstanding talent must be recognised and link with monetary gain so as to motivate and retain the employees

**Encouraging leadership:** one of the reasons as to why employees leave the organisation is lack of empowering leadership. Organizations have to be capable enough to nip attrition in the bud. Organisation should provide enough opportunities for employees to share their knowledge on-the-job via training session, presentation, monitoring and other assignment.

**Employees' relation with immediate supervisor:** a study came up with very surprising but interesting finding. If you are losing good people, look to their immediate supervisor more than any other single reason. So if there is high turnover in organisation at particular department. Organisation should look to their immediate supervisor. There must be cordial relation among supervisor and employees in the organisation so as to conation attrition.

**Better work environment:** if a company wants to control attrition, it should provide good working condition to an employee. This includes autonomy, recreational facilities, and better relation with supervisor, empowering leadership, career growth opportunities, career advancement opportunity etc

### Conclusions

No organisation can taste fruit of success without its

indispensable resources on the work .Success of any organisation depends mostly on proper and efficient management of Human Resource on which best use of others resources depends upon. Due to its dynamic nature, recruiting and most importantly retaining the employees inside the organisation become very tough in present business scenario and it's going to be more challenging in future. In the study it has been observed that organization can only recruit and retain best brain if they are able to fulfil specific needs of each employees beside general needs of employees . So each organisation must take into consideration all employees needs while preparing and implementing Human Resource policies & practices for the organisation. This article has presented some insight knowledge about HR practices of the organisation and retention strategies of the firm

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## Study of age as a factor for hair mercury accumulation in fish consumers residing along Ulhas River Estuary and Thane Creek near Mumbai

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### ABSTRACT

*Mercury is a non-biodegradable and highly toxic metal that bioaccumulates in the body of organisms. Several studies have confirmed that the fish from Ulhas river estuary and Thane creek are contaminated with mercury. The traditional fishing populations who reside in villages along these water bodies consume this contaminated fish. In order to evaluate the exposure levels of these populations to mercury, their hair mercury levels were analyzed and co-related with their age. A high positive correlation was obtained between age and hair mercury concentration with the value of correlation coefficient  $r = 0.88$  and ANOVA-two way test also revealed significant differences in the values. Hair mercury levels in the populations of all the five villages studied showed an increase till 20 years of age, then a steady state up to 50 years and again an increase beyond the age of 50 years. Period of exposure and detoxification mechanism in the body were the probable factors that played a key role in age-related mercury accumulation in hair. Children and elderly people are thereby recommended to reduce their intake of mercury contaminated fish to be safe from mercury poisoning.*

**Keywords:** *Hair mercury, age, Ulhas River Estuary, Thane creek, fish consumers*

### Introduction

Mercury (Hg) is a non-biodegradable, persistent and toxic metal which even at a very low concentration can produce perilous effects (UNEP Chemicals, 2007). Its organic form, methyl mercury, is a confirmed neurotoxicant and genotoxicant which can cause severe and permanent damage to central nervous system; lungs and kidneys (Centre for Science and Environment Press Release, 2003).

Ulhas River Estuary (URE) (73°14'E, 19°14'N to 72°

54'E, 19°17'N) and Thane Creek (TC) (72°55' E, 19°N to 73° E, 19°15'N) are highly polluted owing to the heavy load of industrial pollutants and sewage discharge. Chlor-alkali plants, waste incinerators and thermal power plants are the main sources of mercury pollution in these areas. Presence of mercury in water, sediments and fish of Ulhas River Estuary and Thane Creek have been reported by several workers (Mishra *et al.*, 2003, Ram *et al.*, 2003, Menon and Mahajan, 2010). The villagers residing along the banks of Ulhas River Estuary and Thane Creek depend on these estuarine/creek fish for daily sustenance consuming up to 600 gms of fish per



day (Menon and Mahajan, 2015<sup>a</sup>) which can lead to their deleterious state of health. In order to evaluate the exposure levels of these populations to mercury, their hair samples were collected, analyzed and confirmed (Menon and Mahajan, 2012). Hair is the most preferred bio-indicator as it provides a simple, integrative and non-invasive sample which can be removed painlessly (UNEP, 2007).

Several environmental factors influence the amount of mercury (Hg) accumulation in human scalp hair. Apart from external factors of contamination, Hg absorption occurs through ingestion of various food products contaminated with mercury compounds. Out of the various food components, fish consumption is the main source of Hg exposure. Body retention of Hg is dependent on various factors like Dietary Intake (DI) of Hg by the individual, age, gender, period of exposure etc. (Yasutake *et al.*, 2003). In this study, hair samples of the traditional fishing folk residing in five villages located along Ulhas River Estuary and Thane Creek were analyzed for mercury accumulation and then hair Hg levels were correlated with their age in order to study age-related vulnerability of the populations to mercury toxicity.

## Materials and Methods

### i. Study Areas

Hair samples of individuals were collected during a prospective survey conducted in the study areas. The present study examined a relatively large group of people with a potentially high intake of mercury, namely the substantial fish-eating communities along URE and TC. The details of study areas are as follows:-

Wehele, (73°03' E, 19°14' N) situated on the northern bank of URE opposite to Dombivli, is a highly polluted area. It is a small village where the locals are subsistence fish-eaters. Though most of them have shifted to some other professions, a few families still are engaged in fishing.

Alimgarh, (73°02' E, 19°12' N) which is equally polluted,

is a village situated on the northern bank of the URE where the locals catch and consume fish from the site.

Diwe-Kewni (73°00' E, 19°16' N) are twin villages situated on the northern bank towards the seaward end of the estuary and therefore less polluted. Very few families now practice fishing however many of the locals consume fish three times a day.

Vittawa (72°59' E, 19°11' N) is a small village along the western bank of TC, easily accessible from the cities of Thane and Navi Mumbai. Very few families are engaged in fishing here but most of the locals rely on fish as their staple food.

Airoli, (72°59' E, 19°18' N), a small village on TC, too is highly influenced by the surrounding developing cities. Fishing is practiced but by very few families only and the fish caught is used for their own household consumption and if in excess, sold in nearby markets. (Refer fig.1)

### ii. Questionnaire

The survey was conducted in the study areas with a custom-made questionnaire. This questionnaire included socio-demographic characters, anthropometric details of the subjects, and their fish consumption details of approximately past 4 months. This was necessary as 1 cm of length of hair strand from the root indicated past one month Hg exposure by the individual. As three cms long hair samples were collected and approximately 0.5 cm of hair would remain near the scalp, the fish consumption pattern of the previous four months was recorded.

### iii. Collection, digestion and estimation of Hg in hair samples

Hair samples from volunteered subjects were collected by cutting the hair at the base from the occipital region of the head. Proximal end of the hair sample was tied with a thread and hair samples were carefully placed in polythene bags of size 10 cms x 7.5 cms, sealed, labeled appropriately and brought to the laboratory for further processing. One bundle of hair sample approximately

## Study of age as a factor for hair mercury accumulation in fish consumers residing along Ulhas River Estuary and Thane Creek near Mumbai

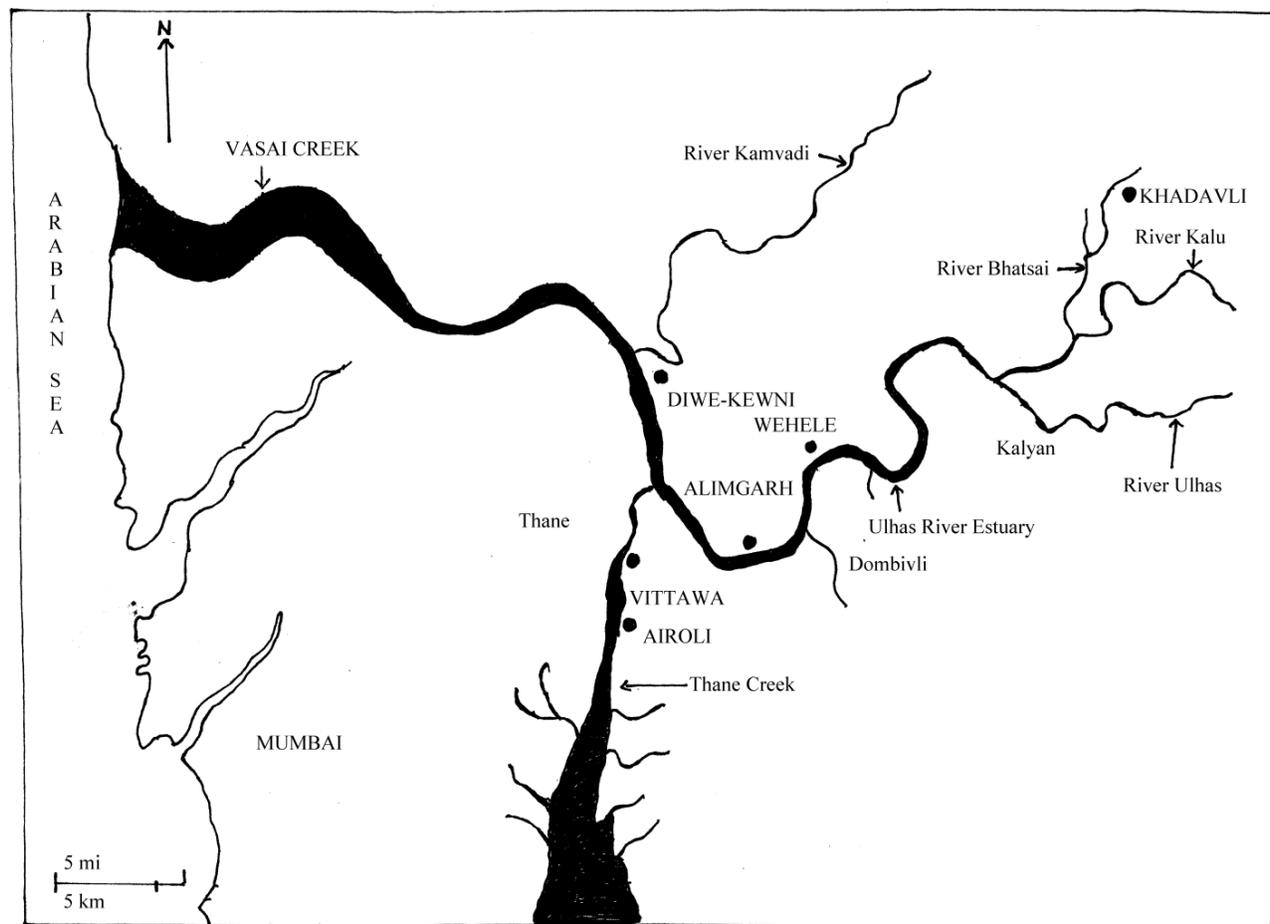


Fig. 1 Map of Ulhas River Estuary, Thane Creek and Study Villages

contained 300 to 350 strands of hair. Thereafter, 3 cms hair sample corresponding to the months described in the dietary assessment questionnaire was cut from the proximal end of both men and women, which would reflect Hg exposure for the past three months. The procedures of collection, digestion and estimation of hair samples have been detailed in the paper by Menon and Mahajan (2012). In brief, the hair sample was washed with a mild detergent and cleaned with acetone two times. Then 1 gm of sample was accurately weighed and separated. It was cut in to pieces by using sterilized s.s scissors and treated with chemicals for digestion as per the APHA, AWWA, WPCF method (1981). This included addition of concentrated sulphuric acid, nitric acid, potassium permanganate and potassium persulphate

and then heating the sample on a water-bath at 70 °C to breakdown organic compounds and oxidize the released Hg to Hg<sup>2+</sup>. Prior to the analysis by Mercury Analyser, NaCl-hydroxylamine was added to reduce the excess of oxidants. Then, SnCl<sub>2</sub> was added which acted as a reducing agent and released Hg vapours from the sample. Hg concentration was then estimated on Mercury analyser MA 5804 (AAS) at BARC and expressed in µg/g.

#### iv. Quality control

Accuracy and precision of the analyses were assessed using NRC, CANADA certified standard reference material-DORM-3 which showed a recovery of 94.27%. In addition, sample duplicates, reagent blanks and spiked



samples were also included. Reagent blanks showed values below detection limit. Spiking method showed a mean recovery of 97.68 % for hair samples. The precision for duplicate analyses was good with a relative standard deviation of 0.061.

#### iv. Calculation of Dietary intake of mercury

In the present study, subjects having same dietary intake of Hg were only selected for the survey. For determining the dietary intake of Hg through fish consumption in an individual, the information about four elements is necessary, viz; 1. Species of the fish consumed, 2.Hg concentration in each species, 3. Quantity of fish consumed per week and 4.Weight of the subject. Using the above information, Dietary intake of Hg of every fish consumer was calculated, the method of calculation has been detailed by Menon and Mahajan (2015<sup>b</sup>).

The uniqueness of the present study is that while correlating hair Hg levels with age of the individuals, all the other variables were kept constant for a precise

conclusion. This type of study has not been sighted in the references from all over the world.

#### v. Procedure to determine relation between age of individuals and hair Hg concentration.

Age-wise hair Hg level was estimated in the subjects from all locations. For this study, hair samples of only males residing in that village since birth were selected because their period of stay coincided with their age. Also, the subjects having dietary intake of Hg in the range of 1 to 2  $\mu\text{g}/\text{kg}/\text{body wt}/\text{week}$  were only selected for the study. The significant difference in the results obtained was further subjected to statistical assessment by ANOVA-two way method along with age-wise Hair Hg concentrations.

### Results and discussion

Table 1 and figure 2 show the age wise hair Hg accumulation in the populations of all the study areas having Hg Dietary Intake of 1 to 2  $\mu\text{g}/\text{kg}$  body weight/ week.

**Table 1: Average hair Hg concentration in  $\mu\text{g}/\text{g}$  in the different age-groups with Hg dietary intake of 1 - 2  $\mu\text{g}/\text{kg}$  body wt/wk in the study areas**

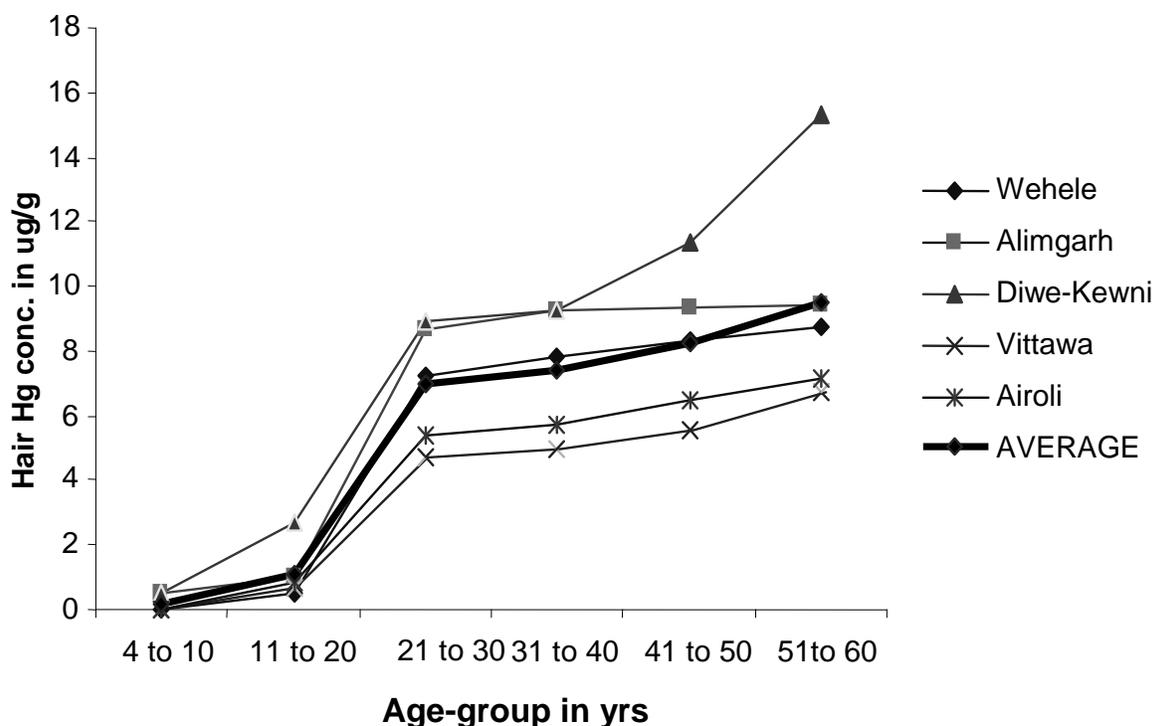
Locations	Age-group in yrs	Age-group in yrs			Age-group in yrs			Age-group in yrs			Age-group in yrs	Age-group in yrs
	N	4 to 10	N	11 to 20	N	21 to 30	N	31 to 40	N	41 to 50	N	51 to 60
Wehele	3	0	9	0.5	8	7.2	4	7.84	9	8.33	5	8.71
Alingarh	3	0.5	8	1	10	8.69	12	9.28	5	9.37	2	9.44
Diwe-Kewni	4	0.5	7	2.68	3	8.92	6	9.28	5	11.39	5	15.29
Vittawa	2	0	3	0.68	13	4.71	5	4.98	2	5.54	2	6.73
Airoli	2	0	8	0.83	11	5.37	4	5.68	6	6.46	3	7.17
Avg		0.2		1.13		6.97		7.41		8.22		9.47

\*N indicates number of individuals

## Study of age as a factor for hair mercury accumulation in fish consumers residing along Ulhas River Estuary and Thane Creek near Mumbai

The results showed a good correlation between age and hair Hg concentration. Despite keeping the dietary intake of Hg constant, very low levels of Hg in hair was observed in children which increased to a higher level

in the age-group 21 to 30 yrs, thereafter showing a very trivial increase in the age-group 31 to 40 and 41 to 50 yrs. After 50 yrs, a gradual increase was observed in all the study areas except Alimgarh.



**Table 2: ANOVA-two way results for location-wise and age-wise hair Hg levels**

ANOVA-Two way Table						
Source of Variation	SS	df	MS	F	P-value	F crit
Age-groups	40.658	3.000	13.553	23.271	0.000	3.098
Locations	195.242	4.000	48.810	83.812	0.000	2.866
Interaction	29.023	12.000	2.419	4.153	0.002	2.278
Error	11.648	20.000	0.582			
Total	276.570	39.000				

Statistically, a high positive correlation was obtained between age group and hair Hg concentration with the value of correlation coefficient,  $r = 0.877$ . ANOVA-two way test also revealed significant differences in the

values and even exhibited a considerable interaction effect between the two. Numerous studies conducted on hair Hg levels from all over the world have concluded that rate of accumulation of Hg in hair increases with



age and many of the observations are well in tune with the present work (Agussa *et al.*, 2005, Diez Sergi *et al.*, 2008). However, in all these studies there is no mention about the dietary intake of Hg. In fact, the present work is more precise as the influential parameters like dietary Hg intake, location and fish consumption pattern were kept constant in this study.

The reason for this increase in the Hair Hg accumulation with an increase in age was mainly attributed to the period of exposure. In the present study, the period of exposure being low in children, the rate of accumulation of Hg in hair is also low. As age increases, there is also a subsequent increase in the period of exposure to Hg. This leads to an increase in the rate of hair Hg accumulation. The second factor that influences hair Hg accumulation is the bio-transformation mechanism that develops with age. Bio-transformation mechanism is the process of metabolic conversion of methyl-mercury to inorganic mercury in order to facilitate its elimination (WHO Environmental Health Criteria 1: Mercury, 1976). Biotransformation played an important part in determining the rate of excretion of mercury from the body (Swensson and Ulfvarson, 1968). In children, bio-transformation mechanism is not fully developed in the initial stages (WHO Environmental Health Criteria 1: Mercury, 1976). In the later stages, the bio-transformation mechanism builds up, leading to a higher rate of detoxification. So although the exposure continues, the rate of accumulation in hair remains almost constant. The net result is a uniform state of hair Hg accumulation thus stabilizing the hair Hg concentration for the next two age-groups. After the age of 50, the mechanism of bio-transformation reduces, resulting in a greater rate of accumulation in hair as seen in the figure. An increase in the hair Hg levels with age was thereby observed in all the study areas.

Yet another factor could be the reduced secretion of Glutathione. Clarkson and Magos (2006) illustrated that Glutathione, a detoxifying tripeptide plays a key role in methyl-Hg metabolism, especially in biliary excretion of Hg. As per the studies by Tanaka *et al.* (1991) on rats, biliary excretion depends on age. Although there are

no confirmatory results of the same on humans, results showed that bio-transformation mechanism developed at later stages. This could explain the reason of an almost steady state of hair Hg accumulation in adults of age-group- 21 to 50 yrs. Above 50 yrs, hair Hg once again showed an increase in its levels. This was due to age-related physiological changes that take place in old people. Of these, changes that impair hepatic and renal functions play a significant role in decreasing absorption, distribution, metabolism and excretion of drugs (Sandhiya and Adithan, 2008) and so even mercury. Thus the accumulation of toxic substances in the body of elderly people increase.

Another important age related change is reduced renal clearance seen in 2/3<sup>rd</sup> of the elderly patients (Betram, 2007). Renal clearance is reduced due to decreased renal blood flow, glomerular filtration rate and tubular secretion. Drugs, mainly excreted via kidney, have a prolonged half-life in patients with reduced renal function resulting in drug toxicity. These factors may be responsible for higher levels of hair Hg in old people. This showed that bio-transformation mechanism reduces at older ages which attributed to higher Hair Hg levels in the present study. A handful of hair samples of individuals greater than 60 years analyzed showed Hair Hg greater than the remaining groups. Since Hg accumulates in the body and older people tend to have a more traditional diet, age is positively associated with exposure of Hg (WHO Food additive series, 44, 2000).

Thus, the present investigation concluded that as age increased, hair Hg levels also increased significantly. Children are at increased risk of exposure as detoxification mechanism is poorly developed. But in adults it reaches a steady state as detoxification mechanism is well developed, thereby maintaining a balance between rate of absorption and rate of elimination. These studies also indicate that aging population may be particularly susceptible to the effects of Hg exposure as renal clearance is affected in elderly and geriatric population.

## Study of age as a factor for hair mercury accumulation in fish consumers residing along Ulhas River Estuary and Thane Creek near Mumbai

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### Recommendations

Children and elderly people should reduce the consumption of estuarine/creek fish in order to refrain from mercury poisoning.

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## Fractal Approach to Climate Change Vital Sign

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### ABSTRACT

*The characterization of irregular shapes is often attempted using fractal geometry that may not be attempted by Euclidean geometry. Fractal analysis has become a very famous tool in all branches of scientific research including biology and medicine. In general, a set having non-integer dimension is a fractal. Fractal Dimension is always between one- and two for two dimensional planes. The more space of the curve, the more it fills the plane the fractal dimension will be closer to 2. This paper discuss fractal approach to climate change effect on water in snowpack in the Tuolumne River Basin in California's Sierra Nevada in 2014 and 2015 taken by NASA's Airborne Snow Observatory using box count technique.*

**Keywords:** *Fractal, Fractal Dimension, Climate change, Tuolumne River Basin, Box count*

### Introduction

Fractal geometry is developed as a new geometry of nature <sup>[1,4]</sup>. It was conceived in 1975 by Benoit B. Mandelbrot, with the aim to describe the complexity of forms and processes met in nature <sup>[5,6]</sup>. Earlier standard quantitative methods in science were based on classical Euclidean geometry <sup>[7]</sup>.

The patterns created by water as it seeps into the soil or flows through coffee grinds or any powder for that matter, are described by fractals known as percolation clusters. Electrical Discharges and the growth of some crystals generate fractal shapes. Some solidification processes also lead to self-similar patterns and fractals <sup>[8]</sup>. Gas particle hitting a solid aggregate to form a crystal by releasing energy, also exhibit fractal

character <sup>[9]</sup>. Formation of lakes is also governed by innumerable competing random processes that include rains, flow of water, climate changes, properties of soil and land, flora and fauna of that region.

Many naturally occurring processes and plants show fractal structures: for example trees, the roots of the trees of the cauliflower and broccoli. The patterns of blood vessels in the human body, kidney, the lung, and some types of nerve cells have fractal feature. In material sciences, fractals appear in polymers, gels, ionic glasses, aggregates, electro-deposition, rough interfaces and surfaces <sup>[10]</sup>, as well as in fine particle systems. The fractal dimension is a measure of roughness of features. Geophysical data like topography, magnetics, surface gravity exhibit power law and scale invariance. Although concept of fractals can be used to quantify the



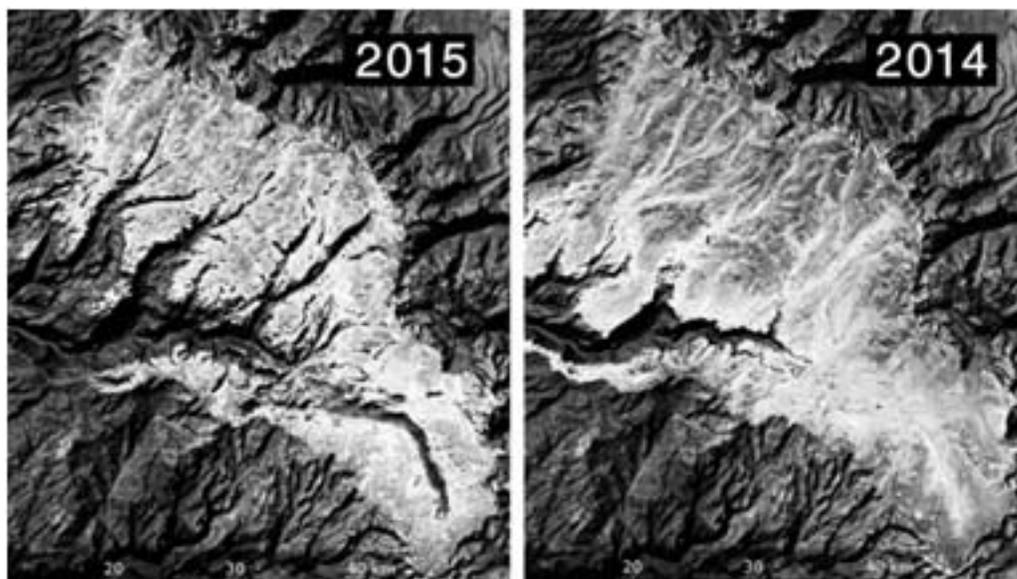
distribution, it is now considered to be a tool that gives deeper insight into the processes responsible to giving rise to such shapes and distributions.

Topography of earth is a result of innumerable competing process having different levels of influences of various kinds. This includes tectonic processes, faulting, folding and flexure. The topography is modified and destroyed by processes like erosion and sedimentation <sup>[11]</sup>. River trees are typical example and exhibit fractal character. Topography often appears to be complex and chaotic

<sup>[12]</sup>, yet there is order in complexity. More the effect of random processes affecting the topography, greater is the complexity and details to the resulting shapes.

### Methodology

For the present paper image of Spatial distribution of the total volume of water in the snowpack across the Tuolumne River Basin on March 25, 2015 (left) and April 7, 2014 (right) as measured by NASA's Airborne Snow Observatory <sup>[13]</sup> has been taken as shown in Fig.1.



**Fig.1: Spatial distribution of the total volume of water in the snowpack across the Tuolumne River Basin on March 25, 2015 (left) and April 7, 2014 (right) as measured by NASA's Airborne Snow Observatory**

The pictures were then processed by converting them into 256 gray scales then converted to two color bitmaps for further analysis and stored asBMP files as shown in Fig.2.

For box counting technique, programs written in Turbo-basic were used. The programme converts the bitmap file into a matrixfor counting the occupied cells using different size of boxes and keeps record of the same. Thus using different box sizes ( $r$ ), the number of boxes ( $N$ ) required to cover the pattern is counted and the results are saved in a file for further use and processing.



**Fig.2: Two color bitmap of Fig.1**

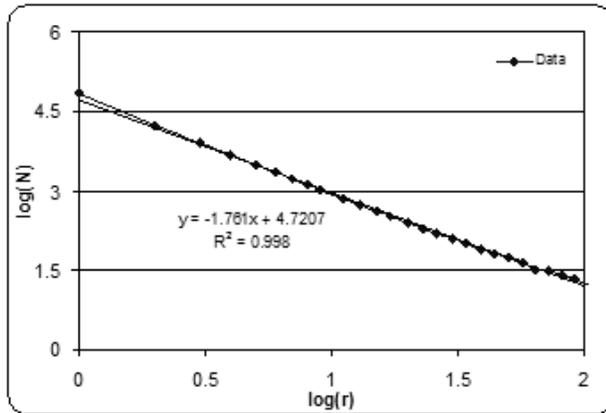


Fig. 3: Plot of log (N) versus log( r ) of the year 2015

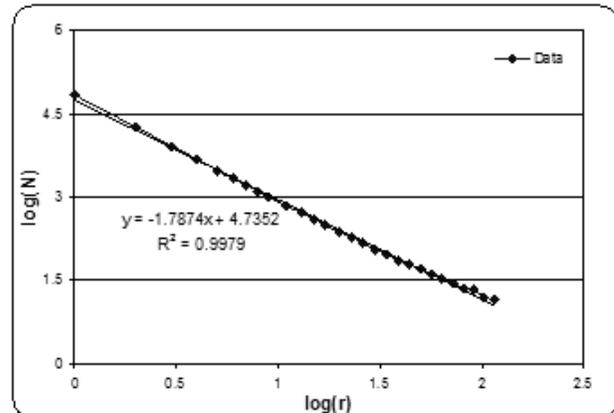


Fig. 4: Plot of log (N) versus log( r ) of the year 2014

### Result and Discussion

A log (N) on y-axis and log (r) on x-axis is plotted are shown in Fig. 3 and Fig.4 , the points shown in the plot are actual data points and the line joining the points is the least square fit applied to those points. The equation in the inset is the equation best representing the data. From the slope of the line, the fractal dimension of the shape is found. It is observed from the Fig.3 that the fractal dimension is 1.761 which shows that in the year of 2015 the volume of the water is less compare to the Fig.4 fractal dimension of 1.787 of the year of 2014 as shown in the Table-1.

Table 1 shows summary of fractal dimension of water volume of the two year

Sr. No.	Fig. No.	Year	Fractal Dimension of Box Count	R <sup>2</sup> values
1	3	2015	1.761	0.998
2	4	2014	1.787	0.998

### Conclusion

The study of shapes of two different years of volume of water, box-counting technique indicates that depending on the complexity of shape and space filling, the resulting fractal dimensions are different as shown in the Table 1. Shapes having more space filling to their structure exhibit higher fractal dimension shows that the water volume is more in that as compared to those having less fractal dimension. As seen from the table, Fig.4 has limited details to their shape and exhibit higher fractal dimensions because of their space filling.

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## Conceptual Analysis of Smart Cities and Related Concepts

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### ABSTRACT

The concept of smart city embraces several of components such as intelligent city, Digital city, Sustainable city, Virtual, Ubiquitous, *wired city etc.* Today's technological advancement and economic growth has contributed towards increased well being of the human beings mainly in the urban areas fostering in urbanization, thereby contributing towards a progressive abandonment of rural areas into urban cities. Resulting in both positive and negative effects such as increased opportunities in terms of work, education, social life, improved economic conditions, infrastructure development. whereas on the other side negative effects are also there such as increased traffic jams, carbon dioxide, greenhouse gases emission, waste disposals, open space problem, air, water and noise pollution etc.

*In such a scenario the need to save the earth, peoples, environment, health gave birth to the concept of Smart City. Smart Cities are Urban innovations and transformation initiatives that aims to harness physical infrastructure, ICT, Knowledge resources, social infrastructure for economic regeneration, social cohesion, better city administration. Smart cities are basically concerned with the transformation of the life of the people, their work, inhabitants. It emphasizes on human collaboration for idea generation, deriving benefits for individual, society and the nation as the whole. It inculcates the ability of meeting the present needs without compromising with the future, neither the environment well being. It Provides a sustainable and environment friendly type of solutions to the nations varied problems.*

**Keywords:** *Smart City, Sustainability, Environment health, Better living standards, Progressive technological developments, Human collaborations etc.*

### Introduction

Smart city is a broad concept including many aspect of Urbanization such as Urban planning, sustainable development, environment well being, energy conservations, its proper utility, economic developments, technology, social cohesion etc. The concept of Smart city is based on the use of ICT to improve and transform

life and work of the people in the society in a sustainable and healthy way, based on the people, society, education, learning and knowledge as key drivers for the change, it also inculcates the governance and policies drafted , implemented by the government. It concerns with the different innovative practices to be brought in order to make optimal utilization of resources, that leads in a less exploitative and more of conservative, total utility



based approach. The main feature of smart city is in the centrality of people, well being of the residents and its essence. In short a Smart city is a forward looking city in varied areas of economy., people, society, governance, environment, mobility, lifestyle, resources utilization etc. The essence of smart cities are information access, lifelong learning, digitalization, social inclusion, economic, sustainable development, economic growth, higher quality of life, innovative socio-technical and socio economic growth of the city. Smart city extends its scope with different approaches such as Modern communication, infrastructure, investment in human and social capital, policy innovation, planning, governance etc.

### Objective of the study

The present study is made with the following Objectives:

1. To study the concept of Smart City.
2. To study the overview about the components of smart city and its impacts.
3. Analyze the benefits of sustainability, environment, social well being.
4. Point out the drawback, changes required in the Indian Cities.

### Methodology

The research methods adopted in the study combines research mapping of scholarly publication, secondary data such as journal articles, data collected through books, websites, newspapers, magazines etc.

### Literature Review

There are various research work being undertaken by the researchers on the topic. However, there are few research papers, reports, theories, Books which have created interest to undertake this research are given below:

1. The Death and Life of Great American Cities (Jane Jacobs, 1961) turned the world of city planning on its head. It consist mainly of common sense

observations, statistical information, economics, sociology and philosophy.

2. The new science of cities (Michael Batty, 2013) with fascinating historical excursus, idea of developing and measuring the urban field- big data phenomenon.
3. Urban Ecology: Science of Cities (Richard T.T.Forman,2014) illuminated to employ urban ecology both inventively and credibly by many insightful analytical diagrams. It gave a synthetic understanding of urban ecology, standard of reference to participate in ecological design, planning.
4. The Responsive City: Engaging Communities through Data-Smart Governance (Stephen Goldsmith. Susan Crawford,2014) a practical book, full of good practices, cases, solutions worked out by smart who put some great ideas into practice.
5. Smart Cities: Big Data, Civic Hackers and the Quest for a new Utopia (Anthony M. Townsend, 2014) Anthony Townsend takes a holistic and interdisciplinary approach and manages to give a spherical view of the current status of smart cities and where they are heading.
6. The Black & Veatch 2016 *Strategic Directions: Smart City/Smart Utility* report follows communities and utilities as the smart infrastructure movement gains momentum. Utilities are beginning to extract value from a decade's worth of infrastructure and automation investments.

According to the Recent smart city trends: empowered citizens on the rise tailored public services to increase resource efficiency. 80 percent of the population currently lives in cities. Population growth and aging, climate change and pollution—all these are the de facto trending topics in our current societies and all of them contribute to the pressure on public resources availability. Faced with the challenge of maintaining citizens' quality of life and living, the smarter move for governments was

## Conceptual Analysis of Smart Cities and Related Concepts

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to combine and use the increasing availability of data and advances in research on the technology of things, and this way optimize the delivery of services.

Therefore, The Smart City Reference Framework, is driven by the following guiding principles: well-being, Equity, Efficiency and Foresight.

“Smart city is defined by IBM as the use of *information and communication technology* to sense, analyze and integrate the key information of core systems in running cities”

### **As defined by California Institute**

*“A smart community is a community that has made a conscious effort to use information technology to transform life and work within its region in significant and fundamental rather than incremental ways”*

### **As per the Press release dated January 28, 2016 (THE HINDU)**

A ‘smart city’ is an urban region that is highly advanced in terms of overall infrastructure, sustainable real estate, communications and market viability. It is a city where information technology is the principal infrastructure and the basis for providing essential services to residents. There are many technological platforms involved, including but not limited to automated sensor networks and data centre’s.

As per the Press release dated Nov 07, 2016 THE TIMES OF INDIA, A smart city is a city equipped with basic infrastructure to give a decent quality of life, a clean and sustainable environment through application of some smart solutions with basic infrastructure like Assured water and electricity supply, sanitation and solid waste management, efficient urban mobility and public transport, robust IT connectivity, e-governance and citizen participation, safety and security of citizens. Smart solutions like Public information, grievance redressal, electronic service delivery, citizens’ engagement, waste to energy & fuel, waste to compost, 100% treatment of waste water, smart meters & management, monitoring

water quality, renewable source of energy, efficient energy and green building, smart parking, intelligent traffic management system.

### **Features of a smart city**

- Promoting mixed land use in area based developments.
- Planning for unplanned areas with wide range of compatible activities.
- Adaptation of flexibility in land use and building bye-laws.
- Housing opportunities for all.
- Creating walkable localities by reducing congestion, minimizing air pollution, boosting local economy, refurbishing road networks for pedestrians, transports etc.
- Preserving and developing open spaces like parks, playgrounds, recreational spaces to enhance the quality of life of the citizens, promote eco-balance.
- Promoting a variety of transport options- Transit Oriented Development, Public transport, Para transport connectivity.
- Making the governance system citizen-friendly and cost effective by introducing online services to bring accountability and transparency.
- Give city identity- based on its main economic activity such as local cuisine, health, education, art, crafts, sports, culture furniture etc.

According to the UN, India will add the greatest number of people to it’s urban population in the next 50 years. According to the report, India will add 500 million people to it’s cities by 2050. To accommodate this population, India must build smart cities to add to the existing crowded cities. The usage of smart technology would allow a city to run itself efficiently and would provide a partial solution to the various problems plaguing our cities.

### **Need for Smart City**

The following needs found out exhibits the importance, essence of smart city to be incorporated in the India.



1. Enable efficient asset allocation and situation management.
2. Reduce greenhouse emissions
3. Reduce energy consumption
4. Improved waste management practices.
5. Ability to serve citizen better.
6. Improve operational efficiency
7. Reduce resource consumption
8. Interconnectivity can provide benefits of greater communication
9. Economic gains would be readily procured
10. Ability to make transportation more efficient, and thus increase labor productivity

First Level of competition which is to be held at the State or UT level wherein each city would make its presentation in front of a team of panelists. This level requires completion of some conditions which precede the point-based evaluation criteria.

There are four conditions to be satisfied by each city, such as

- Undertaking by the State to make City Smart,
- Constitution of inter-departmental task force including ULBs, UDAs and para-statal bodies to achieve this objective,
- Resolution by the elected council of city to make the City Smart, and
- Holding consultations with the residents on development priorities.

### Criteria for Selecting Potential Smart City

Selection of Smart Cities is based on two levels of competition. First, at the State or Union Territory level, leading to selection of cities. Second is for priority-based funding out of selected cities.

These set of conditions are required to be fulfilled at first. After this, case of each city was considered against the following parameters:

### 13- point parameter for ranking cities are —

Existing Service Levels	Points
Increase on number of household sanitary latrines over Census 2011 or Swachh Bharat baseline (whichever is less)	10
Operation of Online Grievance Redressal System with provision of response being sent back to complainant	5
Publication of at least first monthly e-newsletter	5
Information on Project-wise municipal budget expenditure for the last two financial years to be placed on website	5
Institutional Systems/ Capacities	
Compensatory penalty levy for delays in service delivery	5
Collection of internally generated revenue during the last three FYs (2012-15)	10
Self-financing	

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Payment of salaries by ULB up-to last month	5
Audit of accounts up-to FY 12-13	5
Percentage contribution of tax revenue, fees and user charges, rents and other internal revenue sources to the ULB Budget (actuals in 2014-15)	10
Percentage of establishment and maintenance cost of water supply, which is met by collected user charges for supply of water during last FY (2014-15)	10
Past track record and reforms	
Percentage of internal revenue sources (self-generated) budget funds used for capital works during FY (2014-15)	10
Percentage of City-level JnNURM Reforms achieved (Form2, Part 14)	10
Percentage of JnNURM projects completed, which were sanctioned during the original Mission period (upto 2012)	10

Once the cities are selected, the next level is of financing. These selected cities will formulate Smart City Plans which will also be evaluated on the basis of following parameters. Top 20 scorers will be financed during the first year and remaining 80 would be selected in batches of 40 each for financing during next rounds.

### Criteria for Evaluation of City Plans

- At City-level,
  - Credibility of Implementation- Average time taken for approving building plans, rise in property tax assessment and collection, water user charge collection, power supply improvements, traffic congestion easing, using IT for statutory form access and submission, etc.
  - Vision and Strategy- Use of Information, Communication technology to improve delivery of public service, core economic activities and inclusiveness.

- At Proposal- level,
  - Impact of proposal- on poor and disadvantaged. Employment generation, impact on environment, etc.
  - Cost effectiveness
  - Innovation and Scalability
  - Processes followed

The implementation of the Smart City Mission at the city level will be done by a special purpose vehicle (SPV) created for the purpose. The SPV will plan, apprise, approve, release funds, implement, operate and evaluate the smart city development projects. The SPV will be a limited company incorporated under the Companies Act 2013 at the city level in which the state/ union territory and the ULB will be the promoters having 50:50 equity shareholding. Funds provided by the central government under the Smart Cities Mission to the SPV will be in the form of tied grant and kept in a separate grant fund, the government said. The central government will give Rs 48,000 crore over the next five year, on an average Rs 100 crore per city per year, as financial support.



## Smart City Strategy

Smart city strategic components includes area based developments for city improvements - retrofitting, city renewal - redevelopment, city extension- Greenfield development, pan city initiative.

- **Retrofitting :-** Planning in an existing built up area to achieve smart city objectives, i.e, making it more efficient and live able in a shorter time frame .
- **Redevelopment :-** replacing an existing built up environment, enable co-creation of new layout with enhanced infrastructure using mixed land use and increased density.
- **Greenfield :-** making developments in an previously vacant area with smart solutions - innovative planning, planned financing, affordable houses for poor, meeting the needs of the expanding population.
- **Pan-city:-** Developments encompassing smart solutions to be applied in already existing city-wide infrastructure.
- It may also include a composite, a combination of different strategies too such as retrofitting, redevelopment or greenfield development

## Smart City Challenges

- Smart city needs engaging with a broad spectrum of stakeholders.
- It may excludes segments of the population based on socioeconomic factors.
- Communicating the value of smart city project to investors.
- Rising government debt.
- Needs clearly defining role of all stakeholders such as government, industries, citizens etc.
- lack of a single customer

- open data creates new risks and challenges.
- Needs regulatory framework.

## Recommendation for Smart City Challenges

Below is a list of best practices-based recommendations for creating smarter cities — helping governments initiate, optimize, and evaluate smart city initiatives.

- Broadband internet, sensor networks, and Internet of Things (IoT) platforms are key components of any smart city implementation.
- **Connect, communicate, and celebrate** with citizens via community portals and social platforms, keep them informed about progress through communication sessions and social media.
- **Build a city for the people-** Smart city projects should be inclusive, participatory, and social. Launch digital equality initiatives and organize end-user education
- **Identify appropriate milestones and metrics** to measure performance and monitor progress. Define a multicriterion framework, mixing quantitative and qualitative indicators, customized for specific objectives.
- **Embrace open data and open government policies** - Public data and information from government and other sources can help solve civic problems and create new business opportunities.
- Incorporate smart requirements into publicly funded infrastructure programs in areas such as mobility, healthcare, security, lighting, environment, energy, construction, and communications.
- Launch and support cross domain initiatives, such as smart transportation, smart energy, or smart home programs that leverage across sectors and applications.

## Conceptual Analysis of Smart Cities and Related Concepts

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- Stimulate ecosystems and cultivate a collaborative culture. Private industry partners such as project developers, service providers, and technology vendors must play a key role to play in developing smart cities. Governments should boost innovation and collaboration through initiatives like innovation labs, developer contests, and application playgrounds.
- Cities are encouraged to use the “Smart City Assessment Framework” as an internal management tool for assessing the status quo of their smart city development and to identify any gaps and weaknesses

### Conclusion

Smart city is thus present and the future requirement of the Nation. Enabling Internet diffusion among citizens in everyday life, it emphasize on the use of ICTs for public administration, provide better public services and e-services, technology resulting in increase urban wealth, innovation and entrepreneurship, social cohesion; reduced urban crowding. Smart city brings about an improvement of urban planning, safety and sanitary conditions, power demand sustainable, CO2 emissions and greenhouse gases; it also reduce traffic congestion. Smart city thus follows a new paradigm that promotes economic development while reducing greenhouse gas emissions and pollution, minimizing waste and inefficient use of natural resources , conserving and maintaining biodiversity.

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## Biological Control of Sugarcane Pests By Their Parasitoids

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### ABSTRACT

*Sugarcane (Saccharumsp.) is widely grown in India, its cultivation and processing is an important source of agricultural income. The extensive damage of sugarcane crop through different insect pests belonging to order Lepidoptera and Hemiptera results in poor yield. The damage starts from the time of planting till harvest. The poor growing conditions and inefficient control methods result in heavy damage by pests in our country. For high yield these insect pests should be controlled. Eulophid parasitoids which belongs to the family Eulophidae of the order Hymenoptera, are the natural enemies which control the insect pests. These parasitoids have been recorded from eggs, larvae and pupae of the pests. The genus Tetrastichus belonging to the family Eulophidae are the main parasitoid over the sugarcane insect pests. Parasitoid – host list is reported in this paper, in a view to enable the entomologists to exploit the suitable parasitoids in the field of biological control of sugarcane pests. Chemical control is hazardous to other beneficial insects and human health, but the biocontrol is safe in all respect.*

**Keywords:** *Eulophidae, Parasitoids, Insect pests, Sugarcane, Biological control.*

### Introduction

Directorate of Sugarcane Development, Lucknow (2013) reported that in Indian agriculture sector, sugarcane shared is about 7% of the total value of agricultural output and occupied approximately 2.6% of India's gross cropped area during 2006-07. They also mentioned that sugarcane provides raw material for the second largest agro-based industry after textile. Sugar being the major product of sugarcane, the domestic demand of sugar is rotating around 22-23 million tonnes annually. Maharashtra is the largest producer of sugar contribute approximately 34% of sugar in the country followed by Uttar Pradesh.

The genus *Saccharum* has five important species, i.e. *Saccharumofficinarum*, *S. sinense*, *S. barberi*, *S. robustum* and *S. spontaneum* of which first three species are the cultivated species and the last two are wild ones. *S. officinarum* species is widely cultivated in India owing to its high sucrose content.

Sugarcane is vulnerable to attacks by a number of insect pests and diseases. According to Directorate of Sugarcane Development, Lucknow (2013), sugarcane production declines by 20% and 19% by insect pests and diseases respectively. Thus to intensify the sugarcane productivity, management of insect-pest and diseases is of immense importance.

## Biological Control of Sugarcane Pests By Their Parasitoids

Butani (1958), Chandra et al. (1980) and Shafee&Avasthi (1989) gave the list of chalcid parasitoids attacking different species of insect pests in India. Since then a large number of species have been recorded and it is the object of this paper to give the list of Eulophid parasitoids of sugarcane pests. The present study based on insect pest species of sugarcane belonging to the orders Lepidoptera and Hemiptera attacked by different species of Eulophid parasitoids in India. These parasitoids have been recorded from eggs, larvae and pupae of the pests.

### Materials and Methods

Parasitoids and their pests (hosts) list was prepared by deep analysis, careful study and consultation of different research literature. In the present work an attempt has been made to compile available information on sugarcane pests and their Eulophid parasitoids from India.

### Result and Discussion

The insect pest's problem of sugarcane is becoming more and more acute every year. The main causes of the problem are: (i) rapid migration of pests from one region

to other, (ii) large increase in sugarcane acreage with consolidated holdings providing increased opportunity of food to the insect pests and (iii) the introduction of thick and soft cane plant which are more susceptible to insect borers. Most of the pest species are kept under check nature by their parasitoids. These parasitoids have been recorded from the eggs, larvae and pupae of the pests. The population of sugarcane pests are regulated by many of these parasitoids, as they are able to produce successive generation at a faster rate than their hosts.

The present study is based on 17 insect pest species of sugarcane belonging to order Hemiptera and Lepidoptera with a list of 15 species of different Eulophid parasitoids. Parasitoid-host relationship, parasitic species distribution and their references to papers are given in the table. From the perusal of this table, it is clear that *Pyrilla* sp. of family Lophopidae of the order Hemiptera and *Chilo* sp. of family Pyralidae, *Sessamia* sp. of family Noctuidae of the order Lepidoptera are parasitized by maximum number of parasitoids, while the different species of the genus *Tetrastichus*(parasitoid) were found attacking maximum number of pests of sugarcane.

**Table: List of Eulophid parasitoids of sugarcane pests in India.**

S.No	Parasitoids	Pests	Distribution	Sources/References
1.	<i>Anostocetus</i> sp.	<i>Chilotumidicostalis</i> Hamp.	MR	Butani, 1958; Shafee & Avasthi, 1989
2.	<i>Euderomphalesecundus</i> (Mani)	<i>Aleurolobusbarodensis</i> (Maskell)	DL	Husain & Khan, 1986
3.	<i>Euplectrusparvulus</i> Ferriere	<i>Pyrillaperpusilla</i> (Walker)	UP	Husain & Khan, 1986
4.	<i>Pediobiusacantha</i> (Walker)	<i>Marasmiatrapezalis</i> (Guenee)	KT	Husain & Khan, 1986
5.	<i>Pediobiuselasmii</i> (Ashmead)	<i>Chilosacchariphagus</i> (Walker)	KT, MP	Husain & Khan, 1986
6.	<i>Syntomosphyrumpyrillae</i> Khan &Shafee	<i>Pyrilla</i> sp.	UP	Chandra et al., 1980; Shafee & Avashi, 1989



7.	<i>Tetrastichusayyari</i> Rohwer	<i>Chiloinfuscatellus</i> (Snellen)	South India	Chandra et al., 1980; Shafee & Avashi, 1989 Butani, 1958 Subba Rao & Hayat, 1986 Subba Rao & Hayat, 1986
		<i>Chilopartellus</i> (Swinhoe)	TN, KT	
		<i>Chilosacchariphagus</i> (Walker)	KT	
		<i>Cnaphalocrocismedinalis</i> (Guenee)	South India	
8.	<i>Tetrastichusinferens</i> Yoshimoto	<i>Diatraeasticticraspis</i> (Hampson)	South India	Cherian & Subramanium, 1940 Cherian & Subramanium, 1940 Subba Rao & Hayat, 1986 Butani, 1958
		<i>Diatraeavenosata</i> (Walker)	South India	
		<i>Procerus indicus</i> Kapur	KR	
		<i>Sesamiainferens</i> (Walker)	TN, KT	
9.	<i>Tetrastichusisraeli</i> (Mani & Kurian)	<i>Argyria</i> sp.	OR	Butani, 1958; Husain & Khan, 1986
10.	<i>Tetrastichuskuriani</i> Husain & Khan	<i>Scirpophagaincertulas</i> (Walker)	OR	Husain & Khan, 1986
11.	<i>Tetrastichuspyrillae</i> Crawford	<i>Pyrillaaberrans</i> (Kirby)	All over India	Butani, 1958; Shafee & Avasthi, 1989 Butani, 1958; Shafee & Avasthi, 1989; Singh, 2015-16 Narayanan et al., 1957
		<i>Pyrillaperpusilla</i> (Walker)	All over India	
		<i>Saccharicoccussacchari</i> (Cockerell)	BR, DL	
12.	<i>Tetrastichusudaipurensis</i> (Khan & Shafee)	<i>Pyrillaperpusilla</i> (Walker)	OR, RJ	Husain & Khan, 1986
13.	<i>Tetrastichussp.</i>	<i>Chiloinfuscatellus</i> (Snellen)	TN, MR, KT	Butani, 1958 Subba Rao & Hayat, 1986 Krishnamurti & Usman, 1954
		<i>Procerus indicus</i> Kapur	KR	
		<i>Scirpophaganivella</i> (Fabricius)	KT	
14.	<i>Trichospilusdiatraeae</i> Cherian & Margabandhu	<i>Chilosacchariphagus</i> (Walker)	All over India	Husain & Khan, 1986; Shafee & Avasthi, 1989 Cherian & Margabandhu, 1942 Subba Rao & Hayat, 1986
		<i>Diatraeavenosata</i> (Walker)	South India	
		<i>Sesamiainferens</i> (Walker)	KR	
15.	<i>Trichospiluspupivora</i> Ferriere	<i>Cnaphalocrocismedinalis</i> (Guenee)	South India	Husain & Khan, 1986

**Abbreviations:** BR = Bihar, DL = Delhi, KR = Kerala, KT = Karnataka, MP = Madhya Pradesh, MR = Maharashtra, OR = Orissa, RJ = Rajasthan, TN = Tamil Nadu, UP = Uttar Pradesh

### Conclusion

The main object of this paper is to give detail list of sugarcane insect pest species attacked by Eulophid parasitoids, so far recorded from India. The present study is based on 17 insect pest species and 15 Eulophid parasitoids species reported from India.

The overall information has been compiled after a careful consultation of the available literature. In the opinion of the author, this information will not only be significant to the systematics but also to the applied entomologists, working in the field of biological control of sugarcane pests.

The approach of biological control is not only be a better replacement for chemical control but simultaneously prove to be a permanent and comparatively inexpensive method against insect pests. Chemical control is hazardous with respect to other beneficial insects and human health, but the biocontrol is safe in all respect. It is therefore biological control is being widely used in Integrated Pest Management. Thus, now-a-days it is well known that biological control has many advantages over chemical control method.

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## District wise Socio-Economic Development of Kashmir (J&K) – A Statistical Evaluation

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### ABSTRACT

*Nine main development indicators of agricultural, industrial and socio-infrastructure sector were evaluated on the basis of a composite Index (on principle component analysis) for ten districts of Kashmir Province of Jammu and Kashmir. Among 10 districts, the districts which stood best in agricultural sector were Anantnag and Baramulla with a combined rank of 1.5 whereas Srinagar stood last in agricultural sector with rank of 10. In Socio-Infrastructural sector, the district standing best was Srinagar with an overall rank of 2.22 and Ganderbal with a ranking of 8.11 showed poorest performance. Similarly in industrial sector Srinagar stood best with an overall rank of 1 whereas Ganderbal stood last in industrial sector with a ranking of 9.75. A comparative analysis of developmental indicators of economy reveal that Srinagar followed by Anantnag and Baramulla are developed Pulwama Budgam Kupwara and Kulgam are under developed while as Shopian Bandipora and Ganderbal are low developed. The results of the study provide planners and policy makers to take measures for improvements needed in different identified indicators for enhancing the level of development.*

**Keywords:** *Composite Index, Development Indicators, Principal Component Analysis, Ranking*

### Introduction

Jammu and Kashmir comprises of twenty two districts, ten districts are allotted to Jammu Province and ten districts are allotted to Kashmir, while as remaining two districts are Leh and Kargil. To focus the attention of policy makers, scientists, planners and administrators on the estimation of level of development, a series of research investigations were carried by the Indian Society of Agricultural Statistics, New Delhi. The level of socio-economic development was estimated for different states for the year 1971-72 and 1981-82 by Narain et al. (1991).

The study revealed that there were wide disparities in the level of development among different states. To take the analysis to deeper level on the estimation of level of development, district level estimation was analyzed in 1991-92 e.g. Orissa (Narain et al. 1992, 1993), Andhra Pradesh (Narain et al. 1994), Orissa (Narain et al. 2005), Jammu and Kashmir (Narain et al. 2005). The analysis was done for several other states as well in various years on same grounds and it was found that entire parts of low developed districts are not backward but there are some parts which are also better developed. In addition to these studies various other studies were done

where in the researchers tried to provide various dimensions to the concept of development, few worth mentioning are Rangacharyulu's (1993), Dutta and Choudhary (1995), Abhiman Das (1999) and Parihar, H.P. S and S. Srivastava (2003).

The present study is a district level analysis of Kashmir province of Jammu and Kashmir which throws light on the association of development in different sectors of economy in newly formed ten districts of Kashmir.

The geographical location of Kashmir is such that it is surrounded by a number of foreign countries. According to 2011 Population census, the population of Jammu & Kashmir was recorded as 1.25 crores in which Kashmir Valley alone contributes to around 70 lakh souls.

In the present study, the level of development is estimated separately for agricultural sector, industrial sector, infrastructural facilities based on composite index. It was felt to analyze the level of development at district level since there has been a growing consensus about the need of district level planning in the country. Knowledge of level of development at district level will help identifying where a given district stands in relation to others.

**Development Indicators**

The magnitude of development can't be analyzed fully by any single indicator. Moreover, a number of indicators when analyzed individually don't provide an integrated and easily comprehensible picture hence there is need for building up a composite index of development based on Principal Component analysis. Indicators common to all the districts have been included in the analysis for evaluating the level of development. Composite indices have been obtained for different districts by using Principal composite analysis of the data on the following developmental indicators.

1. Net Sown Area
2. Area Irrigated Density of Population
3. Density of Population
4. Loans Sanctioned Under Self-Employment Programme

5. Number of Bank Branches
6. Per Capita Deposits in Banks
7. Literacy Rate
8. Number of SSI Units
9. Number of Handicraft & Handloom Cooperatives

A total of nine developmental indicators have been included in the analysis. Out of nine indicators, two are related to development of agricultural sector, five indicators describe the availability of socio-infrastructural facilities in different districts of Kashmir valley and the remaining two indicators depict the progress of development in industrial sector.

**Principal Component Analysis**

A method for construction of development index based on Principal Component Analysis (PCA) has been employed. An exploratory analysis to investigate the overall structure of the indicators, assess the suitability of the data set and explain the methodological choices. In PCA, first of all Maximum Likelihood Estimate (M.L.E.) of variance –covariance matrix ( $\hat{\Sigma}$ ) was estimated by

$$\hat{\Sigma} = \frac{1}{n} \sum_{i=1}^n (X_i - \bar{X})(X_i - \bar{X})'$$

Where,  $\underline{X} = (X_1, X_2, \dots, X_Q)'$

$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i$  and n is total number of districts.

Then, Correlation matrix (CM) was obtained using above variance-covariance matrix as

$$CM = (\sqrt{V})^{-1} \hat{\Sigma} (\sqrt{V})^{-1}$$

Where, V is Diagonal matrix obtained from variance-covariance matrix and  $\hat{\Sigma}$  is M.L.E. of variance-covariance matrix.

Then, eigen values and eigen vectors of the correlation matrix were obtained using SPSS 20.0



**Construction of composite index or sub indices:** In the process of construction of composite index, first of all, principal components were evaluated using the eigen vectors obtained from correlation matrix of variables and standardized value of variables to be used in construction. The principal components were obtained using the formula given below

$$P_1 = a_{11}Z_1 + a_{12}Z_2 + \dots + a_{1Q}Z_Q$$

$$P_2 = a_{21}Z_1 + a_{22}Z_2 + \dots + a_{2Q}Z_Q$$

Where,  $P_q$ 's are principal components,  $Z_q$ 's are standardized values of sub-index or variable and  $a_{kq}$  is an element belonging to kth eigen vector and for qth sub-index or variable,

$$k = 1, 2, \dots, Q; q = 1, 2, \dots, Q.$$

Then, the composite index or sub-indices were constructed using the obtained eigen values of variables and principal components as given below

$$CI_i = \frac{\lambda_1 P_1 + \lambda_2 P_2 + \dots + \lambda_Q P_Q}{\sum_{j=1}^Q \lambda_j}$$

Where,  $CI_i$  is composite index for ith district,  $\lambda_j$ 's are eigen values and  $P_q$ 's are principal components,  $i = 1, 2, \dots, D; j = 1, 2, \dots, Q.$

After this, the composite index of each district was normalized using the following formula;

$$Cl = \frac{CI - \min(CI)}{\max(CI) - \min(CI)}$$

Where,  $Cl_{Ni}$  is normalized value of composite index of ith district,  $\min(CI)$  is minimum value of composite index and  $\max(CI)$  is maximum value of composite index among all districts. Thus, under a sound theoretical framework, meaningful sub indices and composite index were constructed.

**Table 1: Composite Index Findings on Agricultural Sector in Kashmir**

Districts	Net Sown Area	Area Irrigated
Anantnag	0.95	<b>1.00</b>
Kulgam	0.93	0.92
Pulwama	0.91	0.90
Shopian	0.87	0.85
Srinagar	<b>0.82</b>	<b>0.80</b>
Ganderbal	0.88	0.84
Budgam	0.89	0.95
Baramulla	<b>1.00</b>	0.96
Bandipora	0.87	0.82
Kupwara	0.96	0.91

**Table 2: Composite Index Findings on Socio-Infrastructural Sector In Kashmir**

Districts	Density of Population	SEP Loans	Number of Bank Branches	Per capita Deposits in Banks (Rs)	Literacy Rate
Anantnag	0.82	0.95	0.91	0.87	0.87
Kulgam	0.83	0.91	0.81	0.85	0.79
Pulwama	0.84	0.89	0.83	0.87	0.90
Shopian	0.95	0.92	0.79	0.86	0.86
Srinagar	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>
Ganderbal	0.78	0.88	0.81	0.87	0.76
Budgam	0.88	0.95	0.85	0.85	0.73
Baramulla	<b>0.76</b>	0.90	0.94	0.88	0.92
Bandipora	0.96	<b>0.83</b>	<b>0.78</b>	0.81	<b>0.72</b>
Kupwara	0.84	0.94	0.87	<b>0.80</b>	0.93

**Table 3: Composite Index Findings on Industrial Sector In Kashmir**

Districts	Number of SSI Units	Number of Handicraft & Handloom Cooperatives
Anantnag	0.90	0.88
Kulgam	0.79	0.79
Pulwama	0.86	0.87
Shopian	<b>0.78</b>	<b>0.77</b>
Srinagar	<b>1.00</b>	<b>1.00</b>
Ganderbal	0.85	0.87
Budgam	0.89	0.90
Baramulla	0.90	0.86
Bandipora	<b>0.78</b>	0.80
Kupwara	0.83	0.87

### Ranking Method

Based on the composite Index, at first each district is allotted individual ranks based on different developmental indicators along with overall ranking for each sector as well and secondly mean rank of all districts is calculated based on their individual ranks in different developmental indicators. The minimum mean rank is regarded as best followed by the increasing order of preference.

**Table 4: Ranking in Agricultural Sector**

Districts	Overall Rank in Industrial Sector
<b>Anantnag</b>	<b>1.5</b>
<b>Baramulla</b>	<b>1.5</b>
Kupwara	3.5
Pulwama	4.5
Budgam	4.75
Kulgam	5.5
Bandipora	7.25
Shopian	7.5
<b>Ganderbal</b>	<b>9</b>
<b>Srinagar</b>	<b>10</b>

**Table 5: Ranking in Socio-Infrastructural Sector**

Districts	Overall Rank in Socio- infrastructural Sector
<b>Srinagar</b>	<b>2.22</b>
<b>Anantnag</b>	<b>3.88</b>
Baramulla	5.11
Pulwama	5.22
Kulgam	5.72
Shopian	5.72
Budgam	5.88
Kupwara	6.44
<b>Bandipora</b>	<b>6.66</b>
<b>Ganderbal</b>	<b>8.11</b>

### Results and Discussion

Composite index finding has been obtained for agricultural sector, socio-infrastructural sector and industrial sector . The evaluation indices of development

**Table 6: Ranking in Industrial Sector**

Districts	Overall Rank in Industrial Sector
<b>Srinagar</b>	<b>1</b>
<b>Anantnag</b>	<b>2.5</b>
Budgam	3
Baramulla	4.5
Pulwama	5
Ganderbal	6
Kupwara	6.5
Kulgam	8
<b>Bandipora</b>	<b>8.75</b>
<b>Ganderbal</b>	<b>9.75</b>

**Table 7: Comparative Categorization of districts of Kashmir.**

Districts	Out put
<b>Srinagar</b>	Developed
<b>Anantnag</b>	Developed
<b>Baramulla</b>	Developed
Pulwama	Under-developed
Budgam	Under-developed
Kupwara	Under-developed
Kulgam	Under-developed
<b>Shopian</b>	Low developed
<b>Bandipora</b>	Low developed
<b>Gnaderbal</b>	Low developed

for above mentioned three sectors are given in the Table 1, Table 2 and Table 3. Similarly rankings for development in each sector for each district are given in Table 4, Table 5 and Table 6.

It may be seen from the ranking tables that in case of agricultural development, the district standing best in agricultural sector is Anantnag and Baramulla with combined rank of 1.5 followed by Kupwara with ranking of 3.5, whereas Srinagar stood last in agricultural sector with overall rank of 10 showing worst of results in agricultural sector (Table 4).

In Socio-Infrastructural sector, the district standing best is Srinagar with an overall rank of 2.22 followed by Anantnag with an overall rank of 3.88 whereas the



district which stood last was Ganderbal with an overall ranking of 8.11 showing poorest performance in Kashmir valley (Table 5).

And in industrial sector Srinagar stood best with an overall rank of 1 followed by Anantnag with an overall ranking of 2.5 whereas Ganderbal stood last in industrial sector as well with an overall ranking of 9.75 (Table 6).

The results based on the individual ranking of each district gave us a clear idea about the overall development of each district in Kashmir province. The output of the study is that Srinagar followed by Anantnag and Baramulla are developed, Pulwama, Budgam, Kupwara and Kulgam are under developed while as Shopian, Bandipora and Ganderbal are low developed. Hence it is suggested that policy makers and planners may take necessary steps for development in low and under developed districts of Kashmir province.

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## The forgotten Human Resource Management policies followed by the early Muslims and their relevance to development today

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### ABSTRACT

*Among HRM policy documented by the Arabs immediately after the spread of Islam in the Arabian Peninsula, a letter written by Ammerul Momeneen Ali(a) (556-619 A.D.) holds special significance. This letter contains his instructions to his Governor Designate for Egypt Maalik Al Ashtar. This letter is present as letter number 53 in the book Nahjul Balagah (Peak of Eloquence). The book Nahjul Balagah is compiled by Syed Razi. Arab Human Development Reports (AHDR) of 2002 under the aegis of the United Nations Development Programme has quoted extensively from this letter. This letter outlines the HR policies of the early Islamic Caliphate under him. This Paper attempts to study some key points prescribed in this letter with reference to current day HR issues.*

### Introduction

Arab Human Development Reports (AHDR) of 2002 under the aegis of the United Nations Development Programme<sup>1</sup> has quoted extensively from Ameerul Momeneen Ali (a) instructions to his governor designate to Egypt Maalik-al-Ashtar. This letter outlines the HR policies of the Islamic Caliphate under him. The Arab development reports have highlighted these at a very turbulent stage in Arab history.

Kofi Annan, former Secretary-General of the United Nations, says the caliph ALI-ibn-Abi Talib(a) is the

fairest governor who appeared in human history. In his capacity as the secretary general of the United Nations he advised the Arab Nations to take him as a role model in establishing justice and encouraging knowledge.

This emphasises the need to study this document more in detail especially for key HRM points so as to appreciate the policies which were outlined then, but remain very much relevant even today to solve the HR issues of the current era also.

The letter presently being considered is documented as letter number 53 in the book “Nahjul Balagah” (Peak of



Eloquence) compiled by Syed Razi.

Thus this complete document deserves a detailed analysis. Presently a brief analysis of few key points of this priceless document are presented as follows:

### **The Cornerstones of Kindness, Compassion and Love**

These are emphasised at the very beginning by Ameerul Momeneen Ali(a) when he starts his discussion on human resource management. He says: *“O Maalik! You must create in your mind kindness, compassion and love for your subjects.”* The point to be highlighted over here is that he does not just talk of displaying these qualities but orders Maalik to mould his very mind-set according to these principles. Ali(a) has removed the possibility that leaders and managers may display these qualities just to gain the confidence of their subordinates. He has emphasised for real kindness, compassion and love. When the human mind itself is the foundation of these qualities all decisions which follow will naturally be based on them thus eliminating all conflicts between managers and their team members.

Equality of men, justice and removal of discrimination: He categorically states: *“Be fair, impartial and just in your dealings with all, individually and collectively.”* It is only now that organisations come out with a policy of non-discrimination. While acknowledging religious and cultural differences among the people Ali(a) gives clear instructions not to discriminate any one on the basis of religion and culture. At the same time he highlights the principle of equality between all men. Ali(a) after emphasising love and compassion for all subjects highlights the commonly present weakness in the people. He then logically lays down a policy of forgiveness to be followed in general for people belonging to all groups and not any particular group. He says: *“Remember, Maalik, that amongst your subjects there are two kinds of people: those who have the same religion as you have; they are brothers to you, and those who have religions other than that of yours, they are human beings like you. Men of either category suffer*

*from the same weaknesses and disabilities that human beings are inclined to, they commit sins, indulge in vices either intentionally or foolishly and unintentionally without realizing the enormity of their deeds. Let your mercy and compassion come to their rescue and help in the same way and to the same extent that you expect Allah to show mercy and forgiveness to you.”*

He also gives instructions not to allow personal benefits and matters related to relatives and friends to override the administration of justice. Once his brother Aqeel approached him while he was in the public treasury to request for some preferable treatment in the distribution of public wealth. Before Aqeel could even make a request he asked him whether he had come for some personal work or official work. He then put off the candle in the room saying that it would be improper to burn the candle purchased from public money for discussing personal matters. This peak of non-discrimination in his character made him give the following instructions to Maalik:

*“So far as your own affairs or those of your relatives and friends are concerned take care that you do not violate the duties laid down upon you by Allah and do not usurp the rights of mankind, be impartial and do justice to them because if you give up equity and justice then you will certainly be a tyrant and an oppressor.”* He drew a distinctive line by asserting that if a person does not administer justice to his subordinates he is then a tyrant and oppressor.

In a later part of his instructions he highlights the psychological truth that if justice is not administered the evil will be emboldened and good performance will be discouraged.

*“You should not treat good and bad people alike because in this way you will be discouraging good persons and at the same time emboldening the wicked to carry on their wickedness. Everyone should receive the treatment which his deeds make him deserve.”*

## **Anger Management**

As a prelude to control anger he talks about forgiving mistakes and even forgetting about them. How can something which is forgiven as well as forgotten make any one angry? He underlines patience as the key to anger management. He also highlights the psychological connection between the desire for vengeance and anger. At an earlier part of his life he had even practically demonstrated this when he left an adversary in battle when he spit upon him. He thus displayed a perfect presence of mind and his disconnect from anger due to vengeance. He concludes this point by showing the uselessness of anger and vengeance in managing people. These are his actual words: *“Do not feel ashamed to forgive and forget. Do not hurry over punishments and do not be pleased and do not be proud of your power to punish. Do not get angry and lose your temper quickly over the mistakes and failures of those over whom you rule. On the contrary, be patient and sympathetic with them. Anger and desire of vengeance are not going to be of much help to you in your administration.”*

His instructions for selecting the chief of the army or the police for which qualities of harshness are commonly deemed as desirable are such which give priority to the qualities of mercy and compassion over harshness and rife. He in fact gives clear guidelines as to where both these opposing qualities need to be used. Harshness in front the strong and powerful and sympathy with others. In this case even when he considers absence of vindictiveness as a desirable quality he does not endorse weakness for them. His approach is to balance the two extremes.

“So far as the army is concerned its chief and commander should be a person ....who is most pious, who is famous for his forbearance, clemency and gentleness, who is neither short-tempered nor does he get angry quickly, who sympathetically treats sincere excuses and accepts apologies, who is kind and compassionate with the weak, but severe against the strong and the powerful, who has no vindictiveness which might lead to violence or any inferiority complex or weak-mindedness which makes

them helpless and dejected”

## **Care for those at the base of the pyramid**

Unlike the practices normally followed in organisations, he gives priority to those at the lower strata over the higher ups. Since normally there is conflict of interest between the stakeholders at a higher level with those down the rung. He lays a clear policy of risking the dissatisfaction of the higher ups to satisfy those working at the ground level. In addition to showing his care for the commoners it shows his long term foresight in preferring the base level people as no upper authority can survive if those below are not there or they refuse to co-operate. Short sighted managers would prefer to satisfy the upper rung and risk discontent in the lower rung putting the entire organisations’ existence at risk. His exact expressions are: *“Remember that the displeasure of common men, the have-nots and the depressed persons more overbalances than the approval of important persons, while the displeasure of a few big people will be excused by the Lord if the general public and the masses of your subjects are happy with you.”*

## **Public as well as private appreciation but not open criticism**

At different places he instructs Maalik to be lavish in praising openly when one deserves so. But warns about public broadcasting of weakness. He even lists out the reasons for such a policy. As for his advocacy of open appreciation his mentions two reasons. First being an approval of good performance so as to be repeated with zeal and second being a motivation and encouragement to others to take it up.

He argues for prohibition of open censure acknowledging the fact that people are not infallible. He lays down forgiveness as a duty of the administration. Categorically prohibits digging for shortcomings. When the shortcomings are known in a normal course then he cast a duty for gracefully taking up the matter and teaching and facilitating in its reformation. Once a shortcoming is known and yet if no corrective action is



undertaken it becomes a silent approval for it.

He categorically mentions: *“Speak well of those who deserve your praise. Appreciate the good deeds done by them and let these good actions be known publicly.....The correct and timely publicity of noble actions and golden deeds creates more zeal in the minds of the brave and emboldens the cowards and the weaklings.”*

He also instructs: *“Keep such people away from you.....who are scandal-mongers and who try to find fault with others and carry on propaganda against them because everywhere people have weaknesses and failings and it is the duty of the government to overlook (minor) shortcomings. You must not try to go in search of those weaknesses which are hidden from you, leave them to Allah, and about those weaknesses which come to your notice, you must try to teach them how to overcome them. Try not to expose the weaknesses of the people and Allah will conceal your own weaknesses which you do not want anybody to know.”*

### Overall development

He recognises the need of overall development and the interdependency of each class of the stakeholders. He expresses this in the following words: *“You must know, Maalik, that the people over whom you rule are divided into classes and grades and the prosperity and welfare of each class of the society individually and collectively are so interdependent upon the well-being of the other classes that the whole set-up represents a closely woven net and reciprocal aspect. One class cannot exist peacefully, cannot live happily and cannot work without the support and good wishes of the other.”*

### Encouraging Friendly Co-operation

He says: *“Try to alleviate and root out mutual distrust and enmity from amongst your subjects.”*

He is not satisfied by mere alleviation but wants to totally eradicate suspicion and hostility from the hearts of all. Hearts devoid of hatred will then become fertile

grounds for the development of love and justice which he has already emphasised.

### Instructions for selecting a core team

AmeerulMomeneenAli(a) emphasises the formation of a core team to assist the top boss in managing affairs. He lists out the following qualities which are desirable in candidates who will be inducted in the core think tank of an organisation and who will have unfettered access to the top person:

**1. Those who are Knowledgeable.** Knowledge is among the important cornerstones of any structure. Knowledge of the relevant fields is therefore a must for any administrative order.

**2. Wisdom.** Knowledge to be useful must be accompanied by wisdom. He at the same time qualifies such knowledgeable and wise people to have a mind-set which is free from the scheming and sinning.

**3. Honesty and truthfulness.** His dedication, belief and support for honesty can be gauged from his another quote: *“Honesty saves you even if you fear it.”*

**4. Humaneness.** This quality characterises a feeling of sympathy, love and caring towards other living beings.

**5. Boldness.** He talks of boldness in a sense that the person should be bold enough to even be critical of his immediate boss in pointing out mistakes and undesirable things. By listing out this quality Ameerul Momeneen Ali(a) instructs Maalik not to surround himself with “Yes Men” as most modern managers do. It also reinforces Ali’s dedication to truth.

**6. Piety.** By highlighting piety as a necessary quality in the close advisors he underlines the importance of the personal character of the individual. Today when just professional qualifications are considered for recruitment Ali(a) gives food for thought to modern day recruiters by focusing on the fact that when a person is recruited not only his qualifications are recruited but his

## The forgotten Human Resource Management policies followed by the early Muslims and its relevance for development today

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entire personality is recruited and will then represent the image of the organisation.

He also lists out the following qualities if present in a person would disqualify him from this core group in an organisation irrespective of his seniority in the hierarchy:

**1. Backbiting about other colleagues.** In Muslim culture backbiting is distinguished from slandering. Backbiting is based on true facts while slandering talk is fabricated. By excluding and not tolerating the backbiter he has also excluded the slanderer.

**2. Scandal mongering.** This is backbiting and slandering on a large scale such that all become aware about it.

**3. Miserliness** as misers would discourage philanthropic works and CSR(Corporate Social Responsibility) activities.

**4. Cowardice** as cowards would discourage bold decisions and dissuade from taking even calculated risks.

**5. Greedy and covetous people.** This group's advice will mostly be in favour of exploitation and oppression.

**6. Counsellors of the previous oppressive regime.** Since Ali wants his administration to be based on truth and justice he categorically excludes those who have been supporters of oppression in the past.

**7. Sinful and Criminal mentalities.** Ali (a) wants these people who possess criminal and scheming abilities to be avoided even if they possess the requisite expertise and knowledge.

### Discouraging Flattery

After laying down the principles for selecting a core team he instructs Maalik to discourage them from flattery and false praising. He recognises that it's normal among humans to seek nearness to the one above them and to this end they may resort to undesirable practices. The

leader when surrounded by such an atmosphere may possibly fall prey to the baser human instincts. In the larger interest he prohibits the same as follows:

“Train them not to flatter you and not to seek your favour by false praises because flattery and false praises create vanity and conceit and they make a man lose sight of his real self and ignore his duties.”

### Other Key points

1. Emphasis on reduction of difficulties for human resources.
2. Expecting only what is within capacity.
3. Winning and retaining the trust of the commoners as this would reduce majority of the administrative difficulties.
4. Trusting only after testing.
5. Not trusting the undeserving, inefficient, unfaithful and those who have been previously wronged as they may carry a hidden grudge.
6. Continuing good and beneficial practices of the past. Thus allowing a connect between the past and the present, recognising and giving due credit to past administrators and not taking responsibility for stopping a good practice.
7. Recognise and give credit to each individual for his performance taking care that someone else does not claim credit for the same.
8. Taking care of major necessities of the staff.
9. Due consideration to minor and smaller requirements of the staff also.
10. The most gladdening thing for a manager should be that there is perfect justice within the scope of his influence and that his team loves him.
11. Authority of top managers should not become a



burden to those below.

12. People not only openly but even secretly in their hearts should wish for continuance of the same governance.
13. Providing Job and Family security thus ensuring no excuse remains for non-performance and/or corruption.
14. Leading by example for developing an overall atmosphere of spiritual and ethical behaviour. This characteristics the hall mark and uniqueness in his instructions which becomes the centre point for all other exhortations.

### **The need of Human resource audit and its approach**

Ali(a) does not stop at the instructions for selecting the key personnel but deems it necessary to keep a watch on them. The approach to this ultra-sensitive function is qualified by him as follows: *“Keep an eye over them and watch them as parents watch their children”*

In this way any misgivings about power struggle and threats from well performing senior level managers are put at rest in the overall interest. And the need of keeping an eye and auditing the works of the management team is also underlined. The issues brought up by this audit have to be dealt with in a considerate manner.

### **His instructions for Remuneration Packages**

Ali(a) strictly orders for merit being the sole criteria in fixing pay packages. Discourages underpayment for good work and also prohibits overpayment which is based on the personality of the doer instead of the worth of the work. These work as anti corruption and anti-discontent measures.

He says: *“Do not underestimate and underpay the good work done. Similarly do not overpay a work simply because it has been done by a very important person*

*and do not let his position and prestige be the cause of overvaluation of the merit of his work and at the same time do not undervalue a great deed if it is done by a very ordinary person or a commoner.”*

### **Conclusion**

This document and the comprehensive principles enshrined in it are practically relevant to the issues related to management and governance even today. On scrutinizing this from the aspect of human resource management we derive many points relevant to modern day managers in one of their prime functions which is to manage people. One of the most unique aspect of the principles enshrined herein is the importance attached to a persons' inner self being clean and honest. This focus on the individual human is presented in perfect coherence with the entire society. This transparency in managing human resources is something which is rarely seen elsewhere.

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## Impact of E-Commerce on Consumer Behavior Comparison of Amazon and Bigbazaar (Future Group)

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### **ABSTRACT**

*E-commerce success, especially in the business-to-consumer (B2C) area, can be determined by consumer's trust in online retailers and for the products they cannot see or touch. This paper describes the factors affecting consumer behavior through online and offline retail shopping: firstretailers employing both, online and offline sales channels have wide range of marketing tools available for them to be used in affecting consumer behavior. Retailers belonging to this category have traditional offline stores and they adopted online sales channel as well, in order to increase their revenues. For e.g.: Tesco, Next etc. Second, retailers that rely only on online sales channel and do not have any offline stores. Global retailers such as Amazon, flipkart, eBay etc. this strategy offers substantial benefits in terms of cost savings but at the same time lack the opportunities of impacting consumer behavior through providing hin the store. Nevertheless, online-only retailers can have a positive impact on the level of consumer behavior through enhancing technical capabilities of the website, providing comprehensive information about the products, increasing delivery time of product and in a range of other ways. Furthermore, e-commerce has impacted consumer behavior through widening choices for consumers in several levels.*

**Keyword:** *E-commerce, online v/s offline retailing, sales channels, customer service experiences.*

### **Introduction and background of research**

Electronic commerce refers to buying and selling of information, products and services via computer networks. High speed internet connection and some new technology enhance images of products and services through websites. Therefore, detailed product information and improved service attracts more and more people changed their consumer behavior from the traditional mode to more rely on the internet shopping. Online shopping becomes more popular mainly due to the benefits it provides. First of all, it gives convenience

to consumers to not go out looking for product information as the internet help them to search from online sites, and it also helps evaluate between each sites to get the cheapest price for purchase. The question arises that how online retailers affect consumer buying decision? Every aspect of the e-commerce experience is provided for, including the website design, video, speed, payment, security, returns, customer service, live chat, reviews, customer engagement, mobile, coupons and discounts, shipping, loyalty programs, social media, social responsibility, and retail.



## Research problem

E-commerce comprises with buying and selling of goods, services and information over the net. E-commerce has made it possible for the companies to expand their business in the form of B2B, B2C, etc. E-commerce has brought a change in the expectations and behavior of both firms and consumers. Thus, this study is an attempt to know the role of e-commerce in consumer decision making.

## Objectives

Major objectives of the study are –

- To study the role of e-commerce in consumer decision making.
- To study the impact of various factors affecting consumer buying behavior.

## Literature review

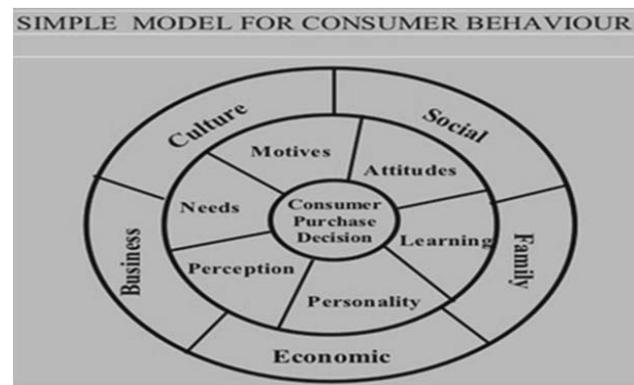
### Online and offline shopping

There is no doubt that online retailing has been rapidly developed, especially in consumer goods industry, but there still have a big difference between offline and online shopping. If we talk about Indian retailing then it can be said that the online sales occupied at a very low percentage rate. The retail giants who are selling their products and services through internet and through offline stores are generating very good revenue such as shoppers stop, Tesco, designer brandsetc. As, the advantages exist in both retail stores and online market; both of them have specific characteristics. For example, a retail outlet can provide convenience in parking and shopping, it allows customers come to see, read, touch and check the quality of goods before they purchase, and also gives benefits of after sales services. However, these stores have limited number of goods, and the selling cost is higher than online store. On the other hand internet retailers provide a very good view of the product with full description, color, size and quality and also provides ample of varieties to compare with. This is not all; online retailers are making their clientele more loyal with their super-fast supply chain, cash on delivery

availability, easy returns and much more. By comparison, we can find out the online shopping is getting more values over physical retail stores. It is clear from the overview that, online shopping (e-commerce) is being used in many corporations due to the dramatic development of technology and competitive advantages of web selling. Therefore, this research will focus on the impact of the internet shopping on consumer behaviors to find out the essential ingredient of marketing and business to satisfy the consumer's needs, and gives a deep understanding of online consumer behavior as a reference for any e-commerce company to make marketing strategies.

## Consumer behaviors

Consumer behavior refers to buying behavior of final consumers (individuals, groups, or organizations) who buy goods and services for personal consumption to satisfy their needs and wants. Below is the simple model for consumer behavior:



It is very much clear from the above diagram that consumer purchase decision is depends on two influences: Internal influences which includes need of the individual, motive (reason of buying the particular product and services), attitude (way of behaving for available options), learning (knowledge acquired through experience, practice), personality (combination of qualities which forms the individual's distinctive behavior, perception (ability to become aware of something through senses). And external influences includes social (society in which an individual lives),

## **Impact of E-Commerce on Consumer Behavior Comparison of Amazon and Bigbazaar (Future Group)**

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family, economic conditions, business, culture etc. As a whole one can say consumer's decision-making process is divided in several consequent steps:

- (1) Problem identification.
- (2) Information search.
- (3) Alternatives evaluation.
- (4) Purchasing decision.
- (5) Post-purchase behavior

### **Impact of Internet on Consumer Behavior**

Consumers are more likely to seek, and then to trust, reviews of products and services online than on television or in print media. They go to social media and product rating sites to get information and reviews on products available on internet. Even if they don't buy them online; trusting the opinions of others push them to buy more commoditised items like utilities or airline-tickets.

Internet shopping provides convenience and interactive services (Jarvanpaa and Todd, 1997), and the offline shopping gives customers more comfortable shopping environment and good quality of products (Lee and Chung, 2000). Both aspects are trying to improve their services. Such as shopping malls provide more parking spaces, more counters, and closer to residential area in order to improve services in convenience; on the other hand internet retailers are adopting virtual reality and 3D techniques to improve the presentation of products. In the following sections, this study will provide the nature of internet shopping at first, then the E-commerce web site will be indicated to comprehend the essence of internet shopping and its advantage of online security, privacy and trust will be discussed. All of these general overviews and discussions about the internet shopping will provide a background to the study and help to build the foundation of academic researches.

### **Motivations for consumers to engage in online shopping**

#### **Convenience**

Convenience and Usefulness is the key perception for

the customers. If they will feel comfortable and ease to use the new technology. Then this perception leads to more growth in this field.

#### **Pleasure**

Pleasure/relaxation/entertainment is another motivation factor for the customers to appreciate their own experience. Enjoyment is the strong and consistent force towards the online shopping. If they feel pleasure while shopping on internet then it leads to the adoption of internet as shopping medium.

#### **Consumer's Traits**

Consumer's traits play an important role in internet shopping. These consumer traits depend on the following demographic factors:

- 1) Age
- 2) Gender
- 3) Education
- 4) Income

These traits have a significant effect on the relationship between basic forces "convenience" and "Pleasure".

#### **Circumstances**

Conditions and circumstances also decide the relationship between on line shopping and consumer behavior. These factors are physical factors, time pressure, geographical distance or location, consumer's mood, need for special items and attractiveness of alternatives.

#### **Product's features**

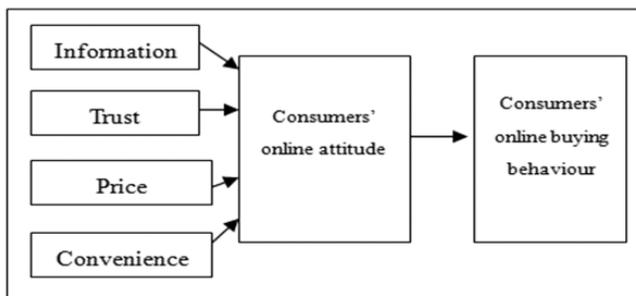
Merchandise feature weigh the difference in the various available categories such as books, magazines, videotapes, CDs, flowers etc. which can be bought online. On the other hand personal care products like perfume and lotions need personal experience and knowledge to be considered for online shopping.

#### **Trust in online shopping**

The use of internet for purchasing goods and services has enormous potential. The internet enables consumers



to shop 24\*7, from almost all locations and provides loads of choices to have quick comparison by interacting with other customers and by reading star rating and reviews. Below is the model of consumer online buying behavior:



Consumer decide to buy the particular product or service through internet after analyzing some factors like information about the product marketed online, trust developed by own experience, star ratings, live exchange of ideas and positive word of mouth. By comparing price of the same merchandise available online and offline and convenience to reach the product or service. Online retailers take most advantage for giving a pleasant shopping experience sitting at home. These all factors prepare the customer to try online goods and services.

**Social Media**

Today’s customers are more aware and louder for their rights. They know the fact that their loud voice can be

heard everywhere through social networking website like YouTube videos, Facebook, twitter, WhatsApp, and other social media websites. Therefore, every company has to pay attention because social media is changing the way customers do business. This power of social media is influencing the entire buying process and push companies to follow the new ways to reach the customers. If they ignore it then they have strong risk of losing customers in this competitive era.

**Research methodology**

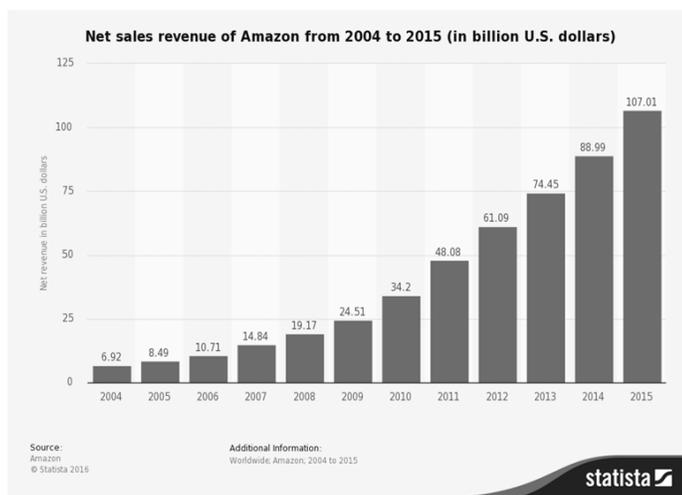
The data has been collected through secondary means. Comparative analysis of facts of the two companies has been taken so exploratory and qualitative methods are being used.

**Data collection**

Secondary data has been collected basically from published summaries, sources, such as articles, books, journals, etc. secondary data was mainly collected from Google Scholar website (<http://scholar.google.com>) which provides so many articles and researches.

**Research finding and conclusion**

7A quick comparison of annual revenues of online and offline retail scenario in India (comparative analysis between two retail giants amazon.in and future group)



**Impact of E-Commerce on Consumer Behavior  
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**Annual Income Statement (values in 000's) Get Quarterly Data**

Period Ending:	Trend	12/31/2015	12/31/2014	12/31/2013	12/31/2012
<b>Total Revenue</b>		\$107,006,000	\$88,988,000	\$74,452,000	\$61,093,000
<b>Cost of Revenue</b>		\$71,651,000	\$62,752,000	\$54,181,000	\$45,971,000
<b>Gross Profit</b>		<b>\$35,355,000</b>	<b>\$26,236,000</b>	<b>\$20,271,000</b>	<b>\$15,122,000</b>
<b>Operating Expenses</b>					
<b>Research and Development</b>		\$0	\$0	\$0	\$0
<b>Sales, General and Admin.</b>		\$33,122,000	\$26,058,000	\$19,526,000	\$14,446,000
<b>Non-Recurring Items</b>		\$0	\$0	\$0	\$0
<b>Other Operating Items</b>		\$0	\$0	\$0	\$0
<b>Operating Income</b>		<b>\$2,233,000</b>	<b>\$178,000</b>	<b>\$745,000</b>	<b>\$676,000</b>
<b>Add'l income/expense items</b>		(\$206,000)	(\$79,000)	(\$98,000)	(\$40,000)
<b>Earnings Before Interest and Tax</b>		\$2,027,000	\$99,000	\$647,000	\$636,000
<b>Interest Expense</b>		\$459,000	\$210,000	\$141,000	\$92,000
<b>Earnings Before Tax</b>		\$1,568,000	(\$111,000)	\$506,000	\$544,000
<b>Income Tax</b>		\$950,000	\$167,000	\$161,000	\$428,000



Minority Interest	---	\$0	\$0	\$0	\$0
Equity Earnings/Loss Unconsolidated Subsidiary	---	(\$22,000)	\$37,000	(\$71,000)	(\$155,000)
Net Income-Cont. Operations	---	\$596,000	(\$241,000)	\$274,000	(\$39,000)
Net Income	---	\$596,000	(\$241,000)	\$274,000	(\$39,000)
Net Income Applicable to Common Shareholders	---	\$596,000	(\$241,000)	\$274,000	(\$39,000)

### Current revenue details of big bazaar (offline retailer)

#### Future Enterprises

Standalone Profit & Loss account	----- in Rs. Cr. -----				
	Mar '16	Mar '15	Mar '14	Dec '12	Jun '11
	12 mths	12 mths	15 mths	18 mths	12 mths
<b>Income</b>					
Sales Turnover	8,339.68	10,341.92	11,577.44	6,987.82	4,101.64
Excise Duty	0.12	0.26	0.00	0.09	0.16
Net Sales	8,339.56	10,341.66	11,577.44	6,987.73	4,101.48
Other Income	36.91	127.24	58.40	284.30	16.34
Stock Adjustments	228.21	411.98	23.07	395.93	494.15
<b>Total Income</b>	<b>8,604.68</b>	<b>10,880.88</b>	<b>11,658.91</b>	<b>7,667.96</b>	<b>4,611.97</b>

## Impact of E-Commerce on Consumer Behavior Comparison of Amazon and Bigbazaar (Future Group)

<b>Expenditure</b>					
Raw Materials	6,236.77	7,820.61	8,521.02	4,840.97	3,143.91
Power & Fuel Cost	113.28	176.69	180.78	126.37	71.44
Employee Cost	279.44	381.87	423.94	336.31	214.47
Miscellaneous Expenses	926.44	1,258.43	1,435.02	1,303.71	746.83
Total Expenses	7,555.93	9,637.60	10,560.76	6,607.36	4,176.65
	<b>Mar '16</b>	<b>Mar '15</b>	<b>Mar '14</b>	<b>Dec '12</b>	<b>Jun '11</b>
	12 mths	12 mths	15 mths	18 mths	12 mths
<b>Operating Profit</b>	<b>1,011.84</b>	<b>1,116.04</b>	<b>1,039.75</b>	<b>776.30</b>	<b>418.98</b>

### Conclusion

This study focuses on the technological advancement of internet and examines the factors affecting consumer's online shopping behaviors. This study examine the background of physical stores their marketing techniques in order to show the developing history of Internet shopping since the E-commerce become popular with help of graphical representation of current retail scenario of two big retail giants in India. In the chapter of literature review some points were discussed like differences in online and offline shopping, motivational forces for being engaged in buying online and online consumer behaviors etc. This paper focus on the Internet shopping (include the nature of Internet shopping, price, convenience, E-commerce website, and trustworthiness) and online consumer behaviors (include product feature, circumstances, pleasure, consumer's values and traits etc.) and online decision making process. In addition to the previous researches, social media is the revolutionary technology in support of online retailing. Social networking sites act as big platform for online retailers to market their merchandise. Moreover, the customer's

purchase decision making process was also examined to identify the potential factors. The information search, trust in the brand, price of the product and convenience to have the same in use are some most important factor which helps the customers find the suitable products or services to satisfy their needs. Therefore, the online retailers have to enhance and improve the information supporting such as detailed description of the product available on internet so as to maintain its market fame. Online retailers have to improve their post purchase services, payment security in purchasing stage and some other refund like benefits in order to support the customer's buying behavior and improve their performance.

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## Sustainable Smart Cities In India: Problems And Prospects

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### **ABSTRACT**

*Cities are hubs of economic growth and innovation .Cities are indispensable to nations—they attract people from rural areas to seek opportunities for employment, education and a better lifestyle.Hence, cities have been witnessing the mega trends of population explosion and urbanisation. While these rapidly expanding urban centres in India are seen as the engines of economic growth, they also face tremendous pressures on their civic infrastructure. In order to meet the challenges of growing urbanization in the country, the Government of India launched new urban scheme in 2014 - the Smart Cities Mission. The basic aim of this scheme is to make urban areas livable, sustainable, smart and inclusive while driving the economic growth of the country. The scheme on Smart Cities focuses on the objectives of enhancing the quality of urban life and providing sustainable development through the adoption of smart solutions.*

*This research paper brings about various aspects related to the development of smart cities. The paper will also highlight on the Government avenues, problems and prospects for merging the concept of sustainable development with the smart city framework to improve the quality of life for citizens. There is a need for set standards and parameters for any smart city project in India. This issue is expected to be extremely important in the coming years.*

**Keywords:** *Cities, Urbanisation, Smart Cities and Sustainable development.*

### **Introduction**

Cities are indispensable to nations—they are hubs of economic growth and innovation .With the growth of a city the nation prospers. Cities attract people from rural areas to seek opportunities for employment, education and a better lifestyle..Hence, cities have been witnessing the mega trends of population explosion and urbanisation. India, too, is experiencing the trend of globalization and ever increasing urbanisation . More than 40% of India's population India is expected to

reside in its urban centres by 2050 (UNDESA, 2014).

In order to meet the challenges of rapid urbanization in the country, the Government of India launched several new urban scheme in 2014- Smart Cities Mission. The basic aim of this scheme is to make urban areas sustainable, smart and inclusive while driving the economic growth of the country. The Smart Cities Mission focuses enhancing the quality of urban life and providing sustainable development through the adoption of smart solutions.



## Objectives of the study

In this background the objectives of the research paper is primarily to examine the concept of sustainable smart cities in India:

1. To examine the impact of growing urbanization on the overall quality of human life.
2. To analyze the government's proposal for development of the 100 smart cities throughout the country and the problems and prospects thereof.

## Hypotheses of the study

It is hypothesised that urbanization leads to growth of slum population, degradation in quality of life and inequitable distribution of basic amenities. The expectations of people for basic services are rising and states are venturing into smart cities for sustainable

development. However there are various problems and prospects ahead.

## Methodology

The research paper is based on data collected from secondary sources which include books, articles, various publications by government agencies as well as non-governmental organizations / bodies.

## Urbanization trends in India

There is a rapid growth in the population in urban areas in India from the year 1951 to 2011 (fig.1). The 2011 Census has indicated that compared to 1,363 in 2001, there are now 3,893 census towns which fulfill the normative criteria of a minimum population of 5,000, density of 400 persons per sq km and at least 75% of the male working force in occupations other than agriculture. By the year 2050, approximately 70% of the global population is projected to live in cities.

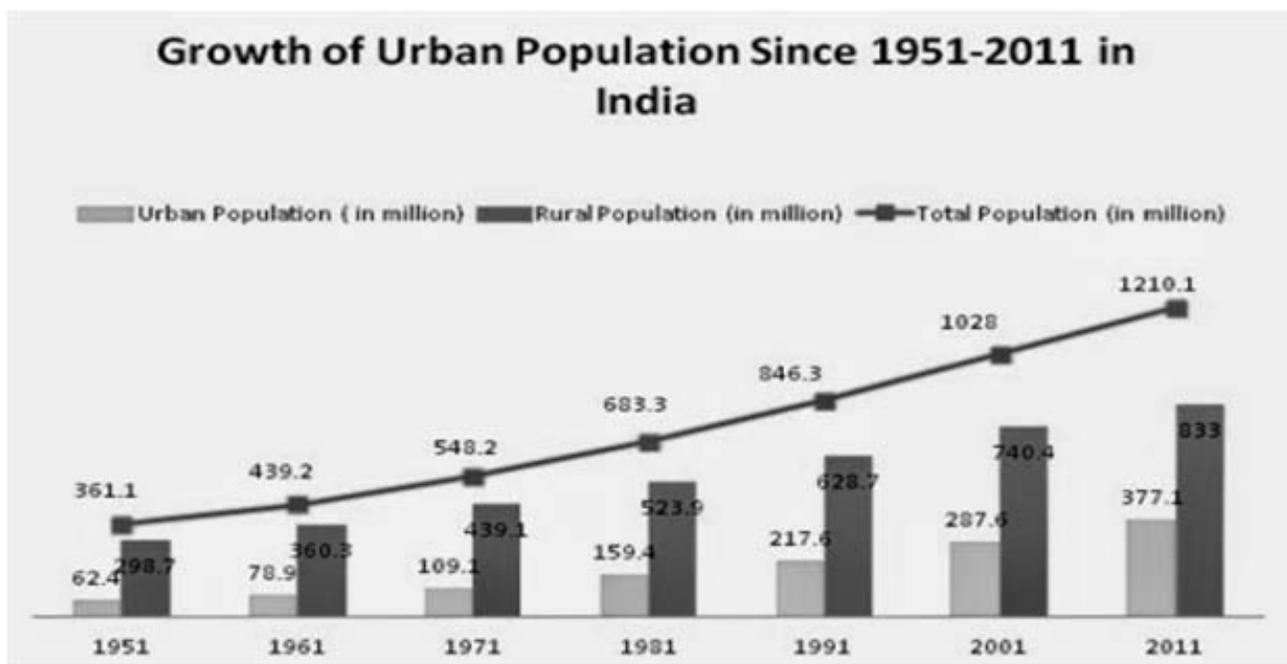


Figure 1 Population in India 1951-2011

While these rapidly expanding urban centres in India are seen as the engines of economic growth, they also face tremendous pressures on their civic infrastructure systems like water supply, sewerage and drainage, solid waste management, etc. Besides infrastructure deficit, Indian cities are also grappling with environmental degradation, air pollution, and disasters. There is, therefore, an urgent need to relook the ways in which we design our infrastructure, run our cities, and manage current pressures emanating from urbanization (TERI, 2014; TERI, 2015).

The 2030 Agenda, i.e. SDG 11, aims at ensuring the development of sustainable cities and communities, in particular by ensuring access to safe and affordable housing, upgrading slum settlements, investing in public transport, creating green public spaces, and improving urban planning and management in a way that is both participatory and inclusive. Today India is on the path of redesigning its cities to make them citizen friendly and sustainable. The Indian government has undertaken concrete steps for making smart cities a reality with the recent announcement of 100 smart cities.

### Operational Definitions

Sustainable development is a process for meeting human development goals while sustaining the ability of natural systems to continue to provide the natural resources and ecosystem services upon which the economy and society depends. (Wikipedia). Sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations General Assembly, 1987, p. 43).

Smart city means the smart development, use and maintenance of resources in a sustainable manner without posing a threat to the environment and using advanced technology. It encompasses a vision of an urban space that is ecologically friendly, technologically integrated and meticulously planned, with a particular reliance on the use of IT to improve efficiency.

Wikipedia defines Smart Cities as “an emerging conceptual view of a city that promotes the use of Information and Communication Technologies (ICTs) to engage with citizens to develop social capital and intellectual capital, to make better use of hard infrastructure (physical capital), reduce usage of environmental capital and support smart growth (sustainable economic development).

In ideal terms, a working definition may be that a ‘smart city’ is an urban region that is highly advanced in terms of overall infrastructure, sustainable real estate, communications and market viability. It is a city where information technology is the principal infrastructure and the basis for providing essential services to residents. However, there is no strict definition of a ‘smart city’.

Cities: Smart and Sustainable:

The Smart Cities Mission covers 100 cities across the country. Thereafter, in the second stage, each of the 100 Smart Cities prepared their smart city proposals (SCPs) for participation in the ‘City Challenge’. The format entails the winning cities in each round to start implementing their SCPs while the remaining cities improve their SCPs for subsequent rounds.

These smart cities will compete with each other to come up with holistic plans for becoming model cities. The government has incorporated sustainability as one of the key components of smart cities. With the increasing frequency of natural disasters and the threat of global warming, the concept of a smart city must be merged with sustainability for the welfare of people. As per the mission guidelines for smart cities released by Ministry of Urban Development, a clean and sustainable environment will be a significant feature for upcoming smart cities. The sustainability aspect is not just in terms of environment but also economic, social and governance.

### Problems:

With the government having 100 smart cities on its construction agenda, many problems lie ahead such as:



- All resources and information generated by the city from different sources, systems, and services are distributed in different departments, regions, and their respective information systems. There is no mechanism to connect them together.
- There is no technical proposal to manage data created across the multiple departments. City operations are multidimensional and comprise multiple stakeholders whose dependencies and interdependencies affect and ultimately determine the services.
- Technology challenges; the existing status quo in how cities are run; and technology is not well understood across city sectors as well as by its administrators. Scaling of many newer technologies has not been proven yet.
- Rapid urbanization adds pressure to the resource base and increases demand for energy, water, and sanitation, as well as for public services, education, and health care. Consequently, social, economic, and environmental issues have become closely interrelated. But this relatedness remains opaque to officials in charge of particular departments responsible for those services.

### Prospects

The Smart cities initiatives by the government is a right step for achieving sustainable development of cities. The government through these initiatives is investing along with private sectors. The investment strategies primarily rely through a combination of public investments, private participation through Public Private Partnership and standalone Private investment. The investment figure would vary widely depending on whether the development is greenfield or brown field. The Smart Cities Mission can be successfully executed through the PPP model. The government can supplement facilities like water supply, sanitation, ICT, health, education. The PPP model will further help the government in overcoming its financial constraints. The smart city will promote the use of Information and Communication Technologies (ICTs) to engage with

citizens and make better use of hard infrastructure, reduce usage of environmental capital and support smart sustainable economic development.

### Suggestions

A city with a strong framework and sustainable facilities will always grow. The responsibility of the local government is to make cities livable and build them with a sustainable framework .It can go a long way in helping the country achieve the global targets. Besides, the current government schemes are only focusing on an odd 500 out of the 8,000+ cities and towns in the country. Any efforts towards achievement of Sustainable Development Goals will need replication and scaling up of sustainable urban solutions and development mechanisms to these ‘other’ urban centres across India. . Sustainable development has to be democratized at the local level in every country. The profile of a city cannot be upheld with individual projects any more but every decision should be weighed on the scale of sustainability. Cities should be patient in developing a culture of sustainability and transformation, which is based on a continuous analysis of their localities.

### Conclusion

The sustainable smart city is an emerging issue. While the master plan for any smart city has to be adaptable with flexible guidelines, it is the balance between industrial and economic activities that will drive a smart city project. Moreover there is a need for trained administrators to manage a smart city. In a nutshell, there is a need for set standards and parameters for any smart city project in India. There is a vital role of governance in the successful financial viability of a smart city.

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## E-commerce In India – Major Challenges, Problems And Prospects

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### **ABSTRACT:**

*Over the last few decades the popularity of e-commerce has tremendously increased due to its quick and convenient way of exchanging goods and regional and global services. India will be booming ground for e-Commerce business models; the country already reported 12% growth in e-commerce retail business year in 2010-2011. The e-Commerce industry in India is growing at a remarkable pace due to high penetration of internet and sophisticated electronic devices. However, the recent growth rate of e-Commerce in India is far lagging behind than other developed countries. There are many big problems and challenged on the way of an online merchant. Factors like safety and security of online money transaction being the biggest problem along with others have curbed the smooth expansion of the online industry in the country.*

*Although, major portion of e-business sectors have affected by major challenges but still there are few online giants like Makemytrip.com, Flipkart.com and Snapdeal.com who have overcome the challenges and represents the perfect growth trends of e-Commerce in India.*

**Keywords:** e-Commerce, internet, electronic devices, online money transaction, etc.

### **Introduction**

In its simplest form e-commerce is the buying and selling of products and services by businesses and consumers over the Internet. Internet sales are increasing rapidly as consumers take advantage of lower prices offer by wholesalers retailing their products. This trend is set to strengthen as web sites address consumer security and privacy concerns. Since last decade the popularity of e-commerce is tremendously increased due to quick and convenient way of exchanging goods and services both regionally and globally. Now-a-days it has become the

virtual main street of the world. Today, e-commerce has grown into a huge industry. The total value of e-commerce activities within India has exceeded Rs 5.7 billion during 2004-05, according to a research conducted by Internet & Online Association of India (IOAI). Currently, more than 30.2% of the world has access to the internet and hence, ecommerce. India will be a booming ground for e-Commerce business models; the country already reported 12% growth in e-commerce retail business year in 2010-2011.

### Significance of the study

This paper discusses about the current status of e-Commerce and new trends and challenges that the e-Commerce Industry in India facing. It also strives to describe the growth and future prospects of e-commerce in India.

### Research Methodology

The prepared paper is a descriptive study in nature. The study has been carried out based on the collection of the relevant secondary data. Secondary data collection was based on various sources such as published books, articles published in different journals & newspapers, periodicals, conference paper, working paper and websites, etc.

### Objectives

The objectives of study were based on:

1. To study the present scenario of e-Commerce in India.
2. To study the vital role of e-Commerce in Indian Economic Growth.
3. To suggest seven challenges faced by e-Commerce in India.
4. To suggest the future prospects of e-Commerce in India.

### Meaning & Definition of e-commerce

E-commerce (electronic commerce or EC) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business. The terms e-Commerce and e-business are often used interchangeably. The term e-tail is also sometimes used in reference to transactional processes for online shopping.

E-commerce is conducted using a variety of applications, such as email, online catalogs and shopping carts, EDI, File Transfer Protocol, and web services. This includes business-to-business activities and outreach such as using email for unsolicited ads (usually viewed as spam) to consumers and other business prospects, as well as to send out e-newsletters to subscribers. More companies now try to entice consumers directly online, using tools such as digital coupons, social media marketing and targeted advertisements.

The benefits of e-commerce include its around-the-clock availability, the speed of access, the wide availability of goods and services for the consumer, easy accessibility, and international reach. Its perceived downsides include sometimes-limited customer service, consumers not being able to see or touch a product prior to purchase, and the necessitated wait time for product shipping.

### A Vital Role of E-Commerce in Indian Economic Growth

The colossal boom in Information Technology has given India new recognition all over the world. The talented, English-speaking IT professionals that are in India attract huge clientele from around the world. India is today an outsourcing hub because it has made a name for itself in providing the best solutions in any IT related job. Due to this, Indian economy is also booming. The kind of boom that Indian economy has seen in the last two decades has been the best in its 60 years of independence. One of the areas where Indian IT professionals have spearheaded their expertise is e-Commerce services.

When business is conducted with an electronic media like computer network and Internet, we call it e-Commerce. With the growing use of Internet even in the interiors of the country, e-Commerce is playing a vital role in Indian economic growth. According to Internet and Mobile Association of India (IAMAI) estimations, the e-Commerce market in India is expected to see a growth of 47% by the end of 2016. With the expanding online travel industry and e-shopping portals,



there are more reasons to believe in IAMAI's prediction. With favouring policies that has been liberating the Indian economy since 1990s, India has opened its market to foreign players in more than one way. Today, it has become easy for overseas players to enter the Indian market with the help of website services such as e-Commerce stores.

There are 100 million Indians accessing the Internet at present. Though not all are regular users of the World Wide Web, even if 10% people use the Internet regularly, there are lot of people using Internet. If predictions are to be believed, by the year 2016 India will lead the world in Internet usage. Looking at the positive growth rate of Internet usage in India and the predictions thereof, it is not surprising that businesses are focusing attention toward e-Commerce services to get more buyers and customers.

About half a decade back, Indians were introduced to e-Commerce when Indian Railways and private airlines started selling their tickets online. Even though then the number of people using the Internet was less and mostly concentrated in the metropolitans, it surprised many industry experts to see the boom. Slowly companies like MakeMyTrip.com started showing a turnover of Rs. 1000 crores and other companies followed suit. Currently, more and more Indians even in the second-tier states of the country are using Internet to buy products and services. Website services such as hotel, flight, train reservations, banking, tax and bill payment, entertainment, matrimonial sites, job sites, etc. are attracting more and more people towards the Internet. Even those who avoided using the Internet saying that it wasn't necessary have started using e-Commerce solutions and getting things of their interest delivered to their doorstep.

Naturally when more and more people start using e-Commerce solutions on a day-to-day basis it has immediate and obvious benefit for the Indian economy. Entrepreneurs are able to see the light of the day and with very minimal investment they can start an e-enterprise. Selling goods and services over the Internet

is not only about convenience, but also about the variety of options. Most second and third tier cities and towns of India are yet to see the retail boom, but when Internet facilitates them with so much option, there is hardly any need felt of these retail stores.

Once the Indian government spreads broadband usage across the country, e-Commerce services will add to more GDP every year. This is not a prediction, but a mere analysis of how things are fast moving forward. SEVEN Challenges Faced by E-Commerce In India:

E-commerce in spite of opportunities, hoopla and hype bears the connotations of challenges as well at the same time. We, therefore, enumerate the major challenges e-Commerce in small enterprises is facing and also submit the remedial measures to meet these challenges.

### **1. Infrastructural Problems:**

Internet is the backbone of e-Commerce. Unfortunately, internet penetration in India is so far dismally low at 0.5 per cent of the population against 50 per cent in Singapore. Similarly, penetration of personal computer (PC) in India is as low as 3.5 per thousand of population compared to 6 per thousand in China and 500 per thousand in US. Internet is still accessible through PCs with the help of telephone lines.

Given the penetration of telephone only 2.1 per cent of population, e-Commerce remains far away from the common man. It is difficult for e-Commerce to reach to 1,000 million population spread over 37 million households in 6, 04,374 odd villages and 5,000 towns and cities. Besides, both cost of PCs and internet access in India are quite high.

### **2. Absence of Cyber Laws:**

Other big challenge associated with e-Commerce market is the near absence of cyber laws to regulate transactions on the Net. WTO is expected to enact cyber laws soon. The India's Information Technology (IT) Bill passed by the Indian Parliament on May 17, 2000 intends to tackle legislatively the growing areas in e-Commerce.

The Bill also intends to facilitate e-Commerce by removing legal uncertainties created by the new technology. As it stand today, the Bill deals with only commercial and criminal areas of law. However, it does not take care of issues such as individual property rights, content regulation to privacy and data protection specific legislation.

### **3. Privacy and Security Concern:**

As of to-day, quite vulnerable issues related to e-Commerce are privacy and security. So far, there is no protection offered either by Website or outside watchdogs against hazard created by exploiting one's privacy.

### **4. Payment and Tax Related Issues:**

Issues related to payment and tax is yet another problem continuously hinting e-traders. The electronic payment is made through credit card or plastic money which could, however, not become popular so far in India mainly due to two reasons. First, the penetration of credit card in India is very low (2 per cent of the population). Second, the Indian customers are quite sceptical of paying by credit card with the increasing threat of fraud played by hackers. Like elsewhere, credit card could not gain growth in India mainly because of authentication and recognition problems of electronic signatures.

Similarly, tax administration is yet another complex problem in this seamless worldwide e-Commerce. As establishing incidence of tax in case of e-Commerce transactions becomes difficult, thus provides ample scope for tax evasion.

There are others who support zero duty on e-Commerce to flourish it in the country. It has already been decided in US that there will be no tax on anything sold on the internet in digital form. Should India not follow US, at least for the time being? We have to ponder over it.

### **5. Digital Illiteracy and Consumer Psyche:**

At present, digital illiteracy is one of the formidable problems e-Commerce is facing in India. On the other hand, the continuous exodus of skilled computer engineers to other countries has denuded India of

software engineers. This has posed a real threat to the Indian IT industry. Obviously, solution to this problem lies in curbing the computer brain – drain and uses the same in the country.

The Indian consumer is also characterised by his unique psyche. Usually, the Indian consumer does not go long distances for having any good of his choice when a neighbourhood store provides him whatever he wants. That is why the consumer does not browse the Net knowing the consequent hassles of connectivity and other botheration. Added to this is that building trust on the electronic media also takes long time more especially when the vendor is situated at a very far off place.

### **6. Virus Problem:**

That computer virus is also a formidable problem in the execution of e-transactions is confirmed by the computer virus originated in Manila. A computer virus lagged 'I Love You' originated in Manila, Philippines on May 5, 2000 rippling across world, inflected millions of computer files causing colossal loss of US \$7 billion to the governments and the businesses. The offenders causing 'virus' must be awarded deterrent punishment, otherwise similar assaults in future can cause lasting blows to the quite young e-Commerce in India as well.

### **7. English Specific:**

Last but not the least, the software so far in the country is English specific. But, in order to make e-Commerce reach to the small enterprises, it needs to be available in the languages (regional) of the owners of the small enterprises to enable them to adapt e-Commerce processes in their operations. Sooner it is done, better will be it for small enterprises to adapt e-Commerce.

### **Future Prospects of E-Commerce in India**

The real challenge to an average retailer in India is not from FDI, but from e-Commerce sites like flipkart.com, snapdeal.com, eazybuy.com, menzkart.com.

This in itself is sufficient to provide a push for online



shopping. Another main factor encouraging e-Commerce is that the people are now comfortable using credit cards on the internet. And mobile has truly come out to have multi-functional benefits. It is now very easy to use mobile phone for activities other than casual talks and message forwarding. Electronic flow of information has increased manifold.

A few points which will speak in favour of e-Commerce are:

1. Marketing is very important and it is generally believed that online people are easier to target. The savings in marketing costs can be passed on and prices can be reduced.
2. Now it is actually possible to get a product at less than what the manufacturer is selling it for.
3. FDI will help improving the efficiency in supply chain.
4. FDI will also help in boosting the confidence levels of the customers in which foreign players will play an important role.
5. The industry is still in the growth phase so profit margins are still likely to be high. The B2C e-commerce is likely to be the main engine driving growth in the immediate future.
6. Spontaneous activity has reduced considerably and consumers now try to make better use of the time spent online.
7. Facebook has touched nearly 45 million in India and we are still not talking of the mobile phone users.
8. Websites are starting to come up in local languages which will help increase the penetration level.

Online shopping is still in the growing stages and has still touched only a few sectors like automobiles, stocks and shares, real estate, travel and tourism, gifts, hobbies,

matrimony and employment. Even some websites sell products like men underwear, lens etc. The reason for the numbers not being as large as the businesses wish it to be is the lack of certain key elements in the existing business models. So there is a scope of improvement in this area.

The main reasons responsible for this sudden growth of e-Commerce in India are the emergence of blogs as a means for the information dissemination, bigger web presence of SMEs and corporate because of low marketing and infrastructural costs, a safe and secure business environment due to improved fraud prevention technologies, and most importantly the youth finds online transactions to be easier.

There is no doubt that the cost of running an e-Commerce is still high but with a billion and counting population which is slowly being hooked up to the e-Commerce the growth potential is too significant to be easily ignored. The existing users count more than the users who have recently joined. India can become industrialized and modernized if it can extensively apply IT to enhance productivity and international competitiveness, develop e-Commerce and e-governance applications.

## Conclusion

E-commerce is an emerging trend in Indian economy in the post economic reforms era. The revolution in the IT sector in the recent past has been instrumental in development of e-Commerce. E-commerce offers many benefits to the various stakeholders. These benefits are cost effectiveness, quick comparison shopping, better customer service, higher business margins resulting from economy in business operations, information saving and knowledge market development etc. At present there are several stumbling blocks in the development of e-Commerce such as computer initial investment, technological issues, computer ill-literacy, legal hassles, and adverse mind-set of consumers, privacy and security issues. However, these barriers to e-Commerce shall be taken care of in due course and hence e-Commerce has

bright prospects in India. We need to update ourselves to greet e-commerce and reap its benefits.

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## Eco Tourism and Sustainable Development (A Case Study of Andhra Pradesh)

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### **ABSTRACT**

*Ecotourism is often perceived as an excellent tool for promoting sustainable development in developing countries. It provides significant economic benefits, employment opportunities and additional income to the local people. There is need for encouraging eco tourism as it provides income to rural poor and conserving environment as the need of the hour.*

*As far as economic benefits are concerned, tourism brings out an opportunity for economic development, growth of related activities and diversification in developing countries. Eco tourism is not only the fast growing sector of the industry but also a hopeful new approach to preserve fragile land and threatened wild areas and to provide people in the host countries with opportunities or community based development.*

*The parameter for successful development and management of eco tourism for sustainable development largely centre on an integrated and holistic approach to tourism product development, employment of host communities, generating adequate support from the locals and a total commitment to environmentally sustainable practices within the tourism Industry. Eco tourism is not only the fast growing sector of the industry but also a hopeful new approach to preserve fragile land and threatened wild areas and to provide people in the host countries with opportunities or community based development.*

*The present study deals with the humble objective to bring out the link between Eco tourism promotion for sustainable development and relating with natural heritage in Andhra Pradesh .*

**Keywords:** *Eco tourism, opportunity, diversification, new approach, community development*

### **Introduction**

Tourism is considered as an activity essential to the life of nations because of its direct effects on the social, cultural, educational and economic sectors of national societies and on their international relations. Tourism

boosts up economic activities through multiplier effects and exploits local cultural and natural specialities in a positive way. The planning commission of India has declared tourism as the second largest sector in the country in providing employment opportunities for low skilled and semi skilled workers. Domestic tourism

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contributes about 75% of tourism economy. Thus in 12<sup>th</sup> five year plan (2012-17) tourism has been marked as a dawn of new era for a social integration and economic development. In 2008, the sector contributed 2000 billion US dollars which is expected to increase to 375.5 billion US dollars in 2018 at a 9.4% annual growth rate.

Ecotourism is a new concept in tourism. It is a purposeful travel to natural nature areas to understand the cultural and natural history of environment, taking care not to alter the integrity of the ecosystem, while producing economic opportunities that make conservation of natural resources beneficial to local people. The concept of ecotourism was developed in 1980s with the purpose of controlling the tourism and its adverse effect of natural areas (World trade organization 2002). Eco-tourism has become a vital part of sustainable community development and at present it is the fastest growing sector of tourism industry (Weinberg et al 2002). According to UNEP, eco-tourism involves traveling to relatively undisturbed or uncontaminated natural areas with specific objectives of studying, admiring and enjoying the scenery, wild plants and animals as well as the existing cultural aspects (both past as well as present) found in the areas. Ecological tourism implies a scientific, aesthetic, philosophical approach, although the ecological tourists are not required to be professional scientists, artists or philosophers (UNEP 1992).

The parameter for successful development and management of eco tourism largely centre on an integrated and holistic approach to tourism product development, employment of host communities, generating adequate support from the locals and a total commitment to environmentally sustainable practices within the tourism industry. Eco tourism is not only the fast growing sector of the industry but also a hopeful new approach to preserve fragile land and threatened wild areas and to provide people in the host countries with opportunities or community based development.

### **Eco-Tourism in Andhra Pradesh:**

Andhra Pradesh is endowed with a rich and varied Bio-

diversity distributed over a mosaic of different habitats spread over the Eastern Ghats, the Deccan Plateau Region, the Coastal Mangroves, the Fresh Water bodies like Kolleru and Brackish water bodies like the Pulicat and the grasslands of Rollapadu. These varied habitats have been supporting a variety of animal and plant species ranging from the Tiger, Gaur, Elephant, Black Buck and a variety of Deers and Antelopes, besides a variety of birds, including the Great Indian Bustard, the Spot bill Pelican, the Lesser Florican and the near extinct Jerdon's Courser. In addition to the above faunal species, the forests of Andhra Pradesh support about 5000 plant species consisting of species like Teak, Rosewood, Sandal Wood, and the endemic Red Sanders and Cycasbeddomeii, etc.

### **Objectives of Eco-Tourism**

Eco-Tourism is "A responsible travel to natural areas, which conserves the environment and improves the welfare of the local people".

The primary objective of the Eco-Tourism is to show case the natural resource to different segments of the society, for viewing the nature and the natural processes for educational, recreational values and to propagate the message of environmental conservation.

To attract both domestic and foreign tourists by creating adequate infrastructure for accommodation, food and transport facilities in the Forest areas, Sanctuary areas and zoological gardens.

### **Activities**

The main activities involved in Eco-Tourism are non-consumptive like Bird watching, Trekking, Nature trails, River rafting and more importantly mere watching of the scenic beauty of the Hills, Valleys, Meadows, Water bodies and the natural processes and learn to live in Nature. Eco-tourism also preaches the understanding and respecting various cultures and customs of people living in the area.

Role of A.P. Forest Development Corporation Ltd., in



implementation of Eco-Tourism Projects.

The Government of AP has designated A.P. Forest Development Corporation Ltd., in G.O.Ms. No. 54 EFS&T (For.-II) Dept., Dt: 26-6-2001, to implement the Eco-Tourism Projects in the Reserved Forests, Wildlife Sanctuaries, National Parks and Zoological Parks of the state.

The prime objective of these projects is to conserve the rich Biodiversity and propagate the message of environmental conservation to the people of Andhra Pradesh, by creating infrastructure facilities and visitor amenities by private participation.

In implementing the Eco-Tourism Projects the ownership of the land and all the assets created there on will remain with the Government of Andhra Pradesh, represented by APFDC, right from day one till the end of the Concession Agreement.

### **Some of important Eco tourism places in Andhra Pradesh State**

**Maredumilli** The least travelled destination in India, the Maredumilli village in the Eastern Ghats exhibits a rich biodiversity with dense wood and grasslands crisscrossed by several small perennial streams. The region is also home to several tribal communities who in support with the Andhra Pradesh Forest Department actively participate in conserving the eco-tourism project. The Maredumilli Forests of East Godavari District are having rich biodiversity and the area is having semi evergreen forests with undulating terrain, which forms part of the Eastern Ghats. The Maredumilli Community Conservation & Eco Tourism Area is situated on Maredumilli – Bhadrachalam road, nearly 4 Km. away from Maredumilli village. The area is having many streams flowing over the undulating rocks in the deep woods and any visitor feel thrilling experience in the Nature. The Eco-tourism project is managed by the local indigenous tribal community of Valamuru, Somireddypalem and Valmeekipeta Vana Samrkhana Samithi people with the active support of Andhra Pradesh

Forest Department.

**Tiger Sanctuary:** The largest wildlife sanctuary in Andhra Pradesh lies between Nagarjunasagar and upstream Srisailam. Spreadover 3,500 sq.km, it encompasses thickly wooded hills in five districts - Nalgonda, Kurnool, Mahboobnagar, Guntur and Prakasam. Road: Located at 150 km from Hyderabad.

**Uppalpadu:** It is an Important Bird Area located near Guntur. The compound consists of a lake right in the middle of which are located tiny islands with countless birds. The sight is breathtaking and awesome.

Painted Storks and Spot-billed Pelicans are quite common. The place is also a home for many migratory species of birds. The ideal time to visit is in the morning. There is a watch tower from where you can view the entire area.

Some other bird species that can be found there are- Black headed Ibis, Asian Openbill, Purple Swamphen, Water Cock, Asian Openbill, Darter, Black-crowned Night Heron etc.

### **Araku Valley:**

Araku is a famous hill station of AP. It is located at a distance of 120 KM from Visakhapatnam. It is famous for its scenic beauty. Located on the eastern ghats, it has valley, waterfalls and streams flowing by the side of the train track and roads. The journey to Araku Valley is the most enjoying as the rail passes through tunnels, hill sides and streams. It is better to go to Araku by train and return by road.

### **TYDA**

The bountiful nature surrounding this small village of Tyda is virtual and vestal modesty that is secretly set in the Eastern Ghats at an elevation of 700 meters (approximately). It is one of the unexplored places in India and thus springs up as an eco-tourism getaway in India with a rich bed of exotic flora including medicinal and aromatic plants. The region is also home to several

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endemic animals and birds such as the chital, sambar, Panther, Wolf, Wild Dog, Hyena, Sloth Bear, Gaur, Black Buck, Chinkara, Chowsingha, and Nilgai amongst the mammals AND red-chested pod chards, pintails, herons, egrets, migratory ducks, water birds, pelicans, teals, ibises and storks amongst the bird species. The region also facilitates many activities like camping, forest trails and trekking.

### **Nelapattu Bird Sanctuary:**

Nelapattu Bird Sanctuary (NBS) is one of the Wildlife Sanctuaries in Andhra Pradesh and it is located in the Nelapattu Village of Nellore district in Andhra Pradesh. NBS is approximately 85 km (52.8 miles) away from Nellore. It is also called as Nelapattu Wildlife Sanctuary. Nelapattu Bird Sanctuary is geographically situated near the Nelapattu Village in Doravarisatram Mandal of Nellore district in Andhra Pradesh. NBS is covered by southern dry evergreen scrub and Barringtonia swamp forests. NBS covers an area of 4.58 sq km (1.768 sq miles) in the Nelapattu village

Nelapattu Bird Sanctuary is a home and a haven for different species of resident and migrating birds. The floristic combination of the sanctuary includes different tree and scrub species such as Manilkarahexandra, Mababuxifolia, Memicylonedule, Buchananiaangustifolia, Zizyphusxylopyrus and Barringtonia-acutangula (Hijal) etc. Ornithologists recorded occurrence of 187 bird species in the sanctuary, including 50 migrating bird species. NBS is an important breeding site for Spot-billed Pelican, White Ibis, Openbill Stork, Night Heron, and Little Cormorant etc. Other migratory water bird spotted in the sanctuary includes Pintail, Common Teal, Dabchick, Shoveler, Coot, Spot Bill Duck, Grey Heron, Darter, Black-winged Stilt, and Garganey Gadwall etc. The Barringtonia trees spread in the sanctuary are the favorite nesting spots for Spot-billed Pelicans. The Pulicat Lake, which is approximately 10 km (6.21 miles) away from the sanctuary acts as a feeding ground for the roosting pelicans in the NBS. Faunal group found in the NBS include Jackal, Hare, Monitor 'lizard and Tortoise along with different varieties of snakes.

### **Belum Caves:**

These caves are the second largest caves in India, situated between Nandyal and Thadipatri in Kurnool district. The caves are 3229 mts. Long. These caves are originally discovered in 1854 by H.B.Foote. The caves were formed due to erosion in limestone deposit in the area by Chitratriver, millions of years ago.

These caves have long passages , spacious chambers, fresh water galleries and siphones. The deepest point of the caves is at 120 feet from entrance level.

### **Anantagiri Hill Station:**

Anantagiri is located at the top of the Elysian Tirumala Hills approximately 112 kms from Visakhapatnam. Among the ranges of the Eastern Ghats Anantagiri is located at a distance of 40 km from Visakhapatnam. Anantagiri is a charming hill resort in the state of Andhra Pradesh. Unchallenged beauty of this place attracts everyone including nature lovers , tourists, pilgrims etc. The beautiful hill resort of Anantagiri is perfect retreat to the blistering summer months.

Walk across meadows of wild flowers and apple orchards in full bloom, see rushing streams cascade down the mountainside, and the snow-capped Himalayas in the distance, and enjoy exquisite views of sunrise and sunset at Anantagiri Hills. The Anantagiri hills attract tourists by its gorgeous sights and smells.

### **Borra Caves:**

Borra Caves are located at a distance of 92 Km north of Visakhapatnam. The caves open with 100 meter on horizontal plane and about 75 meters on vertical plane. These caves spread over an area of one square KM and the origin of river Gosthani which flows through the district. This location is at a height of 800 to 1300 meters. William King the British geologist discovered this million years old cave in the year 1807. Breathtaking hilly terrain, beautiful landscape, semi-evergreen moist deciduous forests, and wild fauna of the area are a visual feast. This cave is the biggest in India considering the area it has spread geographically.



The humic acid in the water reacts with calcium carbonate in the limestone and dissolves the minerals breaking the rock gradually. The perennial water flow over a period of time results in the formation of caves. Stalagmites are formed due water percolating from the roof containing calcium bicarbonate and other minerals from mounds.

#### **Horsley Hills:**

Situated at an altitude of 1265 meters, Horsley Hills is an exciting place to visit. The old name of Horsley Hills was YenuguMallammaKonda. According to the legend there used to be a little girl named Mallamma who was taken care by Elephants. She used to heal tribal people on the hills. When she disappeared suddenly, people thought she was a goddess and built a temple for her. Later the place is named after W.D. Horsley, the Collector of Cuddapah district. He visited this place and was impressed by the beauty of the hills and chose this spot for his summer residence. Now the Governor of Andhra Pradesh uses this house as a summer residence and hence this house is called the Governors bungalow. The scenic drive to Horsley Hills is exciting and has thick vegetation of various species of plants and wild animals. Covering the entire stretch of narrow road are dense growth of Eucalyptus, Jacaranda, Allamanda, Gulmohar, Reeta, Amla, Beedi leaves, Blue Gum and Sandalwood. Wildlife like bears, wild dogs, jungle fowl, sambar and panthers are also sheltered in the forest .

#### **Kolleru Lake:**

Kolleru Lake is one of the largest freshwater lakes in India located in state of Andhra Pradesh 15 kilometers away from the city of Eluru. Kolleru is located between Krishna and Godavari deltas. Kolleru spans into two districts - Krishna and West Godavari. The lake is fed directly by water from the seasonal Budameru and Tammileru streams, and is connected to the Krishna and Godavari irrigation systems by over 67 major and minor irrigation canals.<sup>1</sup> This lake is a major tourist attraction. Many birds migrate here in winter, such as Siberian crane, ibis, and painted storks. The lake was an important habitat for an estimated 20 million resident and migratory birds, including the grey or spot-billed pelican

(*Pelecanusphilippensis*). The lake was declared as a wildlife sanctuary in November 1999 under India's Wildlife Protection Act of 1972, and designated a wetland of international importance in November 2002 under the international Ramsar Convention. The wildlife sanctuary covers an area of 308 kms. Egrets, grey herons, painted storks and black-headed ibises gathering in thousands at Kolleru Lake, Andhra Pradesh, India.

Kolleru Lake under Ramsar Convention (allowing local communities (Here: Vaddi Community) to continue their occupation of culture fish and caught fish) covers 90,100 hectares (222,600 acres) and Kolleru Lake under Wildlife Sanctuary covers 166,000 acres (67,200 ha) <sup>[5]</sup>

#### **Suggestions to Develop Andhra Pradesh as Eco Tourism State**

Keeping in view the above mentioned places, the eco tourism potential of Andhra Pradesh state can be helpful in generating revenue for the state and improve the economy of the state. The various steps by which it can be developed are described as under:

1. **Tourism map of the state:** The famous tourism places of Andhra Pradesh state need to be displayed on the tourism map of the state with complete details about their importance with respect to culture and history of the state,
2. **Road connectivity:** It is the prime necessity for the development of an area by improving transport facilities, tourism activity can be encouraged.
3. **Infrastructure development:** Infrastructure in terms of hotels, shops, parking need to be provided to the visitors/ tourists.
4. **Water sports:** Concept of water sports in terms of parasailing, boating, swimming, scuba diving, river rafting etc. need to be introduced in such a way that it will have least impact on the ecology of rivers and beaches.

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5. **Plantation:** The plantation of local trees needs to be encouraged along the banks of rivers, road side, on slopes, barren land as it will have manifold benefits and at the same time impart beauty to the tourist places.
  6. **Installation of dustbins:** In order to tackle the menace of solid waste there is need of installing dustbins at various places for the collection of solid waste.
  7. **Awareness of eco friendly life style:** Tourists can be informed/ communicated about eco friendly life style through tourist guides, maps, hoardings, banners, booklets, pamphlets etc. for example impose the ban on usage of polythene bags.
  8. Traditional culture, folk art, folk dance should be promoted on priority basis.
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Eco tourism is field of human activity where conservation and development can effectively be balanced to achieve a mutual goal for the benefit of the people and sustainable development in the community.

Tourism awareness and hospitality need to be developed in the region. The APTDC needs to play a major role to provide training and necessary education to the local people to encourage their participation in the sustainable development of tourism industry; it may ensure economic development of the local people and may encourage them to conserve available natural resources.

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## Import-Export Trade Policy

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### ABSTRACT

*The study presents the background and reason for EXIM policy .It further marches presenting trade policy of India, which can enhance trade. The relevance of the study is marked by the fact that there is a relation between Business and EXIM policy. The subject of Foreign Trade Policy has attracted increasing interest in the marketing literature over the last decade. Due to the fact that trade has received significant research attention, this paper explores and integrates the various dimensions of trade policy and concluded that trade policy is a multidimensional construct and any measurement attempts must recognize its different dimensions.*

**Keywords:** Business, Trade, Export, Import, Foreign and policy

### Introduction

The Vision is to make India a significant participant in world trade by the year 2020 and to enable the country to assume a position of leadership in the international trade discourse .To create an architecture for India's global trade engagement with a view to expanding its markets and better integrating with major regions, thereby increasing the demand for India's products and contributing to the "Make in India" initiative in order to rationalise imports and reduce the trade imbalance.

### Exim Policy or Foreign Trade Policy

Is a set of guidelines and instructions established by the DGFT in matters related to the import and export of goods in India.

The Foreign Trade Policy of India is guided by the

Export Import in known in short as EXIM policy of the Indian Government and is regulated by the Foreign Trade Development and Regulation Act,1992. DGFT (Directorate General of Foreign Trade) is the main governing body in matters related to Exim Policy. The main objective of the Foreign Trade (Development and Regulation) Act is to provide the development and regulation of foreign trade by facilitating imports into, and augmenting exports from India. Foreign Trade Act has replaced the earlier law known as the Imports and Exports (Control) Act 1947.

### Objectives of the Exim Policy

- To accelerate the economy from low level of economic activities to high level of economic activities by making it a globally oriented vibrant economy and to derive maximum benefits from expanding global market opportunities.

## Import–Export Trade Policy

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- To stimulate sustained economic growth by providing access to essential raw materials, intermediates, components, consumables and capital goods required for augmenting production.
- To enhance the techno local strength and efficiency of Indian agriculture, industry and services, thereby, improving their competitiveness.
- To generate new employment opportunities and encourage the attainment of internationally accepted standards of quality.
- To provide quality consumer products at reasonable prices.

Commerce Ministry releases Foreign Trade Policy 2015-2020. New foreign trade policy: \$900 bn exports by FY20. The target to double India's exports in goods and services over the next five years (from \$465 billion to \$900 billion) and upping the Indian share of the world exports pie from the current 2 percent to 3.5 percent over the same period.

Exports through Make in India underlined in FTP:  
Commerce Minister Nirmala Sitharaman

### India's Foreign Trade

What does Darjeeling Tea, Basmati Rice, Indian Carpet, Kanchipuram Silk, Mysore Sandalwood Oil, Indian Garments, Indian Software, Surat Diamonds to name a few have in common. They represent the modern symbols of Indian foreign trade.

On 1st April 2015, the new Foreign Trade Policy (FTP) for the period 2015-20 was announced India's Foreign Trade Policy also known as Export Import Policy (EXIM) in general, aims at developing export potential, improving export performance, encouraging foreign trade and creating favourable balance of payments position. Foreign Trade Policy is prepared and announced by the Central Government (Ministry of Commerce).

Foreign Trade Policy or EXIM Policy is a set of guidelines and instructions established by the DGFT

(Directorate General of Foreign Trade) in matters related to the import and export of goods in India.

The foreign trade policy, has offered more incentives to exporters to help them tide over the effects of a likely demand slump in their major markets such as the US and Europe.

Foreign trade is exchange of capital, goods, and services across international borders or territories. In most countries, it represents a significant share of gross domestic product (GDP). While international trade has been present throughout much of history, its economic, social, and political importance has been on the rise in recent centuries.

### Some highlights of the present Foreign Trade Policy 2015-2020

India to be made a significant participant in world trade by 2020.

Commerce Minister announced two new schemes in Foreign Trade Policy 2015-2020. Two New Schemes announced in FTP Are MEIS & SEIS. FTP 2015-20 introduces two new schemes, namely "Merchandise Exports from India Scheme (MEIS)" and "Services Exports from India Scheme (SEIS)". These schemes (MEIS and SEIS) replace multiple schemes earlier in place; each with different conditions for eligibility and usage. FTP would reduce export obligations by 25% and give boost to domestic manufacturing.

E-Commerce of handicrafts, handlooms, books etc., eligible for benefits of MEIS. E-Commerce exports up to Rs.25000 per consignment will get SFIS benefits.

E-Commerce Exports Eligible for Services Exports from India Scheme – As part of Digital India vision, mobile apps would be created to ease filing of taxes and stamp duty, automatic money transfer using Intern Agricultural and village industry products to be supported across the globe at rates of 3% and 5% under MEIS. Higher level of support to be provided to process and packaged



agricultural and food items under MEIS.

Industrial products to be supported in major markets at rates ranging from 2% to 3%.

Branding campaigns planned to promote exports in sectors where India has traditional strength.

Business services, hotel and restaurants to get rewards scrip's under SEIS at 3% and other specified services at 5%.

## India's Trade Policy Philosophy

### Theoretical Background

On analytical grounds, trade policy can be broadly divided into two groups –

Inward oriented and (b) Outward oriented.

**Inward – oriented policy:-** An inward oriented strategy is the one in which trade and industrial incentives are biased in favour of production for domestic market over the export market. Thus, an inward oriented policy is often designated as the import substitution strategy.

**Outward – oriented policy:-** On the contrary, an outward oriented strategy is the one in which trade and industrial policies do not discriminate between production for domestic goods and foreign goods. Thus, an outward oriented strategy is often designated as the export promotion strategy.

### History and evolution of foreign trade policy in India

The changing dynamics will profoundly affect India's trade and we will have to grapple with important questions in the near future around issues such as whether or not India should integrate into new forms of trading arrangements and the pace and extent of such integration. The biggest challenges that India's foreign trade faces today are from within the country. There will always be external challenges but there is no gain saying the fact that without addressing the challenges that lie within the country, we cannot possibly tackle the external ones effectively. Studies show that vis-a-

vis products exported by some of the major East Asian countries, Indian products have been losing their competitiveness

The other reasons are that:

- India is relatively less integrated into regional and global supply chains; existing trade architecture has not been used to its full potential; and
- There is relatively less focus on value-added exports and consequently our marketing arrangements for positioning Indian products at higher levels of value realisation are inadequate.

The vision underpinning the Foreign Trade Policy for 2015-2020 is to make India a significant participant in world trade by the year 2020 and to enable the country to assume a position of leadership in the international trade discourse.

High quality products are their own best advertisement. Recognising the increasing role of standards in global trade and the steps India needs to take both to strengthen its own standards as well as to meet the challenges posed to its exports, a roadmap has been developed on measures required to protect consumers, raise the quality of the merchandise produced and greatly enhance India's capacity to export to discerning markets.

### The FTP for 2015-2020 seeks to achieve the following objectives:

- (i) To provide a stable and sustainable policy environment for foreign trade in merchandise and services;
- (ii) To link rules, procedures and incentives for exports and imports with other initiatives such as "Make in India", "Digital India" and "Skills India" to create an "Export Promotion Mission" for India;
- (iii) To promote the diversification of India's export basket by helping various sectors of the Indian economy to gain global competitiveness with a view to promoting exports;
- (iv) To create an architecture for India's global trade engagement with a view to expanding its markets and better integrating with major regions, thereby increasing

the demand for India's products and contributing to the government's flagship "Make in India" initiative; (v) To provide a mechanism for regular appraisal in order to rationalise imports and reduce the trade imbalance.

### Findings/Conclusion

This paper emphasizes the importance of trade and helps in reaching some important conclusion. Government is committed to transforming India into a manufacturing and exporting hub. This is possible only if India's products are world class and of a standard acceptable in the most discerning markets. It is essential for India to develop a coordinated national response and strategy to meet the challenges of standards and conformity assessment and promote its presence in the international market.

#### Legislative and institutional reforms:

(i) a) To enable a range of options for regulators for conformity assessment procedures to provide for use of independent, third party Conformity Assessment Bodies (CABs) (inspection bodies, certification bodies and laboratories) for the purpose of administering the regulations. b) For low risk items there should be provision for conformity assessment through Supplier's Declaration of Conformity (SDoC) procedure. c) SDoC works well in combination with a strong Product Liability Law and market surveillance both of which are weak in India. A new legal framework on Product Liability is required.

(ii) Each regulator/ line ministry should review its technical regulations/ standards for various products to identify the gaps vis-à-vis the international standards and lay down realistic time frames for bridging these gaps and evolving good regulatory practices.

(iii) The internationally accepted system is "Certified Once, Accepted Everywhere". This minimizes re-testing and recertification thereby reducing costs and market access delays and eliminating non-tariff barriers to trade. A policy must be evolved in this regard.

(iv) It is necessary to promote awareness about standards, regulations and conformity assessment procedures of India's trading partners and gaps with reference to global benchmarks. Many countries are allocating huge resources for brand promotion. A long term branding strategy is required for India to hold its own in this highly competitive environment, not merely to attract consumers but, more importantly, to encourage industry to position its products in highly discerning markets and to ensure that Brand India becomes synonymous with high quality.

**Future Focus:** Branding is a dynamic process which needs to evolve continually in line with the environment. The term "Brand India" is used very often without actually defining its specific elements. What is it that we actually associate or wish to associate with "Brand India? Therefore, the first exercise needs to be is to identify the elements of "Brand India". As a follow up to the articulation of the "Brand India" concept, the following action will be taken: I. Development of a standard brand kit. Re-orienting "The India Shows" The India Shows should not be standalone events but part of global as well as the biggest sectoral shows. They must showcase India on the biggest and the best international platforms through campaigns designed for maximum impact. Brand manual for exhibitors a brand manual for the exhibitors would be designed and provided for all the "India Shows":

**Promotion of Brands from India.** Brands fetch additional value for their promoters. They also bring additional institutional recognition to the country because building a brand is a long term comprehensive procedure in which several stakeholders play a role.

**Geographical Indications.** India has about 300 registered Geographical Indications (GIs), but only a few of them have been used for commercial value. A large number of these GIs are on man-made products from specific regions. Several of these manufactured products are in the area of textiles. Some of India's well known GIs are Basmati Rice and Darjeeling Tea. The potential to enhance the branding and, thereby, the



commercial value of such products remains underutilised. Nor have exports of such products been adequately incentivised. Doing so will give a boost to our traditional sectors. . **The MAI & MDA Schemes.** The Market Access Initiative (MAI) scheme is an umbrella instrument for supporting trade prom. Under the Market Development Assistance (MDA) Scheme, financial assistance is provided for a range of export promotion activities implemented by Export Promotion Councils and Trade Promotion Organizations.

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## Smart Cities: The Need of New India - A Case Study: New Town, West Bengal

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### ABSTRACT

*Urbanization is most predominant and contemporary process prevalent throughout the globe especially in developing countries like India. To sustain the brisk growth rate of economy and urbanization and to alleviate the problems arising due to the growth, an integrated approach and sustainable strategy is required. The inclusive and smart planning is one such emerging strategy to tackle and mitigate these problems. In 2008, IBM of the United States put forward the concept of “Smart Cities” to study how the function of a city can be optimized to promote the development of a talent based economy and improve the quality of life. This paper attempts to introduce the concept and definition of a Smart City, to understand the need of Smart Cities in India and to give a review of the development of a smart city in West Bengal through a case study- (Newtown, Rajarhat). The main source of data is secondary. Journal articles and conference papers related to smart cities in general and information regarding the smart city of New Town in West Bengal are considered. The analysis indicates that the cities are expanding and new cities are being formed mainly by transformation and growth from villages and towns. But these cities lack basic infrastructural services and other amenities due to various reasons. New Town, Kolkata is a new entrant in this sector. Here an attempt has been made to scrutinize the features of a smart city with reference to New Town.*

**Keywords:** *Urbanization, Inclusive, Smart Cities, Transformation, Infrastructural*

### Introduction

There is no universally accepted definition of a smart city. It means different things to different people. The conceptualisation of smart city, therefore, varies from city to city and from country to country, depending on the level of development, willingness to change and reform, resources and aspirations of the city residents. In the approach of the Smart Cities Mission, the objective is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and

sustainable environment and application of ‘Smart’ Solutions. The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model which will act like a light house to other aspiring cities.

The core infrastructure elements in a smart city would include:

- i. Adequate water supply
- ii. Assured electricity supply
- iii. Sanitation, including solid waste management



- iv. Efficient urban mobility and public transport
- v. Affordable housing, especially for the poor
- vi. Robust IT connectivity and digitalization
- vii. Good governance, especially e-Governance and citizen participation
- viii. Sustainable environment
- ix. Safety and security of citizens, particularly women, children and the elderly
- x. Health and education

Accordingly, the purpose of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to Smart outcomes. Area- based development will transform existing areas (retrofit and redevelop), including slums, into better planned ones, thereby improving liveability of the whole City. New areas (Greenfield) will be developed around cities in order to accommodate the expanding population in urban areas. Application of Smart Solutions will enable cities to use technology, information and data to improve infrastructure and services. Comprehensive development in this way will improve quality of life, create employment and enhance incomes for all, especially the poor and the disadvantaged, leading to inclusive cities.

### **Background for the Development of Smart Cities**

Since the rapid rise and development of the internet in the last century, information and communication technologies (ICT) have been widely used in government, businesses and societies as well as in daily lives. In the recent years, it has been a worldwide practice to take ICT as a core consideration in city development and management. In 2008, IBM of the United States put forward the concept of “Smart Cities” to study how the function of a city can be optimised to promote the development of a talent based economy and improve the quality of life.

### **Review of Literature**

According to the Union urban development ministry’s

website, Smart Cities are projected to be equipped with basic infrastructure that will offer a good quality of life through smart solutions. Water and power supply, sanitation and solid waste management, efficient urban mobility and public transport, robust IT connectivity, e-governance and citizen participation along with safety are some of the projected attributes of these smart cities. Washburn et al. conceptualizes smart city by laying an explicit emphasis on the use of smart computing technologies. They viewed current urban crises as an imperative of a smart city initiative. Deteriorating conditions of cities in a crisis include scarcity of resources, inadequate and poor infrastructure, energy shortages and price instability, global environmental concerns, and human health concerns. Giffinger et al. highlighted the performance of smart city in economy, people, governance, mobility, environment, and living. The Smarter Cities project of the Natural Resources Defense Council conceptualizes smart city by highlighting positive outcomes made by being smarter. IBM’s view of smart city envisions its three main characteristics: instrumented, interconnected, and intelligent. Instrumentation means sourcing of real-time real-world data from both physical and virtual sensors. Such data may be interconnected across multiple processes, systems, organizations, industries, or value chains. The combination of instrumented and interconnected systems effectively connects the physical world to the virtual world. Rios’s approach is based on an architectural lens. He sees smart city as a city that gives inspiration, shares culture, knowledge, and life, and motivates its inhabitants to create and flourish in their own lives.

### **Conceptual Framework**

To build the set of common multidimensional components there is a need to take a close look at the conceptual cousins of smart city and trace the roots of the terms popularly used. A variety of the labels can be largely categorized into three dimensions: technology, people, and community.

## Smart Cities: The Need of New India - A Case Study: New Town, West Bengal

Dimensions	Concepts
Technology	Digital City
	Ubiquitous City
	Wired City
	Hybrid City
	Information City
	Intelligent City
People	Creative City
	Learning City
	Humane City
	Knowledge City
Community	Smart Community

### Research Objectives

1. To introduce the concept and definition of a Smart City
2. To understand the need of Smart Cities in India.
3. To give a review of the development of a smart city in West Bengal through a case study- (NewTown, Rajarhat)

### Research Methodology

The research methodology adopted for the present study is a rationalistic and systematic one. The main source of data is secondary. Journal articles and conference papers related to smart cities in general and information regarding the smart city of New Town in West Bengal are considered.

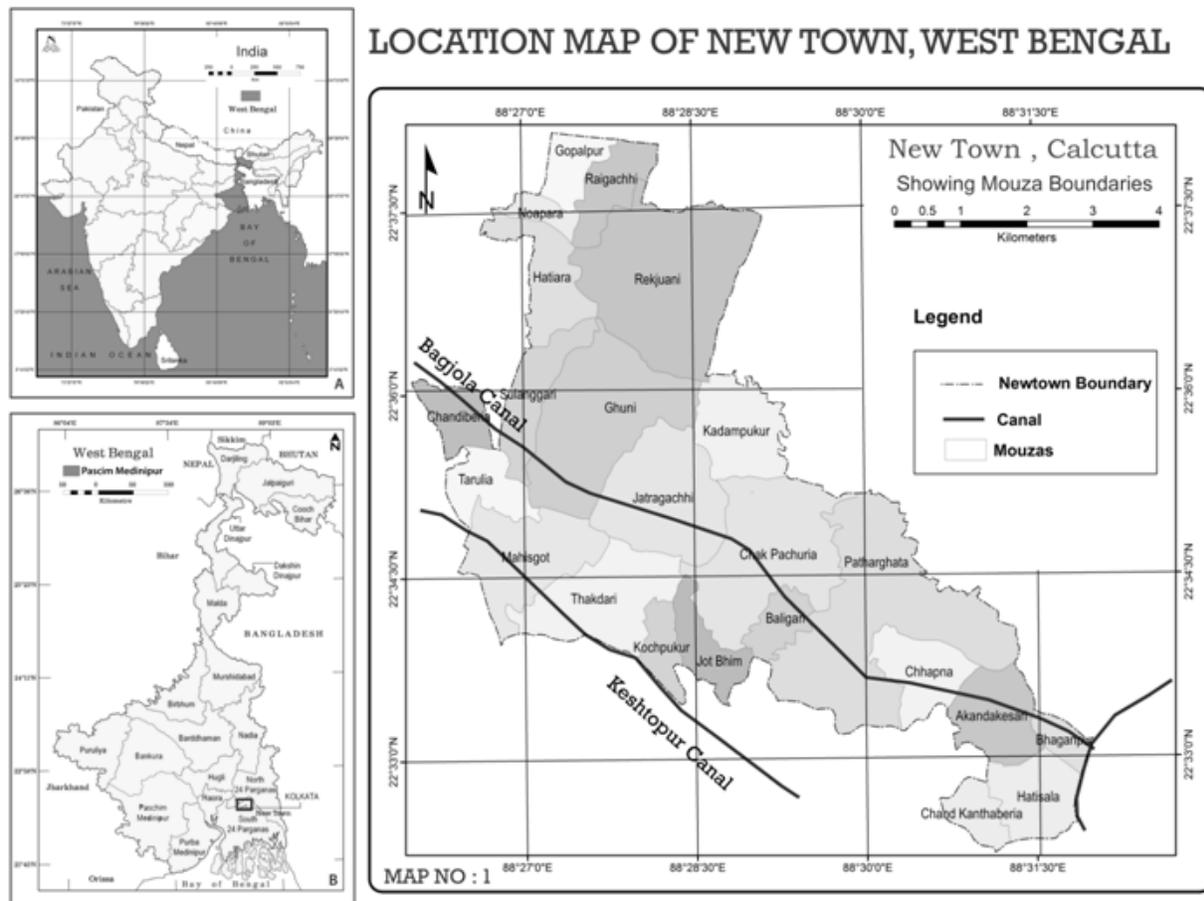
### Research Discussion and Analysis

New Town, a neighbourhood of Kolkata (earlier, Calcutta), located in Kolkata district of the Indian state of West Bengal, is a fast-growing planned satellite city. This new information technology and residential hub is being developed on the north-eastern fringes of Kolkata. It consists of areas of two erstwhile Blocks of Rajarhat and Bhangar, which is now a statutory planned development area. The area mainly consisted of huge acres of cultivable lands and water bodies, which have

been acquired and developed in a planned manner. The process of investing for residential and industrial facilities and infrastructural development of the area has mainly started under the leadership of the then Chief Minister of West Bengal Buddhadeb Bhattacharya in the late 1990s. The master plan envisions a township which is at least three times bigger than the neighbouring planned Salt Lake City. The New Town (Rajarhat) has been also declared as a Solar City by the previous UPA government at the Centre and now as Smart Green City. (Map No 1)

New Town has made the smart city list on its second attempt with a slew of smart proposals that include cycle and wheelchair tracks, Wi-Fi and GPS-enabled e-transport and bus stops with screens showing when the next bus will arrive. New Town in the second list of 13 cities chosen to receive funding under the Smart City Mission, an initiative by the Narendra Modi government to develop 100 satellite towns across the country. New Town ranks No. 6 among the smart set.

In the first list of 20 cities, New Town was put on the 30<sup>th</sup> rank. In the second list, New Town topped the list of four places in Bengal - Salt Lake, Asansol and Durgapur were the other three - nominated for smart city status. The township, which has been in the making for several years, thereafter got a chance to participate in a fast-track competition among the leading contenders



from all states. Bhagalpur, Imphal, Ranchi and Agartala are some of the other places in the second list of 13.

### Features That Helped New Town to Stand Out Among Competitors

- Elderly & Wheelchair Friendly Pavements:** Already some of the pavements in New Town would be provided with tactile that would make walking easier for the elderly and visually challenged. Pavements will also have ramps for wheelchairs.
- E-Health Clinics:** These Clinics run by the New Town Kolkata Development Authority will have specialists, paramedic teams and diagnostic centres from where reports would be sent to patients via
- Intelligent Streetlights:** Power saving LED Street lights would be retrofitted with sunlight sensors so that they automatically switch off when the sun comes out and switch on when dusk sets in or it gets cloudy. Panic buttons will be installed on these poles. A person in distress will just need to reach the nearest police station and NKTA control room.
- Cycling Tracks:** Cycling Tracks would be developed along all major roads in the township. There would also be a cycle renting zones to promote cycling.

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- **Wi-Fi hotspots:** In public places people would be able to access free Wi-Fi for the first 40 minutes every day. The internet service will be chargeable then on.
- **New Amusement Hubs:** Both the sides of the canal would be beautified. An entertainment zone of 2450 sq.meter will be developed.
- **Solar Panels in all parks and playgrounds:** Solar cells will be used to power the street lights.
- **New Water Treatment Plan:** A water treatment plant that can supply 20 MGD filtered water a day is already on trial and will be effective by next month.

Talks have already been held at the secretarial level between the Centre and state on the New Town smart city concept plan. The plan states developing an intelligent public transport system, township wide Wi-Fi coverage, underground solid waste management system, sensor-based street light energy conservation modules, web-based property tax system, developing video-based health consultation clinics, synchronisation of land and tax data on the database, drone-based surveillance systems, synchronisation of land and tax data on the database, among other measures. The plan also mentions the use of analytics to automatically scrutinise CCTV footage, use of modern techniques to detect water flow in pipe networks.

Another 40 smart cities would be selected during 2016-17 and the remaining 40 over the next financial year. Each city selected in different rounds of competition will be given central assistance of Rs 200 crore in the first year and Rs 100 crore each in the subsequent three financial years. State governments and respective urban local bodies will also provide the same amount.

The analysis of New Town indicates that the cities are expanding and new cities are being formed mainly by transformation and growth from villages and towns due to rapid urbanization. However, these cities lack basic

infrastructural services due to various reasons like lack of administrative and service delivery mechanism, lack of proper planning vision, investment, management, and to some extent changing lifestyle of the people.

### Recommendations

Spatial Planning is one of the important pre-requisites for smart city in Indian context and New Town should consider the following crucial aspects:

- Preparation of comprehensive city spatial plans using ‘State of art’ technologies such as GIS and Remote Sensing applications.
- Spatial Plan which envisages efficient allocation of land and resources.
- Poly-centric city plan with mixed land use.
- Integration of land use and transportation using TOD concept.
- Local area planning and energy efficient urban design involving citizens/stakeholders.
- Sustainable Urban Transport road design to bring about more equitable allocation of road space for movement of people, rather than only vehicles by providing compact, well-designed and well-coordinated pedestrian and Non-Motorized Transport oriented infrastructure.
- Revisiting existing development controls and zoning regulations.
- Infrastructure Planning & resource mobilization.
- Capacity building, skill development training and exposure visit for city planners to familiarize with latest techniques and technologies.

### Conclusion

Nowadays the usage of “smart” captures innovative and transformative changes driven by new technologies.



However, social factors other than smart technologies are central to smart cities. In this sense, a socio-technical view on smart city is needed. A smart city initiative requires a comprehensive understanding of the complexities and interconnections among social and technical factors of services and physical environments in a city. Smart Cities need smart planning - keeping in mind the economy, environment and society and thus Remote Sensing GIS technologies should be used for systematic records and analysis.

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## Vocational Education in India: The Need of the Hour

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### ABSTRACT

*This paper aims at highlighting the current scenario of vocational education in India and its importance considering the shift in Indian Industrial scenario. The paper also recommends the various ways in which vocational education can be improvised further for adoption by the masses such that a nation comprising mainly of youth can be made skillful and future ready. The Government is already focusing on vocational education through schemes such as National Skill Development Corporation, Skill India, Make in India, etc. and professional engineering societies are offering an opportunity to earn non-formal diplomas and degrees to working young professionals allowing them to upgrade their qualifications while the Industry is in need of skilled job ready youth. The current problem is that the formal method of earning a qualification in India is still considered to be costly and at the same time the Industry regards it as insufficient when it comes to employability. The short term certificate courses offered by various vocational education centres enable youth to get jobs but render them with very little knowledge and limits their possibility of upgrading themselves. Employed industrial people do possess the skills to perform a particular task with high level of excellence but this is not suitable to the ever growing and shifting global industrial environment. If the government, professional engineering societies and the Industry work together offering the youth with affordable quality vocational education with on Job training it could result in a Nation of highly skilled youth with increased level of employability which is discussed in the paper.*

**Keywords:** Vocational Education, Certificate and Diploma Courses, National Skill Development, Professional Societies.

### Introduction

Vocational Education is based on occupation and employment and it is the need of the hour for every country to have strong vocational education system. It can be defined as skilled based education. Vocational Education helps in Economic growth. The Indian education system recognizes the role of education and particularly Vocational Education.

### What is Vocational Education?

Vocational Education can be defined as the education that is based on occupation and employment. Vocational Education is also known as career and technical education (CTE) or technical and vocational education and training (TVET). It prepares people for specific trades, crafts and careers at various levels in all spheres



of life. It involves various practical activities. It is sometimes referred as technical education because the trainee directly develops expertise in a particular group of techniques. Vocational education is related to the age-old apprenticeship system of learning. In other words Vocational Education may be classified as teaching procedural knowledge. Vocational education consists basically of practical courses through which one gains skills and experience directly linked to a career in future. It helps students to be skilled and in turn, offers better employment opportunities.

### Need of Vocational Education

Vocational, or skills-based, education is becoming more and more important today, with many employers expecting new employees to have all the practical skills they need to start work and also for those who have to support their families immediately after senior secondary education. Vocational courses are typically more practical and skills-based than academic degrees, but they are often taught at universities as well as colleges and technical institutes. Vocational Education and Training (VET) is an important element of the nation's education initiative. Vocational education has to be viewed from different multi-layered practices. One is of course the hands on training component. The other is employment generation and sustainability. It could be hospitality and tourism, retail management, software development or interior design. There are literally thousands of skills based training options out there. In today's technical world, even an engineering graduate is supposed to have some technical skills apart from the degree possessed by him or her i.e. in the form of certification etc.

### Vocational Training in India

In India, we believe that education is the key to the task of nation-building. It is also a well-accepted fact that providing the right knowledge and skills to the youth can ensure the overall national progress and economic growth. The Indian education system recognizes the role of education and particularly Vocational Education. Vocational training in India is provided on a full-time as

well as part-time basis. Full-time programs are generally offered through I.T.I.s Industrial training institutes. The nodal agency for granting the recognition to the I.T.I.s is NCVT, which is under the Ministry of Labour, Govt. of India. Part-time programs are offered through state technical education boards or universities who also offer full-time courses. The technical and vocational education and training system (TVET) in India develops human resource through a three-tier system:

- Graduate and post-graduate level specialists (e.g. IITs, NITs, and engineering colleges) trained as engineers and technologists.
- Diploma-level graduates who are trained at Polytechnics as technicians and supervisors.
- Certificate-level for higher secondary students in the vocational stream and craft people trained in ITIs as well as through formal apprenticeships as semiskilled and skilled workers. [1]

### Economic Situation

The Approach Paper for the 12th Five Year Plan specified that the Indian Economy on the eve of the 12th Five Year Plan is characterized by strong macro fundamentals and good performance over the 11<sup>th</sup> Five Year Plan though clouded by some slowdown in growth in the current year (2011-12) with continuing concern about inflation and the sudden increase in uncertainty about the global economy. The objective of the 11th Plan was faster and inclusive growth and the initiatives taken in the plan period have resulted progress towards attaining both objectives. Rapid GDP growth, targeted at 9.0% per annum, is regarded necessary for two reasons: i) to generate the income and employment opportunities that were needed for improving living standards for the bulk of the population; and ii) to generate the resources needed for financing social sector programmes, aimed at reducing poverty and enabling inclusiveness. The economy has performed reasonably well on the growth front, averaging 8.2% in the first 4 years.

### Higher Education Enrolment Results in Lowering Unemployment

On the employment front, the 66th round of National Sample Survey Organisation (NSSO) survey on employment (2009-10), indicates that the number of young people in education, and therefore, out of the workforce, has increased dramatically causing a drop in the labour participation rate. The total number of young working age people (15 to 24 years) who continued in educational institutions doubled from about 30 million in 2004-05 to over 60 million in 2009-10. The survey further shows that the overall labour force expanded by only 11.7 million between 2004-05 and 2009-10. This was considerably lower than comparable earlier period. Over the same period, 18 million job opportunities were created on current daily status basis. Thus, in absolute terms, unemployment came down by 6.3 million; and the unemployment rate which had increased from 6.06% (in 1993-94) to 8.28% (in 2004-05) came down to 6.60% (in 2009-10).

### Skill Development

There is a need for concerted action in several key areas in order to ensure that skill formation takes place in a demand driven manner. Curriculum for skill development has to be reoriented on a continuing basis to meet the demands of the employers/industry and align it with the available self-employment opportunities. Accreditation and certification system have to be improved. There is a need to establish institutional mechanism providing access to information on skill inventory and skill maps on a realtime basis. A sectoral approach is required for the purpose with special emphasis on those sectors that have high employment potential. Skill Development Centre can be established in existing education and training institutions. This would ensure huge saving in cost and time.

### Enhancing Employability

For both 'general' and 'professional' education streams, integrated curriculum with greater flexibility in choice

of subjects and innovative pedagogic practices are needed to improve the quality and enhance employability. Graduates now require the skills beyond the basic of reading, writing and arithmetic (the 3 Rs). Skills, such as critical thinking, communication, collaboration and creativity (the '4Cs') are now important in more and more jobs. Accordingly, there is need to focus on the 4Cs. The vocational education and training sector in the country is small and this limited capacity is underutilized due to poor quality and lack of social status. During the 12th Five Year Plan, there is an urgent need to develop a large sector offering qualifications in the form of associate degrees catering to intermediate skills in the higher education space within the National Vocational Education Qualifications Framework. Such degrees would carry with them social prestige, would be less expensive and academically less rigorous, thus catering to the needs of students whose abilities fit less well with the formal education system. Emergence of this sector would ensure vertical mobility for the pass outs from the vocational sector and integrate them with the mainstream higher education. [2]

### Vocational education

In the recent past, the outlook on India has been one of cautious optimism. However, it is widely believed that India will be on track for growth if reforms are continued and issues relating to governance are tackled. In recent months, the government has taken some positive steps including the introduction of reforms in the retail sector, in insurance and in pensions, and the issuance of guidelines in higher education, which allow foreign universities to offer programs in India. We believe these reforms are steps in the right direction, although much needs to be done to take India to a mid-income level as a country. This idea of a prosperous India is based on a favorable population demographic. Given the ageing populations in most other developed economies, and the median age here of 25 years, India is looking to become an exporter of skilled manpower. Even within the country, about 11-13 million people are expected to seek employment opportunities every year, for the next decade. However, the employability of this population



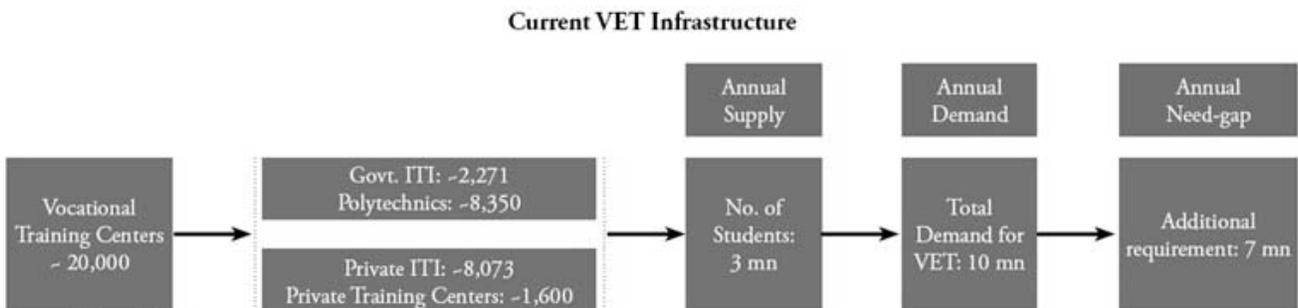
is an issue. A quick look at Figure 1 gives an insight into the challenge or the opportunity, depending on how one chooses to see it in making this population productive and employable.



Source: Technopak Analysis

**Fig. 1: India's Population: Age and Employability**

This huge demand for vocational education and the enormous gap in capacity makes the situation precarious for India. Figure 2 details the gap in capacity on a yearly basis.



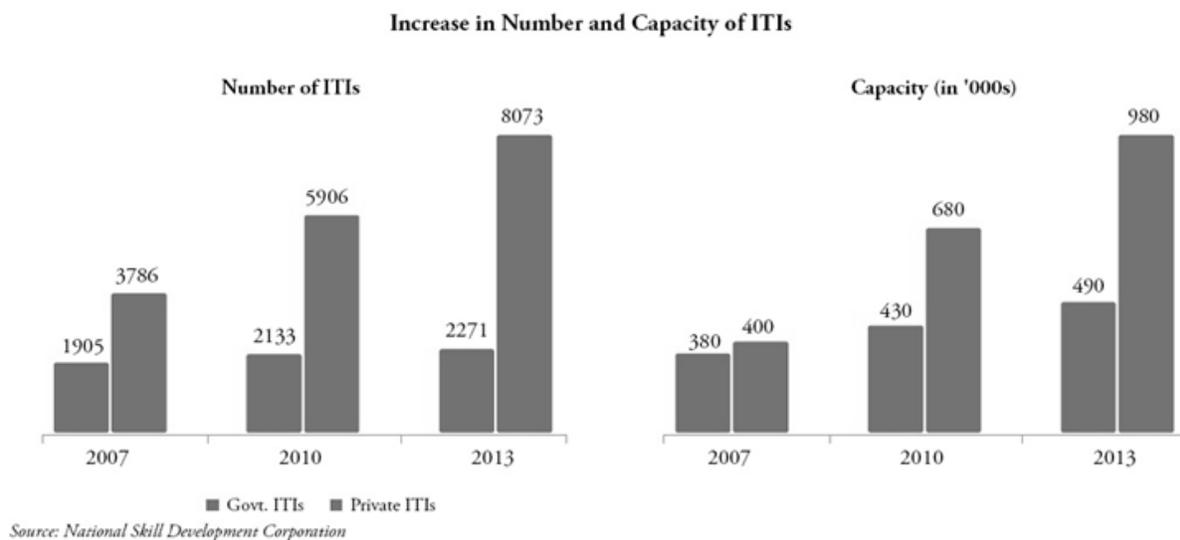
Source: Technopak Analysis

**Fig. 2: Current Vocational Education Training (VET) Infrastructure**

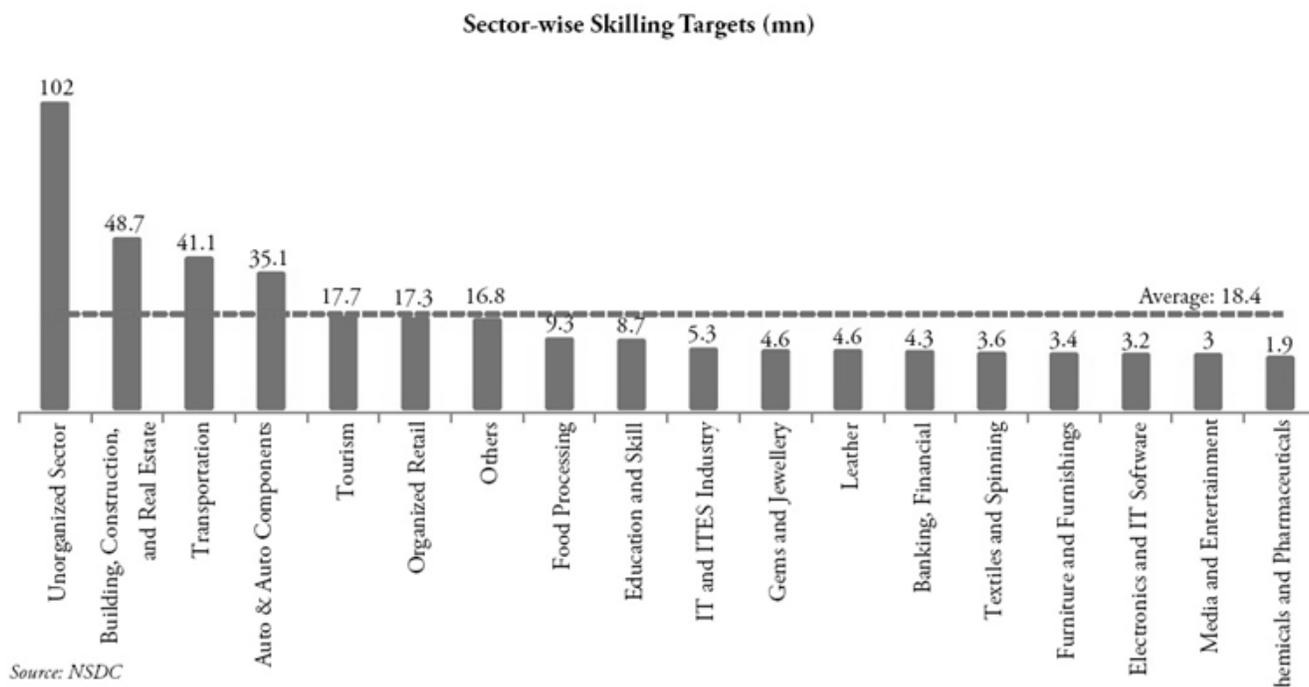
The enormity of the challenge is well-recognized; the government has taken a slew of measures including the setting-up and funding of new ITIs, studying the sustainability of vocational models, establishing payee mechanisms, vocational standards, creation of sector skill councils, modular employability schemes, etc. Recently, the government has set up the National Skill Development Agency (NSDA) with a mandate to coordinate all skill development initiatives which have resulted in an increase in capacity in recent years.

The manpower demand across various key industries over the next decade will help us put the challenges into perspective. Figures 4 and 5, give insights into the requirement across various industries and skill levels.[3]

## Vocational Education in India: The Need of the Hour



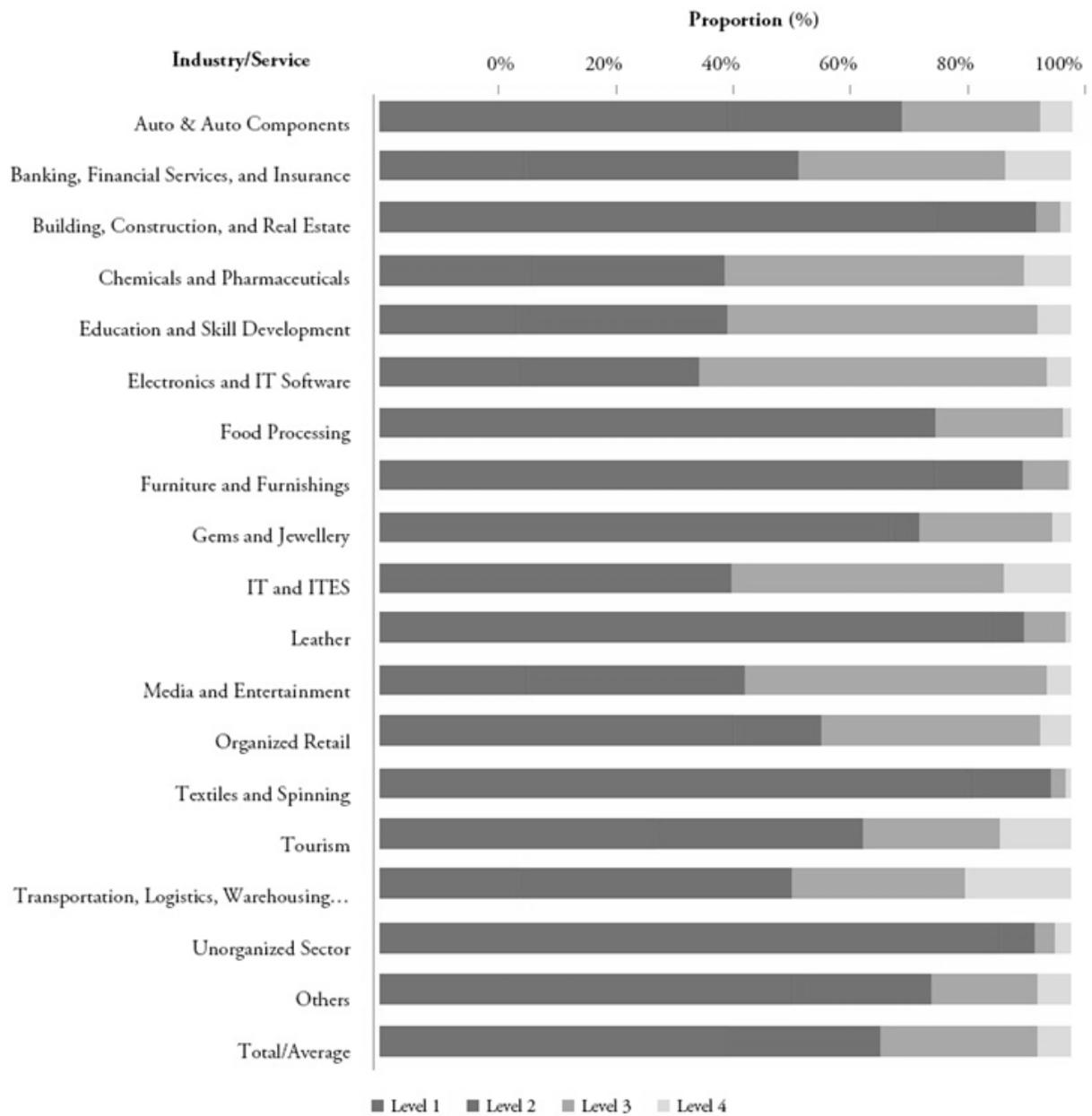
**Fig. 3: Increase in Number and Capacity of ITI's**



**Fig 4: Sector wise Skilling targets**



**Increase in Skilled Workforce Requirement in Key Industries, Fiscal 2008-2022 (E)**



Source: National Skill Development Corporation

**Fig 5: Increase in skilled workforce requirements**

### **National Skill Development Corporation (NSDC)**

Skills and knowledge are the driving forces of economic growth and social development for any country. India currently faces a severe shortage of well-trained, skilled workers. It is estimated that only 2.3 % of the workforce in India has undergone formal skill training as compared to 68% in the UK, 75% in Germany, 52% in USA, 80% in Japan and 96% in South Korea. Large sections of the educated workforce have little or no skills, making them largely unemployable. Therefore, India must focus on scaling up skill training efforts to meet the demands of employers and drive economic growth. India's annual skilling capacity was estimated at approximately 7 million during the period 2013-2014. Apart from meeting its own demand, India has the potential to provide a skilled workforce to fill the expected shortfall in the ageing developed world. India is one of the youngest nations in the world, with more than 54% of the total population below 25 years of age and over 62% of the population in the working age group (15-59 years). The country's population pyramid is expected to bulge across the 15-59 age group over the next decade. This demographic advantage is predicted to last only until 2040. India therefore has a very narrow time frame to harness its demographic dividend and to overcome its skill shortages. The enormity of India's skilling challenge is further aggravated by the fact that skill training efforts cut across multiple sectors and require the involvement of diverse stakeholders such as: multiple government departments at the centre and state levels, private training providers, educational and training institutions, employers, industry associations, assessment and certification bodies and trainees. All these stakeholders need to align their work together in order to achieve the target of 'Skill India'. The Ministry of Skill Development and Entrepreneurship (earlier Department of Skill Development and Entrepreneurship, first created in July 2014) was set up in November 2014 to drive the 'Skill India' agenda in a 'Mission Mode' in order to converge existing skill training initiatives and combine scale and quality of skilling efforts, with speed. The Ministry, therefore, proposed to launch the NATIONAL SKILL

**DEVELOPMENT MISSION (NMSD** - known henceforth as, the Mission), which will provide the overall institutional framework to rapidly implement and scale up skill development efforts across India.

Vision of NSDC is to create an ecosystem of empowerment by Skilling on a large Scale at Speed with highStandards and to promote a culture of innovation based entrepreneurship which can generate wealth and employment so as to ensure Sustainable livelihoods for all citizens in the country. While the mission is to 1. Create a demand for skilling across the country. 2. Correct and align skilling with required competencies. 3. Connect the supply of skilled human resources with sectoral demands. 4. Certify and assess in alignment with global and national standards; and 5. Catalyse an ecosystem wherein productive and innovative entrepreneurship germinates, sustains and grows leading to creation of a more dynamic entrepreneurial economy and more formal wage employment. [4]

### **Role of Professional Societies**

India has a number of professional societies that offer an opportunity to the working youth to upgrade their existing qualification through membership non formal education system.

### **Institution of Engineers (India)**

The **Institution of Engineers** is the national organization of engineers in India. The Institution of Engineers (India) has more than one million members in its 15 engineering disciplines in 125 centers or chapters located in India and overseas; it is the world's largest multi-disciplinary engineering professional society in engineering and technology world. The Institution of Engineers (India) conducts a regular examination of its associate membership. This examination is considered to be equivalent to B.E. / B.Tech when contemplated as an eligibility qualification write competitive examinations like the Indian Civil Service, Indian Engineering Services, GATE, etc., and for employment in Government, public and private sectors in India.[5]



The Institution can bring substantial changes in providing affordable quality technical education to already working professionals as it aims at focusing on the following thrust areas:

- The Learned Society Function : Dissemination of knowledge through an Information Data Bank, Continuing Education Courses, Seminars, Workshops and other interactive activities; and enhancement of technological base through promotion of research, development and deployment activities at all levels undergraduate students, postgraduate students and doctoral students.
- The Qualifying Function: Assessment and accreditation of technical education, training and placement of engineers in the country and abroad.
- The Professional Body Function : Improving the membership strength, taking steps to attract senior engineers, young engineers and women engineers into its fold; looking after the interest of the profession, supporting better job opportunities and proper salary structure to ensure their growth on sound lines; promoting development of innovative ideas of undergraduate and postgraduate engineering students; supporting development of new technology.
- The Visibility Function: Conducting studies and developing policy-framework documents for consideration of governments on technical education, training, skills building and placement; ensuring that the contributions of engineers do not go unrecognized, suggesting actions to check the drain of the best engineering talent into non-engineering fields and taking steps to improve the engineers' relative position.
- The Institution-Industry Interactive Function: Conducting outreach programmes of interest to the industry to reflect strength of the Institution to industry through two-way communication, reorient programmes to have more industry orientation, promote institution-industry interaction for collaborative R&D activities in emerging areas and recognizing industry leaders. [2]



### **Skill India and Make in India**

Make in India and Skill India are complementary to each other. The key objective of Make in India is to promote manufacturing in 25 sectors of the economy, which will lead to job creation and consequently need for skilled manpower. Some of these sectors include automobiles, chemicals, IT, pharmaceuticals, textiles, ports, aviation, leather, tourism and hospitality, wellness, railways, auto components, design manufacturing, renewable energy, mining, bio-technology, and electronics. Correspondingly, Skill India aims at preparing a highly skilled workforce which is completely aligned to the requirements of industry so as to promote growth through improved productivity.

Skilling efforts will be completely aligned with the requirements of 25 key identified sectors of Make in India. A joint committee of stakeholders under both initiatives will be constituted to closely monitor growth of manufacturing activity under Make in India programme and anticipate skill requirements for such initiatives so that the same can be developed in coordination with various SSCs and training institutions.[6]

### **Conclusion**

Vocational education and training is truly essential as stated before and explained in the paper along with the Government taking steps such as National Skill Development Mission it will be important to ensure that Professional Engineering Societies and Industry are made equally important not only in imparting basic vocational training but for continuous upgradation of skills and qualification of the youth.

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## Need For The Sustainable Development Of Women Entrepreneurship

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### ABSTRACTS

*Enterprise is a key parameter for the development and advancement of all nations and it is most applicable to move nations. A country in whatever way rich in material assets, can't succeed if its assets are not put to beneficial use, for this reason, enthusiastic business people are required who can contribute adequately for national flourishing. The main arrangement is advancement and improvement of Entrepreneurship, as enterprise goes for making an individual an occupation supplier and not work seeker. Business enterprise has for the most part been a male-ruled marvel from the early age however, now time has changed the circumstance and brought women as today's most vital and motivational business people. The position and status of women in any general public is a list of its human advancement and advance. In all the created nations on the planet women are putting their means at standard with the men in the field of business people are similarly equipped in running business yet at the same time needs behind not withstanding women strengthening development in our nation, there are social and monetary obstacles in the method for women enterprise and the real issue is absence of entrepreneurial environment. Regardless of having the potential and ability, women are denied of chances, data and training.*

**Keywords:** *Entrepreneurship, women entrepreneurship, transition countries*

### Introduction

Women claimed organizations are expanding the world over. The concealed entrepreneurial capability of women has been bit by bit going to the fore with the changing socio political calculates society. The discriminatory limitations are smashed and women are now working in each line of business from papad making to power links. "They are prospering as architects, inside decorators, exporters, distributors, piece of clothing makers and as yet investigating new roads of financial participation".

Empowering women business visionaries is fundamental for accomplishing the objectives of economical advancement and the bottlenecks obstructing their development must be destroyed to entitle full cooperation in the business, "In a view to energize women in setting up their own particular ventures, the Ministry of MSME has a Scheme named Trade Related Entrepreneurship Assistance and Development (TREAD)".

Women Entrepreneur is a person who acknowledges test to meet her own needs and turn out to be monetarily free by working together. The part of women business

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person in monetary advancement is inescapable. These days, women enter in those callings as well as in callings like exchange, industry and designing. Women are likewise eager to take up business and add to the country's development. This part is likewise being perceived and steps are being taken to advance women business enterprise. In India, strengthening to women is not legitimately given, for including into entrepreneurial exercises as well as in their regular day to day existences. The idea of Women Entrepreneurs might be characterized as women or gathering of women who start, sort out and maintain a business endeavor. Women claimed organizations are exceptionally expanding in the economies of all nations. Enabling women business people is fundamental for accomplishing the objectives of feasible advancement and the bottlenecks preventing their development must be annihilated to entitle full support in the business.

### Objectives of the Study

The present study goes for satisfying the accompanying targets.

1. To concentrate on the profile of women business visionaries.
2. To investigate the challenges of women business visionaries with respect to being - A business person  
Being - A women.
3. To recommend measures for inspiring the status of women business visionaries.

### Research Methodology

The research design which has been formed for this research article is descriptive research design. The nature of data which is collected and used for this research article is secondary. The relevant and required data are collected from secondary sources such as text books, national as well as international articles and dailies.

### Limitations

The data are secondary in nature. As such the data are taken from the secondary sources the analysis is based

on the rendered information from them. The suggestions rendered may not be extended to the similar cases.

Need for the promotion of the Women Entrepreneurship Society business people are change specialists that enhance society by creating powerful and fair new models regularly less various leveled yet more helpful and complex than existing ones. Analysts and experts have characterized society enterprise in different ways however, a typical demonstrator is a wander that increases the value of a group mission through inventive, hazard taking and professional practices. Women in Ancient India were accountable for the home issues and were agreed high status practically equivalent to that of man in religious obligations. Progressively because of the changing social-political circumstance, women were consigned to the foundation and were subjected to abuse. Two primary drivers for the decrease of women power are: a) Lack of appropriate instruction. 2) Lack of money related autonomy. In Modern India more women are leaving colleges, IIT's and IIM's; there are women specialists, women engineers, women researchers and women social laborers and so forth.

With a specific end goal to a lady to bloom forward as an Entrepreneur in our general public, there are 4 conditions: 1) There must be a perused enthusiasm for chalking out one's way as an Entrepreneur. 2) There must be appropriate direction from experienced and concerned people. 3) Financial and Moral support from the Institutions and Social Organizations. 4) Various administrative bodies to go about as facilitators. At the foundation of all there is the person who is extraordinarily taught and sufficiently informed women possessed organizations are very expanding in the economies of the considerable number of nations. The concealed entrepreneurial possibilities of women have bit by bit been changing with the developing affectability to the part and monetary status in the general public. Aptitude, information and versatility in business are the principle explanations behind women to rise into business-wanders. The unreasonable impediments are smashed and women are discovered enjoying each line of business from papad to power links. The difficulties



and openings given to the women of advanced period are developing quickly that the occupation seekers are transforming into employment makers.

Exceptionally instructed, in fact sound and possibly qualified women ought to be empowered for dealing with their own business instead of dependent on wage work outlets. An attractive situation is important for each lady to instill entrepreneurial values and include significantly in business dealings.

The Vastly opening up of opportunities for women

1. Eco-accommodating Technology.
2. Bio-Technology.
3. IT Enabled Enterprises.
4. Occasion Management.
5. Tourism Industry.
6. Telecom Sector.
7. Plastic Industries.
8. Floriculture.
9. Sericulture.
10. Home grown and Health Care.
11. Sustenance Processing.
12. Instruction Sector.
13. Worldwide Efforts.

### Classification of Micro Entrepreneurs

The women are arranged into four gatherings as indicated by their exercises as (1) Cultivators (2) Sellers (3) Manufactures (4) Managers.

Arrangement of women smaller scale business visionaries activities under taken

1. Cultivators Cultivating - (a) Organic vegetables, (b) Fruits (c) Flowers, (d) Leafy vegetables (e) Mulberry leaves (f) Oil seeds.
2. Merchants selling vegetables, organic products, nuts, blooms verdant vegetables, drain items.
3. Fabricates associating with readiness and offering of pickles, drain, curds, cakes, jams, natural prod-

uct juices, building up tiffin focuses, sustenance courts, spread drain fixates on the high courses closer to their towns.

4. Supervisors managing milk centers, petty shops, bakery, flour mills, sericulture exercises and so on.

The women are classified into four groups according to their activities as (1) Cultivators (2) Sellers (3) Manufactures (4) Managers.

### Problems of Women Entrepreneurs in India

Like a male business people a women business person has numerous capacities. They ought to investigate the possibilities of beginning new endeavor; attempt dangers, present new developments, coordination, organization and control business and give compelling initiative in all parts of business. In India, the entrepreneurial world is still a male ruled one. The entrepreneurial procedure is same for men and women. Fruitful men and women business visionaries experience comparative inspirations and subsequently make progress upto a great extent same path under comparative difficulties. They are likewise found to have admittance to support from similar sources. In a similar condition both men and women can be fruitful business people. (Cohoon et.al. 2010). In any case, practically speaking the greater part of the upcoming women business people confront issues that are of various measurements and extents than that confronted by their male partners. These issues, for the most part, keep these women business people from understanding their potential as business people.

### How to develop Women Entrepreneurship

1. Empowering Womens' investment in Decision-Making.
2. Professional Training to be reached out to Women Community that empowers them to comprehend the creation procedure and generation administration.

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3. Aptitude Development in Womens' Polytechnics and ITI's.
4. Making arrangement of Micro-Credit System and venture credit framework to Women Entrepreneurs at Local Level.
5. Sexual orientation Sensitization Programs.
6. A Women Entrepreneurship Cell (WEC) ought to be set up to handle the different issues of Women Entrepreneurship in all states.

### Need for the Women Empowerment for Sustainable Development

Engaging women business people is fundamental for accomplishing the objectives of supportable advancement and the bottlenecks thwarting their development must be destroyed to entitle full cooperation in the business. Service of MSME has a scope of plans focused on particularly to help the women business person. Give me a chance to clarify these plans quickly. With a view to energize women in setting up their own endeavors, the Ministry of MSME has a Scheme named "Trade Related Entrepreneurship Assistance and Development (TREAD)". The plan visualizes monetary strengthening of women through the advancement of their entrepreneurial aptitudes in non-cultivate exercises. Under the plan, the Government of India gives upto 30% of the aggregate venture cost to the Non-Government Organizations (NGOs) for advancing enterprise among women. The staying 70% of the venture cost is financed by the loaning organization as credit for undertaking exercises as imagined in the venture. Further, to bestow aptitudes and for preparing women business people, a give of upto Rs.1 lakh per program for preparing organizations/NGOs is offered subject to specific conditions. Another plan of the Ministry is the Micro and Small Enterprises Cluster Development Program (MSE-CDP). The Cluster Development goes for upgraded aggressiveness, innovation change, appropriation of best assembling works on showcasing of items, business era et cetera. The plan gives help to limit building, normal offices, promoting and so on the

conveyance, digestion and dispersion of the distinguished innovation from its makers to the beneficiary client of little endeavors. If there should arise an occurrence of the hard intercession the commitment from the M/o MSME for groups claimed and oversaw by women business visionaries could be upto 90% of the venture cost.

However, another plan for business people is the Credit Guarantee Scheme. The Scheme expects to guarantee better stream of credit to smaller scale and little ventures by minimizing the hazard view of budgetary foundations and banks in loaning without insurance security. Under the plan, ensure cover is given to insurance free credit office reached out by part loaning establishments (MLIs) to the new and in addition existing smaller scale and little undertakings on advances upto Rs.100 lakh. The assurance cover accessible is upto 75% of the credits amplified. However for Micro and Small Enterprises worked as well as claimed by women, the degree of certification cover is 80%.

### Advantages of Women Micro Entrepreneurship

Create individual financial autonomy and improve the individual and social abilities like

- Create mindfulness
- Develop social net working
- Enhance the fearlessness
- Improve the way of life
- Urge to accomplish
- Dare to take an interest in political issues
- Economic strengthening
- Able to take an interest in basic leadership exercises.



- Solve the issues of rustic women and the town.
- Enhance the initiative qualities.

Manageable Development of women through miniaturized scale business enterprise bring numerous advantages like women strengthening, financial status, fairness, property rights, improvement of self-regard, notoriety, overall market offices, group advancement and so forth.

### Constraints of Women Entrepreneurs

Because of gender discrimination segregation young women are mingled diversely controlled by social standards, ethics, convictions, rehearses with no rights and basic leadership powers. In light of these reasons women business people are confronting numerous requirements like absence of certainty, double parts, unbending and male commanded economic situations and so on.

1. Absence of confidence due to differential socialization social standards, ethics in the family women need certainty, bolster, basic leadership powers required for the development of a business person.
2. Over burdenness because of double parts with the double parts as, spouse and mother women not able to deal with the endeavor successfully due to absence of time, fixation and over troubled individual commitments.
3. Inflexible and male ruled economic situations women, business visionaries need to depend, on their family male individuals because of unbending male overwhelmed economic situations, absence of mindfulness, experience, and heaving limits.
4. Need pushing generally, Indian women associated with female qualities, withdrawal attitude, child inclination, and confined development. The most critical pushing is self-inspiration, family bolster positive Government Policies, auspicious accounts

and a reasonable environment to build up their endeavors.

5. Absence of appropriate preparing Indian families and society give preparing to a young lady to make her as a decent spouse as opposed to inspire her as a business visionary she is not permitted to create network with different businesspeople, which is considered as a transgression and terrible culture.
6. Absence of access to money related bolster as a result of societal personality women are not access to funds like (1) partake in the property (2) Government or private advances, plans motivations, and so forth.
7. Lack of introduction, data about preparing programs because of absence of education, confined development, absence of systems administration, and mindfulness. Proficiency is the primary wellspring of data about all plans and organizations which will give preparing, money related help and about the endeavor and market offices.
8. Absence of access to assets withdrawal nature, societal zero heaven, reluctant nature of fabricate the abilities to distinguish their needs and shed down the women keeping them far from all resources hesitations to figure out how to snatch a wide range of assets.

### Conclusion

The rise of women business visionaries and their commitment to the national economy is very noticeable in India. The discriminatory limitations are smashed and women are observed to have been enjoying each line of business from papad to power links. The difficulties and openings given to the women of advanced period are developing quickly that the employment seekers are transforming into occupation makers. They are prospering as architects, inside decorators, exporters, distributors, piece of clothing makers and as yet investigating new roads of monetary cooperation It is

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high time that the nation ought to adapt to present circumstances and make more emotionally supportive networks for empowering more business enterprise among women the main feasible improvement can be accomplished in India. Despite the fact that the administration of India has made appreciative strides for the advancement and improvement of the women yet at the same time the long approach. A portion of the proposal which can enhance the state of the women business enterprise in India for the economical advancement of the nation are as follows:

1. Enabling Women Entrepreneurs is vital for accomplishing the objectives of supportable improvement.
2. The bottlenecks obstructing the development must be annihilated.
3. Full cooperation of women as business visionaries in a wide range of appropriate organizations ought to be empowered.
4. Appropriate preparing projects ought to be started.
5. Tutoring, News Letters, Trade Fairs/Exhibitions can be a valuable wellspring of entrepreneurial-advancement.
6. Advancing Women-Entrepreneurship is unquestionably a beyond any doubt way to fast financial development and advancement.
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## Supply Chain Practices In FMCG And Durable Goods

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### ABSTRACT

*Supply Chain Management includes coordination and collaboration with channel partners, which may be suppliers, intermediaries, third-party service providers, or customers. Supply chain management integrates supply and demand management within and across companies.*

*When it comes to durables and non durables, it is very much evident that non durables being the daily requirements of consumers, the frequency of purchase is more than durables, so the availability in the market of such products needs to be more as compared to durables, hence the companies adopt different strategies for supply chain management of FMCG and Durable goods.*

**Keywords:** *Supply Chain management, FMCG, Durables*

### Review of literature

A customer-focused definition is given by Hines (2004:p76): "Supply chain strategies require a total systems view of the links in the chain that work together efficiently to create customer satisfaction at the end point of delivery to the consumer. As a consequence, costs must be lowered throughout the chain by driving out unnecessary expenses, movements and handling.

The integration of key business processes across the supply chain for the purpose of creating value for customers and stakeholders (Lambert, 2008).

According to the Council of Supply Chain Management Professionals (CSCMP), supply chain management encompasses the planning and management of all

activities involved in sourcing, procurement, conversion and logistics management. It also includes coordination and collaboration with channel partners, which may be suppliers, intermediaries, third-party service providers, or customers. Supply chain management integrates supply and demand management within and across companies. More recently, the loosely coupled, self-organizing network of businesses that cooperate to provide product and service offerings has been called the Extended Enterprise.

### Objectives of paper

- 1) To highlight the difference in supply chain management of FMCG and durable goods.
- 2) To understand the elements of supply chain management in durables and non durables.



## Research Methodology

This paper is based on primary as well as secondary data. The survey was conducted in the markets of suburbs of thane and tool used was Questionnaire. The sample technique was random and convenient sampling and sample size was 50 distributors especially in FMCG market and outlets of durable goods.

## Introduction

The term “supply chain management” entered the public domain when Keith Oliver, a consultant at Booz Allen Hamilton (now Strategy &), used it in an interview for the Financial Times in 1982. The term was slow to take hold. It gained currency in the mid-1990s, when a flurry of articles and books came out on the subject. In the late 1990s it rose to prominence as a management buzzword, and operations managers began to use it in their titles with increasing regularity. Commonly accepted definitions of supply chain management include:

The management of upstream and downstream value-added flows of materials, final goods and related information among suppliers, company, resellers and final consumers.

The systematic, strategic coordination of traditional business functions and tactics across all business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole.

According to the Council of Supply Chain Management Professionals (CSCMP), supply chain management encompasses the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management. It also includes coordination and collaboration with channel partners, which may be suppliers, intermediaries, third-party service providers, or customers. Supply chain management integrates supply and demand management within and across companies. More recently, the loosely coupled, self-

organizing network of businesses that cooperate to provide product and service offerings has been called the Extended Enterprise.

A supply chain, as opposed to supply chain management, is a set of organizations directly linked by one or more upstream and downstream flows of products, services, finances, or information from a source to a customer. Supply chain management is the management of such a chain.

Supply chain management software includes tools or modules used to execute supply chain transactions, manage supplier relationships and control associated business processes.

Supply chain event management (SCEM) considers all possible events and factors that can disrupt a supply chain. With SCEM, possible scenarios can be created and solutions devised.

In many cases the supply chain includes the collection of goods after consumer use for recycling. Including third-party logistics or other gathering agencies as part of the RM re-patriation process is a way of illustrating the new endgame strategy.

## SCM Practices in Indian consumer goods Industry

Fast Moving Consumer Goods (FMCG) goods are commonly named as consumer packaged goods. Items in this category include all consumables (other than groceries/pulses) people buy at regular periods. The most common in the list are toilet soaps, detergents, shampoos, toothpaste, shaving products, shoe polish, packaged foodstuff, and household accessories and extends to certain electronic goods. These items are meant for daily frequent consumption and have a high return.

The FMCG Industry is on a high growth curve with the overall demand expected to multiply over the next decade. This high growth is most likely to be accompanied by significant structural shifts such as

## Supply Chain Practices In FMCG And Durable Goods

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changing customer preferences, emergence of modern retail dimensions, growing rural spend tendency.

The resultant new challenges that need to be addressed for an efficient and effective supply chain are:

Managing generation of different varieties.  
Aligning to the outstart of new channels.  
Managing the challenges of reach.

Companies are now realizing that current supply chain configurations need to evolve to enable them to participate in achieving growth. This requires fresh thinking on the ways in which an organization would structure itself in terms of its key supply chain processes and drivers.

With the presence of 12.2% of the world population in the villages of India, the Indian rural FMCG market is something no one can overlook. Better infrastructure facilities will improve their supply chain.

In a low margin and high volume business like **FMCG**, it requires a very close attention on the planning and operational part of the entire value chain activities because these minutes details can change the fortune of any organization. While branding differentiates the image of the product, the distribution system will determine the faith of the organization up to a very large extent in FMCG industry. The diversity of India and existence of vast untapped markets of rural areas provide the bundle of opportunities to companies. The best price or quality product offerings combined with heavy promotional and advertising budgets will not help the product succeed if one of the major ingredients of the marketing mix as distribution is not properly focused.

### SCM Practices in Durables

Supply chain management in the **consumer durables** industry has been focusing on push and sell. **The key features of the Supply Chains are:**

The push system is used as market is small, buying

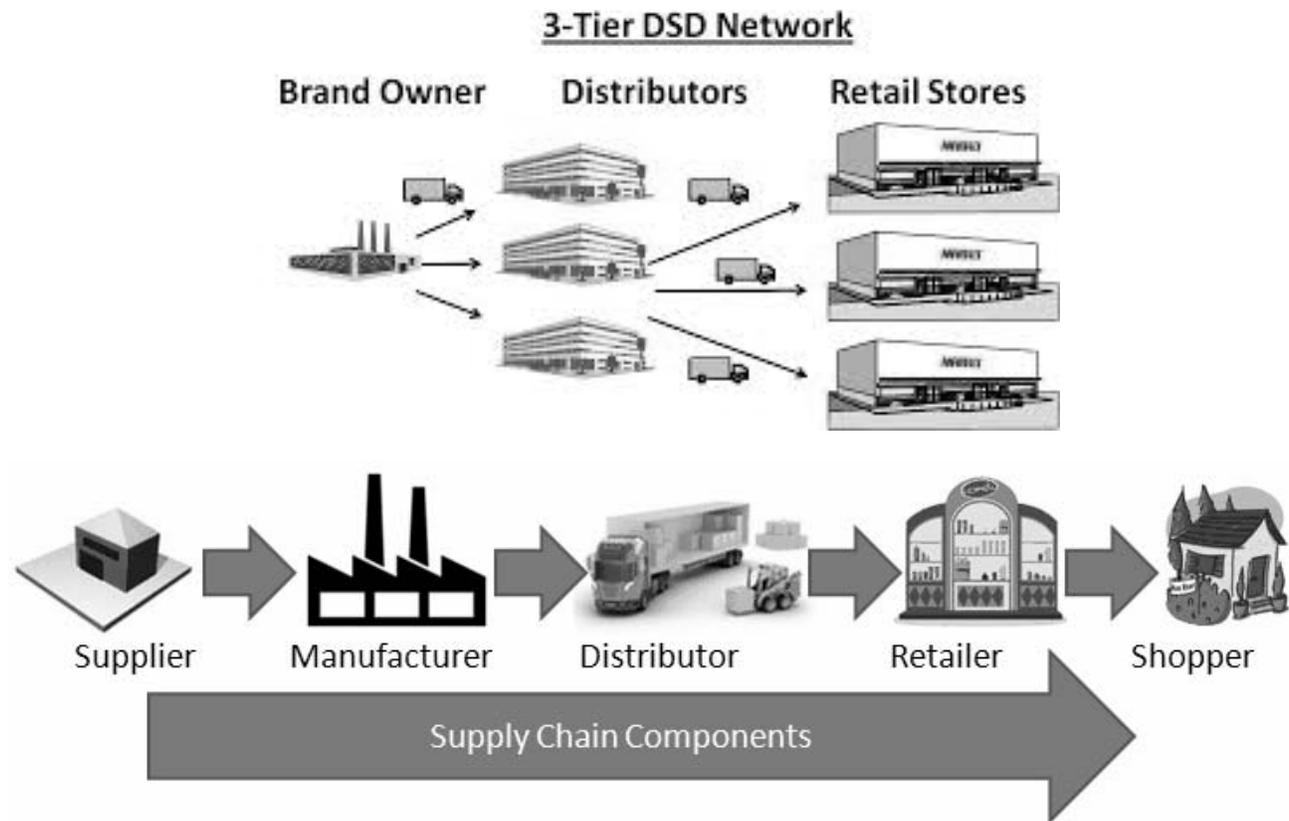
power restricted and high margin requirement of the dealers. Forecasting is based on historical data Supply Chain is seen as the mere means to transport goods. Requirements of each model are planned in ad hoc manner and are far removed from actual market demand. Long Order Cycle times (upto 3 months) and Fragmented industry meant focus on Link Optimization rather than Chain Optimization.

Durable goods tend to have a long useful life. For statistical purposes, a durable good is expected to last at least three years, according to the Economics and Statistics Administration. Goods consumed in a short time or that have useful lives of less than three years are classified as non-durable. The dividing line isn't always rigid. For example, people sometimes use a piece of clothing for more than three years.

### Types

Consumer durable goods include items like furniture, jewellery and cars. Large appliances such as stoves and washing machines are durable goods. The category also includes defense and commercial procurement of heavy equipment and assets like aircraft, trucks and ships. Non-durable goods include food, medicines and other consumables, as well as products that last a limited lifetime such as clothing, shoes and small electronic devices.

The market for some non-durable goods, such as food tends to be stable. Growth in other consumer products, like clothing and electronics, indicates economic growth. The significance of changes in durable goods production and sales is more complex. Generally, increases tend to indicate economic growth and the likelihood of job growth in the manufacturing sector. However, an unexpected jump is often an indicator of inflationary pressures on prices. Sudden increases thus may lead to a rise in interest rates and cause bond prices to fall. Economists sometimes exclude categories such as defense procurement and aircraft because they tend to be volatile and may vary for reasons that have little to do with overall economic trends.



Source: [consumerpsychologist.com](http://consumerpsychologist.com)

### Consumer Durables Industry in India

The Indian Consumer durables industry was valued at Rs.15,000 crores in 2001. The industry has become very competitive in the recent years. The entry of several international players has further intensified competition with customers now being the focus. Customers now have the kind of choices that were not available in the past like a wide variety of products to choose from e-shopping, home delivery of products etc. Appliances are being built keeping in mind the customer demand. Durable Supply Chains of the Past Supply chain management in the consumer durables industry has been focusing on push and sell in the past. The key features of the Supply Chains of the past are:

1. The push system was used as market was small, buying power restricted and high margin require-

ment of the dealers

2. Forecasting was based on historical data and was mostly inaccurate
3. Supply Chain was seen as the mere means to transport goods
4. Requirements of each model were planned in ad hoc manner and were far removed from actual market demand
5. Long Order Cycle times (upto 3 months)
6. Fragmented industry meant focus on Link Optimization rather than Chain Optimization However, things are beginning to change which is also reflected in numbers such as:

## Supply Chain Practices In FMCG And Durable Goods

Logistics cost as a percentage of Total sales coming down by 1% inventory holding days reducing at a CAGR of 1.5% for the last 5 years

FG inventory holding days been reducing at a CAGR of 1.2% for the last 5 years

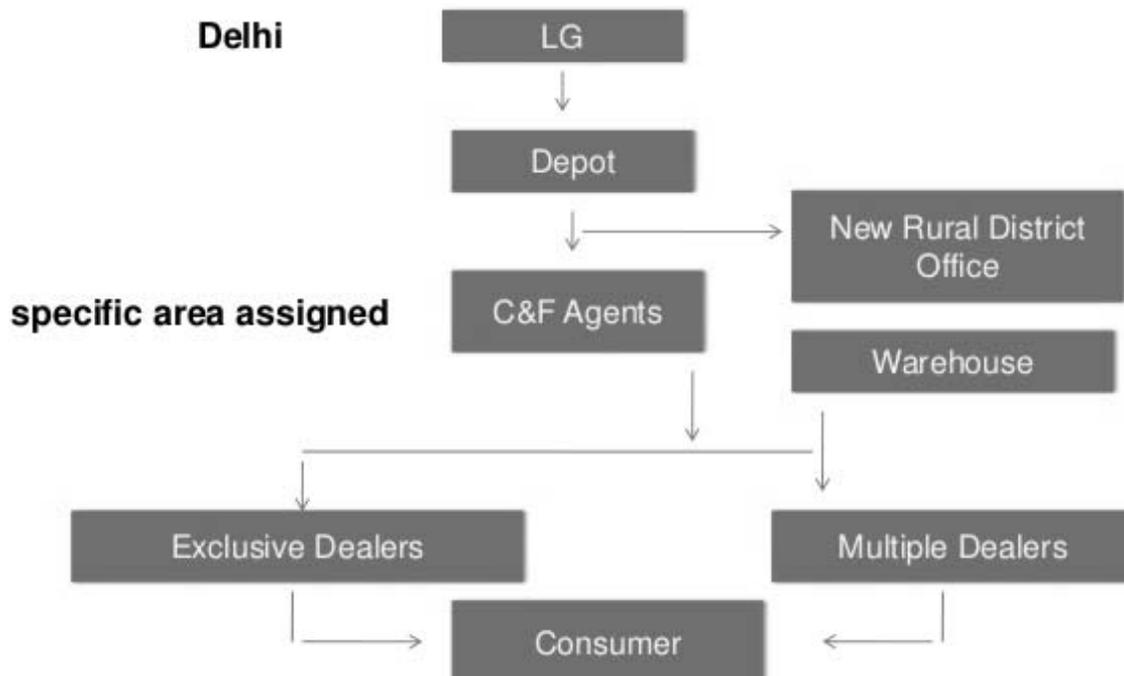
### New Age Durable Supply Chains

The change in competitive landscape along with other factors such as a dip in the industry growth rate, a drop in penetration levels, decreasing profitability have necessitated a chain in the Supply Chain management

processes for the industry. The focus has shifted from Supply Chains to Value Chains with key players identifying the prime movers of a value chain namely:

- Waste reduction
- Speed of delivery to the customer
- Collaboration with customers to shorten product life cycle
- Develop tighter value chains to avoid shortages
- Make to order replacing forecasting
- Automatic replenishment of inventory at dealers

## DISTRIBUTION MODEL OF DURABLE GOODS COMPANIES



The orders are generated by the company's sales field force, which in turn is supplied by the C&F agent.



## Conclusion

Thus the supply chain management differs in case of FMCG and durables because of the very nature and customer requirements of both. Moreover, the dealers and distributors adopt different supply chain practices to gain strategic advantages. The customer relationship management and supplier relationship management also differ accordingly. Consumer durables companies are increasingly appreciating the importance of SCM to reduce logistics costs, inventory and improve inventory turnovers when sales growth has been declining and margins shrinking.

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## Green Revolution Technological Advancement, Initiatives by Indian Government and Corporate Sector in Agro Industry Case Study of Madhya Pradesh

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### ABSTRACT

*Green Revolution Technological Advancement, Initiatives by Indian Government and Corporate Sector in Agro Industry Case Study of Madhya Pradesh.*

*The technological revolution relevant to agriculture is the eco-technology movement. This involves the appropriate integration of frontier sciences with the ecological prudence of farming communities. Agriculture is not just as a food producing machine for the urban population, but also as a major source of skilled and remunerative employment and the backbone of the rural livelihood system. Unless there is such a change in mindset, the food security situation will remain precarious and rural poverty will persist. Food and fuel are going to be the commodities in greatest demand in the future. New agriculture technologies like genomics and information technology together with improved agronomic management should form the cornerstone of increasing agriculture productivity and profitability of small farms both in irrigated and rainfed areas as well as in problem soils and coastal areas. Recombinant DNA technology has already resulted in the breeding of crop varieties possessing tolerance to salinity and drought as well as to serious biotic stresses caused by the triple alliance of pests, pathogens and weeds. There is dire need to tap our potentials in crop and animal husbandry, fisheries, forestry and agro-processing.*

### Introduction

New agriculture technologies like genomics and information technology together with improved agronomic management should form the cornerstone of increasing agriculture productivity and profitability of small farms both in irrigated and rainfed areas as well as in problem soils and coastal areas. Recombinant DNA technology has already resulted in the breeding of crop varieties possessing tolerance to salinity and drought as well as to serious biotic stresses caused by the triple

alliance of pests, pathogens and weeds. There is dire need to tap our potentials in crop and animal husbandry, fisheries, forestry and agro-processing.

### The objectives of this paper are:

To forward deliberations and insights into the Indian government's initiatives towards the second green revolution. The need for second green revolution and the strategies adopted by the Indian government. However the author is also forwarding the challenges



which have been accomplished by the government and citizens.

The technological revolution relevant to agriculture is the eco-technology movement. This involves the appropriate integration of frontier sciences with the ecological prudence of farming communities. Agriculture is not just as a food producing machine for the urban population, but also as a major source of skilled and remunerative employment and the backbone of the rural livelihood system. Unless there is such a change in mindset, the food security situation will remain precarious and rural poverty will persist. Food and fuel are going to be the commodities in greatest demand in the future.

The first green revolution took two decades to spread over India. The second green revolution may take just as long. The best examples are:

1. The biggest rural initiative comes from ITC, whose e-choupals will cover 100,000 villages by 2010, accounting for two-thirds of rural GDP. E-choupals are electronic buying and selling centres, which also provide information to farmers on prices, weather, and scientific farming practices. By cutting out middlemen, e-choupals can pay farmers a higher price than they get in mandis, yet lower ITC's procurement costs. The company started with soya-beans, wheat and shrimps, and is now diversifying into oilseeds, spices and fruit.
2. Field Fresh, run by Sunil Mittal of Bharti Telecom, already has 1000 acres under horticulture in Punjab. Pepsi and McDonalds have started contract cultivation of citrus fruit and lettuce respectively.
3. Godrej is into contract cultivation of maize, used to make cattle feed.
4. Global Green, a Thapar company, uses contract cultivation for gherkins and other products for export, and has a turnover of over Rs 100 crore.
5. Paper companies like Ballarpur and ITC provide

farmers with fast-growing clonal varieties of trees that mature in just four years, and buy the output.

6. Other big groups (Tatas, Mahindras, DCM and possibly Reliance) are entering rural areas to sell agricultural inputs and consumer goods.

This corporate upsurge is being encouraged by a new political urgency to uplift rural India, where almost 60% of the population lives. A raft of new laws aims to end historical hurdles.

### Issues and Challenges to be met with

- **The Agricultural Produce Marketing Committee Act forces farmers to sell only at mandis**, ostensibly to protect them from rapacious traders. But this makes contract farming illegal; companies cannot directly buy from farmers. However, six states have now repealed their versions of the APMC Act, six others have drafted new legislation, and politicians generally recognize the need to provide a sound legal basis for contract farming.
- **India has long been plagued by a maze of 16 different food laws**, some of which are self-contradictory (one law permits sweeteners in jams and another bans the practice!). Chilli paste is a widely sold product in Asia but cannot be produced in India because the law prohibits the use of thickeners.

The Central government now proposes a new integrated food law to replace the old maze of laws. Land reform laws ban corporates from farming. But contract farming is possible: corporates contract to provide high-tech farm inputs on credit, and lift the output at guaranteed prices.

- The government proposes a Warehousing Receipts Act, which will make warehousing receipts negotiable instruments, and thus qualify for bank financing. This, along with futures trading in the new NCDEX commodity exchange, can modernise agricultural trading just as stock market reforms earlier modernised the capital market.

## Green Revolution Technological Advancement, Initiatives by Indian Government and Corporate Sector in Agro Industry Case Study of Madhya Pradesh

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- In order to curb hoarding, the Essential Commodities Act has long placed limits on commodity stocks. This makes large-scale corporate investment impossible. Now that chronic agricultural shortages have given way to surpluses, the list of essential commodities has been cut from 30 to 15, and optimists hope that the whole Act will soon be scrapped.

- Tax laws and incentives are being liberalized to encourage private investment.

Sixth, banks are very keen to get into rural business, and many are now lending to self-help groups, which can enter into contracts with companies. Cheap credit from banks and corporates can facilitate horticulture.

- Companies are doing contract cultivation on some thousands of acres, a tiny proportion of India's 400 million acres of cultivated land. Many past attempts at contract farming have foundered: farmers have refused to honour contracts if the market price exceeds the contract price. Farmers have pressured state governments to force companies to buy substandard produce, and this can ruin exports. ICICI Bank's experience with financing contract farming has been very mixed.

The legal and administrative system makes enforcement of contract difficult: banks have never been able to seize the mortgaged land of defaulting farmers. Indian infrastructure is lousy, rural electricity is totally unreliable, and cold chains for keeping vegetables fresh repeatedly break down.

So, while the potential for a second green revolution is huge, the hurdles are high too. High-tech farmers with assured irrigation will surely link up with the best companies. But progress will be slow in rainfed areas, and for small and marginal farmers<sup>1</sup>.

### Case Study

**Grain of success:** Madhya Pradesh farms a green revolution to become India's rice bowl Madhya Pradesh clocked more than 20 per cent growth in 2014-15 over the previous year. It has come a long way from the (-) 4.7 per cent recorded in 2004-05, and in the process won the Union government's Krishi Karman award, for the highest growth in food production, for four years on the trot. Agricultural production has doubled in the past 10 years, and MP is now the second largest producer of wheat from being the fourth largest some years ago. The numbers are even more impressive when one takes into account the fact that agricultural output in the country grew at a paltry 1.1 per cent in 2014-15, and that the farm sector's contribution to the GDP is constantly declining<sup>2</sup>.

MP's chief minister, Shivraj Singh Chouhan, who occupied the state's top political office while this turnaround took place, has a direct connect with this issue. He is known to visit his farm at Bais village in Vidisha district, about 60 km from state capital Bhopal, two to three times a month. There, in consultation with caretakers, he oversees his pomegranate plantation and poly house—a kind of greenhouse—in which Gerbera daisies are grown, and keeps tabs on how his flowers fare at the market. Having already used the 'kisan putra' tag to his advantage in his political career, CM Chouhan often holds forth these days as a kisan himself—one of the 9.88 million farmers in the state—speaking at numerous public meetings on the virtues of adopting progressive agricultural practices over traditional ones to make farming remunerative. However, to lay all the credit for this turnaround at one man's door would be simplistic. There are many factors that have contributed to the resurgence in MP's agricultural fortunes, and one of them is the enterprise of the farmers themselves.

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<sup>1</sup> A second green revolution? – Swaminomics

[swaminomics.org/a-second-green-revolution/](http://swaminomics.org/a-second-green-revolution/) Referred on 6<sup>th</sup> October 2016

<sup>2</sup> Rahul Noronha, "Grain of success: Madhya Pradesh farms a green revolution to become India's rice bowl" September 8, 2016| [indiatoday.intoday.in](http://indiatoday.intoday.in) > Magazine > NATION Referred on 10<sup>th</sup> October 2016



The initial success with soyabean cultivation from the 80's onward had ushered in a wave of mechanization and rural prosperity. But by 2005, returns on that crop had plummeted, and farmers were looking for the next big thing. It was then that they began to consider the cultivation of 'basmati' paddy as a viable alternative.

*(MP is currently fighting a legal battle to allow its rice crop to be certified as 'Basmati', which is a geographical tag, just as 'Darjeeling' is for tea and 'Champagne' is for sparkling wine. At present, MP's rice crop has not been granted that distinction.)*

## BUMPER CROP

Madhya Pradesh's agricultural turnaround, in numbers

### AREA UNDER CULTIVATION

<u>2004-05</u>	<u>2014-15</u>	<u>GROWTH</u>
191.7	230.7	20%

(Figures in lakh hectares)

### AGRICULTURAL PRODUCTION

<u>2004-05</u>	<u>2014-15</u>	<u>GROWTH</u>
214	450.6	111%

(Figures in lakh tonnes)

### IRRIGATED AREA

<u>2004-05</u>	<u>2014-15</u>	<u>GROWTH</u>
46.3	96	107%

(Figures in lakh hectares)

Source: Department of Statistics, Economics and Planning

## Green Revolution Technological Advancement, Initiatives by Indian Government and Corporate Sector in Agro Industry Case Study of Madhya Pradesh

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Paddy of the traditional kind has been cultivated for long in the eastern and northern parts of the state. However, the central Narmada region, including the districts of Raisen, Hoshangabad, Narsinghpur and Harda are the most prosperous areas for agriculture in MP—took to rice cultivation in a big way, preparing the ground for a transformation. Today, produce is being procured from farmers of this region by numerous branded rice companies, mainly for export. While procurement prices depend on global factors, the crop has offered unprecedentedly high returns—as much as Rs 4,500 a quintal, or Rs. 90,000 per acre—which is six times more than soyabean. The introduction of long grain rice, such as Basmati, has ensured a productivity increase from 6.6 quintals per hectare in 2002-03 to 24.5 quintals per hectare in 2014-15.

Soon, companies manufacturing consumer goods were scouting the area to tap its disposable wealth. “There was a consistently high growth, of about 30 per cent, in the sales of SUVs on either side of the Narmada, in Raisen and Hoshangabad district, for about three years. It was mainly possible after farmers took to cultivation of rice in the area. Growth was recorded in sales in all areas, except Bundelkhand. A similar jump was seen in tractor sales as well,” says Virendra Singh of Win Win automobiles, a Mahindra dealership in the area.

This success would not have been possible without some key interventions on the part of the state government. Ensuring the availability of water for irrigation was one such. The implementation of already-announced irrigation projects was speeded up, and a restructuring of the water sector also took place, thanks to aid from the World Bank. The rural development department also contributed to this increase in productivity, via schemes such as Kapil Dhara, under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS). The increased availability of certified seeds was another such state government intervention. There has been an almost ninefold increase in availability of certified seeds over the past 20 years, which was considered a key driver of growth. In a similar vein, the shortage of fertilisers was an enduring theme in MP’s

agriculture cycle till about five years ago. Administrative interventions such as advance stock building have helped increase the amount available for use by farmers.

Mechanisation has been on a steady rise too. There has been a threefold increase in tractor sales in the past 10 years, which is partly due to the easy credit available to farmers for the purpose. Two hundred villages have been developed as yantradoot gram (mechanised villages), where output increases in agriculture have been recorded in third-party evaluations. However, naysayers point to the fact that the surge in tractor sales corresponded with the infrastructure boom in the country, and especially the spike in road construction in rural areas under the Pradhan Mantri Gram Sadak Yojana (PMGSY). The investment in tractors during this period, they say, was indirectly subsidised by the high demand for rental earthmovers by road contractors. The availability of tractors seems to have helped bring a larger area under cultivation in the state.

Factor contributing to the increased production is the availability of power for agricultural use. In 2008-09, the availability of power for pumps stood at 0.80 Kilowatts (Kw) per hectare. By 2013-14, that number had increased to 1.36 Kw per hectare. Currently, about 16.1 billion units of power is being supplied to the agriculture sector, up from 6.7 billion units in 2009-10. One of the most striking incentives offered by the Shivraj Singh Chouhan government has been farm credit at zero per cent interest, available since 2012-13. In the past, farm loans were given at 5 per cent interest. The waiving of interest not only ensures that farmers buy fertilisers and seeds on credit, but also leaves them with cash in hand for other expenses. “There are about 2.8 million farmers in MP in the credit net,” says cooperatives minister Vishwas Sarang. “We plan to increase this number to 3.8 million in the next two years. A total amount of about Rs 13,500 is disbursed as credit to each farmer through state government cooperative banks at zero per cent interest in a given year.”

The state government has decided to focus on soil health, to determine what kind of fertilizers needs to be supplied.



Soil health cards are to be issued to 10.7 million farmers and to better predict seasonal changes 1,200 automated weather stations and 33,000 rain gauges will be placed across the state. There is also a focus on the use of customised farming equipment as this will promote mechanisation. Another focus area will be to bring more area under cultivation for the 'third crop cycle' in the summer months; currently, this stands at 3.6 lakh hectares. The state government has also adopted the target of doubling farm incomes in the next five years.

### Conclusion and Suggestions

India is confronted with the need to safeguard the food security requirements of both resource poor farmers and resource poor consumers. The bulk of such resource poor farmers are small or marginal farmers and landless agricultural labor in unirrigated areas. It is these linkages, which need to be understood and attended to.

The proposed national food security and sovereignty board can attend to these complex linkages in a holistic manner and develop and implement a transparent national food security policy in the interests of all regions of the country and all sections of our population<sup>3</sup>.

India will remain during most of the 21st century a predominantly agricultural country, particularly with reference to livelihood opportunities. Therefore there is need for both vision and appropriate action in the area of shaping our agricultural destiny.

Our major agricultural strengths are a large population of hard working farm women and men, varied climatic and soil resources, abundant sunshine throughout the year, reasonable rainfall and water resources, a long coast line and rich agro-biodiversity. Converting them into jobs and income is the challenge.

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## Sustainable Development & Sustainable Living

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### **Abstract**

*The theme of the seminar is to have discussion on sustainable development in the field of trade, commerce and science. To achieve economic agenda the planners want to have industrial corridor across the country and the globe. The idea is to have mass production and to create mass consumption, create and market them. We have robust financial and banking sector to push the product through B2B or B2C.*

*The moot question is we really creating sustainable development with the idea of sustainable living? The question which storms in our mind is whether we are better off than what we were? Are we going to create better world for the next generation than what we are living in?*

*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In simple words, have your fruits and leave enough for the future without compromising the quality of the fruit or cutting any branches of the tree. In nut shell, it is a process for meeting human development goals while sustaining the ability of natural systems to continue to provide the natural resources and ecosystem services upon which the economy and society depends.*

***In nutshell the paper deals with:***

***What does one really need to live?***

***What makes us happy?***

***And in what kind of a world do we want to live?***

***What kind of living we want to give to next generation?***

**The word “Sustainable Development”** and **“Sustainable living”** are never paradoxical or contrary to each other rather they are complimentary to each other but we have made the situation where one is coming in the way of other like covering your body in winter when the shawl is small ....you pull it from top or either way or either protect your head or your legs.

**Sustainable living** is a lifestyle of human being that attempts to reduce an individual’s or society’s use of the earth’s natural resources and personal resources. Those who advocate sustainable living make sure that their action would reduce carbon footprint by altering methods of transportation, energy consumption, and diet. Proponents of sustainable living aim to conduct their



lives in ways that are consistent with sustainability, in natural balance and respectful of humanity’s symbiotic relationship with the earth’s natural ecology and cycles. The practice and general philosophy of ecological living is highly interrelated with the overall principles of sustainable development. Live and let live is the philosophy of living life and allow sustaining the recourses for next generation.

Sustainable living is interconnected with *social* domains: **economics, ecology, politics and culture**. In the first conception, sustainable living can be described as living within the innate carrying capacities defined by these factors. In the second or circles of sustainability conception, sustainable living can be described as negotiating the relationships of needs within limits across all the interconnected domains of social life, including consequences for future human generations and non-human species.

Let us study the key issues covering our country. The study also gives food for thought to arrive at the solution. We as a country, as a society have temporary solution to every permanent problem. We are reactive to the problem rather than pro active to the solutions.

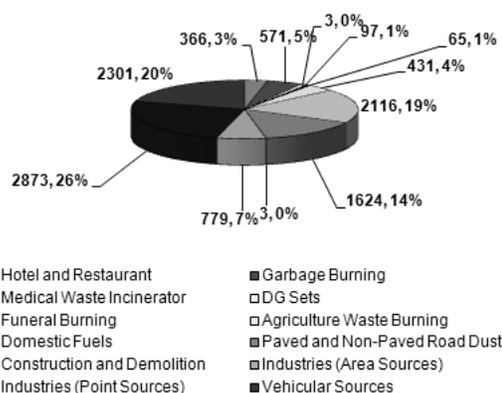
**WATER**

Water conservation, a major factor of sustainable living, involves that which no human can live without water. Unsustainable water use has far reaching implications for humankind. We got the taste of the problem when last two years there was a deficit rainfall across the country. Current year, country received good monsoon hence the past is forgotten. For the next generation, we will be surrounded with water but there will be no water to drink. The human civilization may be at war with each other. Look at what is happening with Karnataka and Tamilnadu state over Kaveri water sharing. Look at China by indulging in clandestine way to block the Brahmaputra water. Look at two neighboring countries are at war of words over sharing of Indus water treaty. As per a UN report published on water conservation in March this year, India will face the consequences if it

will not plan for water conservation. The report had predicted that by 2025, nearly 3.4 billion people will be living in ‘water-scarce’ countries and the situation would become grim in the next 25 years. The report added that due to its unique geographical position in South Asia, Indian sub-continent may face the brunt of the crisis and India would be at the centre of this conflict. As per the Ministry of Water Resources, India has 18% of the world’s population but has only 4% of total usable water resources. By 2025, India’s annual per capital availability of water will reduce to 1,340 cubic meter and by 2050, to 1,140 cubic meter. 90 % of waste water discharged in rivers fails to meet environmental norms. 65% rainwater runoff goes into the sea, which is a major wastage. In India, agriculture sector is the biggest user of water followed by domestic sector and industrial sector. As per experts, there is an urgent need to harness the ground water through rain water harvesting. It may be too late to react and act.

Unsustainable water use has far reaching implications for humankind. Currently, humans use one-fourth of the earth’s total fresh water in natural circulation, and over half the accessible runoff. Additionally, population growth and water demand is ever increasing. I live to the cheer intelligence and common sense of every citizen to ponder over the thought of what they want to leave for the Generation Next.

**WASTE DISPOSAL, GARBAGE COLLEC-TION**



Mother earth has endowed us with abundant resources to make our living. What have we given it? Visit Deonar or Mankhurd dumping ground at Mumbai and it gives us the frightening picture. Both the dumping ground has been in news many times for its frequent fires and toxicity.

As populations and resource demands climb, waste production contributes to emissions of carbon dioxide, leaching of hazardous materials into the soil and waterways, and methane emissions. Garbage collection usually increases by 20-30% during festive seasons. In all festivals, people in India generously contribute to the waste. It was shocking to read that entire night BMC workers at Marine Drive took pain to clear the garbage of 22 tons so that city get back to its normal routine for next day

Thus, a crucial component of sustainable living is being waste conscious. One can do this by reducing waste, reusing commodities, and recycling. Vision is about serving mother earth so that in return we are producing & preserving abundance for future generations.

A sustainable city is a city designed with consideration of – environmental impact, – inhabited by people dedicated to minimization of inputs of energy, water and food, – and waste output of heat, air pollution - CO<sub>2</sub>, methane, and water pollution. In 2014-15, Mumbai alone accounted for 6.11% of the total waste generated daily in India. As its waste piles up, the land-starved city is staring at the big question - where to dump?

Environmentalists believe the BMC's (Brihanmumbai Municipal Corporation) current policies are in violation of Municipal Solid Waste (MSW) Rules, 2000, as the corporation allows contractors trucks to collect mixed waste and fails to penalize buildings that do not segregate waste. It result in to high-level emissions of greenhouse gases from the city's unsanitary landfills and the growth of bacteria that cause life-threatening diseases, has fuelled the prospects of the waste management industry, which has yet to firmly establish itself in India.

What is the solution? Firstly, people need to be made aware of the gravity of the problem. They need to be taught how to dispose of wet and dry waste separately. The disposal of wet and dry garbage separately should be enforced as a law and some sort of fine should be imposed for the law breakers. Financial incentives for conscientious citizenry to promote segregation at the source. Instead of paying the contractors for accepting waste at landfills, property tax rebates should be given to buildings that generate minimal garbage. People should be encouraged to reduce their waste by reusing as much as possible and then recycling as much as possible. Minimization of waste through home composting, vermi-composting, biogas generation should be encouraged.

- Vision is about serving mother earth so that in return we are producing & preserving abundance for future generations.
- This vision is seen by conscious individuals who see their children as care takers of nature & not exploiters of nature.
- This vision a Sustainable economy is created & thereby is running on ecological principles of conscious actions towards ecology.

*The motto is Wastes ....Resource Conservation  
....Reduce.... Reuse....Recycle*

### POLLUTION





New Delhi Smog....Chokes and Fume. Last two weeks New Delhi has been in news for alarming pollution. It is causing serious health issues in the city. Children, especially, suffer from breathing problems and reduced lung capacity. Analysis of air pollution data from the Delhi Pollution Control Committee shows that on Diwali day (October 30) the air was already saturated. The 24-hour average level of PM 2.5 was 347 microgramme per cubic metre and was at 'severe' level which is the worst category according to the air quality index. Everyone is asking do they have **'Right to Breathe?'** According to the World Health Organization, of the 20 most polluted cities in the world, 13 are in India, and New Delhi is at the top of the list. The number of vehicles in New Delhi has increased by 97 percent over the last decade leading to heavy congestion and increased travel time. But vehicles aren't the primary cause of air pollution in the smog covered capital.. It is typical of neighbouring states to be blamed for the burning of grass on field. We live in one nation one law. Centre must knock their head together to have inter- state and inter ministerial coordination.

Creating awareness is another very important issue. It's ironical that whereas on one hand more & more industries are realizing the importance & cost benefits of energy conservation, the individuals have become more unconcerned about the same. While industries respond rapidly to market forces, through efficient use of energy, households are much slower to respond, for a variety of reasons. One reason may be that low-income households under-invest in energy efficiency technology, partly because they face formidable information barriers, partly because they cannot observe many of the costs of energy they use.

CPCB only monitors 29 cities real time and has just one continuous air quality monitor at most locations. Since 2014 at least 94 Indian cities have not met national air quality standards. Many of these cities have been on the list from the 1990s, say officials of the Central Pollution Control Board (CPCB) Neither the Centre nor the states have put in place a plan to ensure that cities get taken off this list. The Organization's recent urban air quality database lists 10 Indian cities among the world's 20

worst polluted. But that doesn't seem to worry the CPCB or administrators.

The Centre has made only one major decision this year to tackle air pollution—notifying BSVI emission standards for vehicles manufactured after April 2020, which will bring down particulate emissions from vehicles by 60%-80%. Dipankar Saha, additional director, air laboratory at CPCB said: "This is not relevant anymore since we have started real-time monitoring of cities. We alert the non attaining cities every three years."

But CPCB only monitors 29 cities real time and has just one continuous air quality monitor at most locations. The rest are manual monitoring machines which are "highly inefficient" and at times "inaccurate", say experts.

"Only when there is pressure from the people and the judiciary, cities start acting on pollution. There is no national policy. Even the government's smart city project only makes a passing reference to air quality but doesn't make it binding on cities to meet this criteria," says Anumita Roy Chowdhury, head of Centre for Science and Environment's clean air programme. CPCB's air quality bulletins routinely show Faridabad, Agra, Kanpur and Lucknow in "severe" or "very poor" categories.

Our Prime Minister took initiative for 'Swachh Bharat Abhiyan', the moment he took over but no we Indians won't do it because we think it is Modi who will do everything for us. He is PM, he can guide but common sense has to be used and hard work has to be put in by each one of us but no we don't do and thus live in filth....continue...live in hell of own making" Bengaluru is fast catching up with Delhi in air pollution. We have been going from pillar to post for the last several months to put an end to unauthorized burning of garbage and medical waste in our locality but without any decisive action. The hold of those who commit this crime is so strong that one wonders whether there is any civic governance at all in the city.

In 2013, China started a 'war against pollution' with the

government introducing 10 measures. Some of these are policies India can adopt. They issued Red Alert to the entire city. By 2017, Beijing region aims to reduce use of coal by replacing it with electricity from natural gas and non-fossil fuels and closing all excess iron, steel, cement and heavy industries that burn coal. Beijing aims to be completely coal-free by 2020. Across the country, coal use will be brought down to 65% by 2017. On 1 January 2015, China's Environmental Protection Law came into force. There is no cap on fines for polluting companies; non-profits can file public interest lawsuits against polluters. They started '**Real-time monitoring**' system with hourly air pollution data from over 1,500 sites. We need strong laws and commitment from civil society.

### TRANSPORT

The City of Mumbai is India's largest metropolitan city and also a financial hub. Mumbai is known as an island city covering an area of about 437.71 sq.km, houses about 13 million people, and has an overwhelming population density of about 27,209 people per sq. km. Mumbai truly is a cosmopolitan city bustling with activity. With its ever increasing population, deteriorating environmental conditions, scarcity of land resources, income disparities.

Sustainability of the City becomes a major agenda for Mumbai. Mumbai faces similar stumbling blocks to its effective development. Despite having an extensive rail and bus system, heavy traffic and congestion continue to afflict the city. It is estimated that the overcrowded Mumbai local trains are used by 80 lacs people every day. But it is not enough for the 1.24 Cr. strong population. Being the financial capital with an ever increasing population, industries and construction sites have grown in number. Mumbai is equipped with both bus and train services, which are considered superior, compared to other Indian cities. The popular and environmentally clean mode of public transport is electrically operated suburban railways; it is punctual and purposeful, but over crowded. Mumbai transportation sector contributes 92% of the carbon monoxide (CO), 60% of nitrogen oxides (NOX), up to

16% of particulate matter and up to 4% of sulphur dioxide (SO<sub>2</sub>) to the city.

The significance of an efficient public transportation system to sustainable development cannot be stressed enough. As we mentioned above, for cities to take the route of compact growth, well connected mass transit facilities are fundamental. They reduce the dependence on private transport, thereby cutting down on greenhouse gas emissions as well as fuel demand. It is also an affordable and time-saving mode of commute. Hence, it has to be made an attractive option to the public.

However, price incentives alone won't do the job. A systematic, safe, timely and well-maintained network of rail, metro and bus is crucial. A majority of Mumbai's residents choose to travel in the overcrowded and often delayed local trains for the lack of a cheaper and quicker option. If the government invested in more lines, better maintenance and up gradation of infrastructure, even those who avoid taking the trains might feel encouraged to do so.

**from our children" We owe them.....**

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## “MUDRA LOAN YOJNA: A Scheme for Uplifting Small Entrepreneurs”

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### **Abstract**

*Banks play an important role in the economic development of any country in the world. On a bigger scale, national banks offer similar access to credit and financial services to larger businesses, local governments, and in some cases international customers. Most individuals, especially those living in rural and interior parts of India, have been excluded from the benefits of formal banking system. Therefore, they never had access to insurance, credit, loans and other financial instruments to help them establish and grow their micro businesses and for other necessities. So, most individuals depend on local money lenders for credit and local money lenders charge them high rate of interest in return. The banks increase the participation of the private sector in economic development by making available loans easily on reasonable rate. The expansion of financial sector encourages entrepreneurs to make investments by promoting entrepreneurship. Our honorable Prime Minister 'Narendra Modi' has launched the Micro Units Development and Refinance Agency Ltd (MUDRA) Bank with a corpus of Rs 20,000 crore and a credit guarantee corpus of Rs 3,000 crore. This research paper explores the necessity of MUDRA Bank for Micro as well as Small level entrepreneurs.*

**Keywords:** Role of Banks, local money lender, MUDRA

### **Introduction**

MUDRA stands for Micro Units Development & Refinance Agency Ltd. It is a new institution being setup by government of India for development and refinancing activities related to micro units. It was announced by the honorable finance minister while presenting the union budget for financial year 2015-16 but later on it has been launched by our Honorable Prime Minister Narendra Modi. The purpose of MUDRA is to provide funding to the Non-Corporate small business sector as well as to small poor entrepreneur.

Supporting the small entrepreneurs of India is the biggest way to help the Indian economy to grow and prosper. In

our country, only 1 crore 25 lakh people find employment in large industries, whereas small enterprises employ 12 crore people. Yet, the harsh reality is that whereas there are a number of facilities provided for the large industries in India, small entrepreneurs and informal business entities are often cut off from banking system because of limited branch presence and other constraints. There is a need to focus on these 5 crore 75 lakh self-employed people who use total funds of just Rs 11 lakh crore, with an average per unit debt of merely Rs 17,000 to employ 12 crore Indians. These facts, when brought to light, led to the vision for MUDRA Bank. The small businesses, with a little help, have the potential to grow manifold.

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The MUDRA scheme is aimed at “funding the unfunded” means for poor needy people. The small entrepreneurs of India are used to exploitation at the hands of money lenders so far, but MUDRA will instill a new confidence in them that the country is ready to support them in their efforts that are contributing so heavily to the task of nation building. The biggest bottleneck to the growth of entrepreneurs in the Non-Corporate Small Business Sector (NCSBS) is the lack of financial support to this sector. Majority of this sector does not have access to formal source of finance. Government of India has set up the MUDRA Bank for catering to the needs of the NCSBS segment (or the informal sector) for bringing them in the financial mainstream. It is being set up as a subsidiary of SIDBI, which has been supporting India’s small scale industry since last 25 years.

### Objectives

- To understand the Role and Importance of MUDRA Bank for micro as well as small businesses
- To know the performance of MUDRA Bank for micro as well as small businesses
- To understand the objectives of MUDRA
- To know the benefits available to small business units
- To know the various products /offerings of MUDRA

### Methodology

The data and information for the study is gathered from secondary sources like newspapers, magazines, various websites including website of MUDRA Yojana.

### Overview

The formation of the agency was initially announced in the 2015 Union budget of India in February 2015. It was formally launched on 8 April.

Micro Units Development & Refinance Agency (MUDRA) Bank would be responsible for developing and refinancing all Micro-finance Institutions (MFIs) which are in the business of lending to micro / small

business entities engaged in manufacturing, trading and service activities. Since the enactment is likely to take some time, it is proposed to initiate MUDRA as a unit of SIDBI to benefit from SIDBI’s initiatives and expertise. About 5.77 crore (57.7 million) small business have been identified as target clients using the NSSO survey of 2013. Only 4% of these businesses get finance from regular banks. The bank will also ensure that its clients do not fall into indebtedness and will lend responsibly.

The bank will have an initial corpus of 200 billion (US \$ 3.0 billion) and a credit guarantee fund of 30 billion (US \$ 450 million). The bank will initially function as a non-banking financial company and a subsidiary of the Small Industries Development Bank of India (SIDBI). Later, it will be made into a separate company. It was also to act as regulator of MFIs, earlier; but it will be done by RBI now.

The bank will classify its clients into three categories and the maximum allowed loan sums will be based on the category:

- Shishu : Allowed loans up to Rs. 50,000
- Kishore : Allowed loans up to Rs. 5 lakhs
- Tarun : Allowed loans up to Rs. 10 lakhs

Government has decided to provide an additional fund of Rs. 1 trillion to the market and will be allocated as under:-

- 40% to Shishu
- 35% to Kishore
- 25% to Tarun

All micro and small enterprises engaged in manufacturing, trading or services are eligible under this scheme.

### Performance

Under this scheme, according to MoneyControl.com, nearly 1,65,000 people avail the over-drafting facility where the government mobilised US\$ 157,400,000 for this scheme by 1 September 2015. As of 26th of Sept 2015, Banks have already disbursed 240 billion (US \$



3.6 billion) to 27 lakh small entrepreneurs under this scheme.

Till the date of 7th April, 2016, the Mudra Yojana scheme in the state of Gujarat has served to 9.5 lakh beneficiaries under the 'Shishu Loans' category with a loans disbursement worth of Rs 2111 crore, 85,039 beneficiaries under the 'Kishore Loans' category with a loan disbursement worth of Rs 1,843 crore, and 25,852 beneficiaries have been served under the 'Tarun Loans' category with a loans disbursement worth of Rs 1,875 crore in the last 12 months.

## Salient Features of Mudra Loan Scheme

### 1. Brief background for introduction of MUDRA Loan Scheme by Govt. of India

As per NSSO survey (2013), there are around 5.77 crore small/micro units in the country, engaging around 12 crore people, mostly individual proprietorship/Own Account Enterprises. Over 60% of units are owned by persons belonging to Scheduled Caste, Scheduled Tribe or Other Backward Classes. Most of these units are outside the formal banking system, and hence are forced to borrow from informal sources or use their limited owned funds. MUDRA Loan Scheme has been proposed to bridge this gap.

### 2. Brief details of the Product

MUDRA loans are extended by banks, NBFCs, MFIs and other eligible financial intermediaries as notified by MUDRA Ltd. The Pradhan Mantri MUDRA Yojana (PMMY) announced by the Hon'ble Prime Minister on 8th April 2015, envisages providing MUDRA loan, upto Rs. 10 lakh, to income generating micro enterprises engaged in manufacturing, trading and services sectors. The overdraft amount of Rs. 5000 sanctioned under PMJDY has been also classified as MUDRA loans under Prime Minister MUDRA Yojana (PMMY). The MUDRA loans are extended under following three categories: Loans upto Rs. 50,000/- (Shishu) Loans from Rs.50,001 to Rs. 5 lakh (Kishore) Loans from Rs. 5,00,001/- to Rs. 10 lakh (Tarun) more focus would be given to Shishu.

### Eligible borrowers

- Individuals
- Proprietary concern
- Partnership Firm
- Private Ltd. Company
- Public Company
- Any other legal forms

The applicant should not be defaulter to any bank or financial institution and should have a satisfactory credit track record. The individual borrowers may be required to possess the necessary skills/experience/ knowledge to undertake the proposed activity. The need for educational qualification, if any, needs to be assessed based on the nature of the proposed activity, and its requirement.

### 3. Purpose of Assistance/Nature of assistance

Need based term loan/OD limit/composite loan to eligible borrowers for acquiring capital assets and/or working capital/marketing related requirements. The MUDRA loans are provided for income generating small business activity in manufacturing, processing, and service sector or trading. The project cost is decided based on business plan and the investment proposed. MUDRA loan is not for consumption/personal needs. For the purpose of working capital limit, MUDRA has launched a new product called "MUDRA Card", which is a Debit card issued on RuPay platform, and provides hassle free credit in a flexible manner.

### 4. Amount of assistance

Upto to Rs. 10 lakh in three categories viz. Shishu, Kishore and Tarun.

### 5. Margin/Promoters Contribution

Margin/Promoters Contribution is as per the policy framework of the bank, based on overall guidelines of RBI in this regard. Banks may not insist for margin for Shishu loans.

### 6. Interest rate

Interest rates are to be charged as per the policy decision of the bank. However, the interest rate charged to

## “MUDRA LOAN YOJNA: A Scheme for Uplifting Small Entrepreneurs”

ultimate borrowers shall be reasonable. Scheduled Commercial Banks, RRBs and Cooperative Banks wishing to avail of refinance from MUDRA will have to peg their interest rates, as advised by MUDRA Ltd., from time to time.

### 7. Upfront fee/Processing charges

Banks may consider charging of upfront fee as per their internal guidelines. The upfront fee/processing charges for Shishu loans are waived by most banks.

### 8. Security

A. First charge on all assets created out of the loan extended to the borrower and the assets which are directly associated with the business/project for which credit has been extended.

B. DPN (wherever applicable).

C. CGTMSE (wherever felt desirable)/MUDRA Guarantee cover (as and when introduced). In terms of RBI guidelines issued vide Master Circular on lending to MSME Sector (para 4.2) dated July 01, 2014, in respect of loans upto Rs. 10 lakh, banks are mandated not to accept collateral security in the case of loans upto Rs. 10 lakh extended to units in the Micro Small Enterprises (MSE) Sector.

### 9. Tenor of Assistance

Based on the economic life of the assets created and also the cash flow generated. However, MUDRA’s

refinance assistance will be for a maximum tenor of 36 months which will also be aligned to terms of allotment of MUDRA funds by RBI from time to time.

### 10. Repayment

Term Loan: To be repaid in suitable installments with suitable moratorium period as per cash flow of the business.

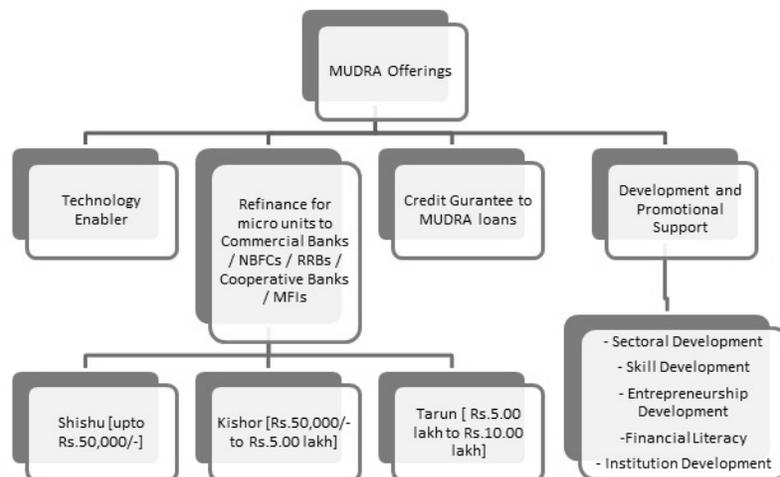
OD & CC Limit: Repayable on demand, Renewal and Annual Review as per internal guidelines of the Bank.

### 11. Availability of the loan

Mudra loan under PMMY is available at all bank branches across the country. Mudra loan is also issued by NBFCs / MFIs who are engaged in financing for micro enterprises in small business activities.

### Products/Offerings of MUDRA

MUDRA is an NBFC supporting development of micro enterprise sector in the country. MUDRA provides refinance support to Banks / MFIs for lending to micro units having loan requirement upto Rs. 10 lakh. MUDRA provides refinance to micro business under the Scheme of Pradhan Mantri MUDRA Yojana. The other products are for development support to the sector. The bouquet of offerings of MUDRA is depicted below. The offerings are being targeted across the spectrum of beneficiary segments.





### Micro Credit Scheme

Micro Credit Scheme is offered mainly through Micro Finance Institutions (MFIs), which deliver the credit upto Rs.1 lakh, for various micro enterprise activities. Although, the mode of delivery may be through groups like SHGs/JLGs, the loans are given to the individuals for specific income generating micro enterprise activity. The MFIs for availing financial support need to enroll with MUDRA by complying with some of the requirements as notified by MUDRA, from time to time.

### Refinance Scheme for Banks

Different banks like Commercial Banks, Regional Rural Banks and Scheduled Cooperative Banks are eligible to avail of refinance support from MUDRA for financing micro enterprise activities. The refinance is available for term loan and working capital loans, upto an amount of 10 lakh per unit. The eligible banks, which have enrolled with MUDRA by complying with the requirements as notified, can avail of refinance from MUDRA for the loan issued under Shishu, Kishor and Tarun categories.

### Women Enterprise Programme

In order to encourage women entrepreneurs the financing banks / MFIs may consider extending additional facilities, including interest reduction on their loan. At present, MUDRA extends a reduction of 25bps in its interest rates to MFIs / NBFCs, who are providing loans to women entrepreneurs.

### Securitization of Loan Portfolio

MUDRA also supports Banks / NBFCs / MFIs for raising funds for financing micro enterprises by participating in securitization of their loan assets against micro enterprise portfolio, by providing second loss default guarantee, for credit enhancement and also participating in investment of Pass Through Certificate (PTCs) either as Senior or Junior investor.

### Purpose of MUDRA Loan

Mudra loan is extended for a variety of purposes which provide income generation and employment creation. The loans are extended mainly for:

1. Business loan for Vendors, Traders, Shopkeepers and other Service Sector activities.
2. Working capital loan through MUDRA Cards.
3. Equipment Finance for Micro Units.
4. Transport Vehicle loans.

### Mudra Card

MUDRA Card is an innovative product which provides working capital facility as a cash credit arrangement. MUDRA Card is a debit card issued against the MUDRA loan account, for working capital portion of the loan. The borrower can make use of MUDRA Card in multiple withdrawal and credit, so as to manage the working capital limit in a most efficient manner and keep the interest burden minimum. MUDRA Card will also help in digitalization of MUDRA transactions and creating credit history for the borrower.

National Payment Corporation of India (NPCI) has given RuPay branding to MUDRA Card and also separate BIN / IIN for the same, by which credit history can be tracked.

MUDRA Card can be operated across the country for withdrawal of cash from any ATM / micro ATM and also make payment through any 'Point of Sale' machines. The design of the MUDRA card as approved by DFS, GoI and NPCI is given below. Banks can customize the same by incorporating their logo and name.



### Portfolio Credit Guarantee:

Traditional financing in Indian context adopts an Asset

## “MUDRA LOAN YOJNA: A Scheme for Uplifting Small Entrepreneurs”

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Based lending approach with emphasis on collaterals. Micro units, most of the times, are unable to provide the comfort of collaterals. Hence MUDRA loans i.e. loans upto Rs.10 lakh, have been made collateral free, as per the RBI norms in this regard.

To mitigate the issue of collaterals, MUDRA is offering a Credit Guarantee Product. MUDRA Credit Guarantee is extended by creation of a Fund called “**Credit Guarantee Fund for Micro Units**” [CGFMU] and the scheme has been notified by GoI vide its notification dated April 18, 2016. Accordingly, all eligible micro loans sanctioned since April 08, 2015 is covered under the Scheme. The Scheme is being managed by National Credit Guarantee Trustee Company Ltd. [NCGTC], an agency promoted by the GOI.

Creation of Resources for Credit Enhancement/ Guarantee Facility

The corpus proposed for the Credit Guarantee Scheme would be regularly augmented with a charge on the outstanding loans under refinance. The same would be utilized for providing first loss guarantee / credit enhancement for securitized portfolio loans as discussed below.

Credit enhancement : Facilities offered to cover probable losses from a pool of securitized assets in the form of credit risk cover through a letter of credit, guarantee or other assurance from the originator / co-originator or a third party to enhance investment grade in any securitization process. First loss facility is the first level of credit enhancement offered as part of the process in bringing the securities to investment grade. Second loss facility provides the second / subsequent tier of protection against potential losses.

### Conclusion

The idea of MUDRA Bank is not just based on meeting the credit and financial needs of small enterprises. Rather than just providing credit, it is based on the “Credit-Plus” approach under which access to credit will be combined with various enterprises development and welfare related services and will take up interventions for providing development support across various beneficiary segments. Some of the proposed initiatives under MUDRA would include supporting financial

literacy, Promotion and Support of Grass Root Institutions, Creation of framework for “Small Business Finance Entities” where it will work with credit bureaus and rating agencies and synergies with National Rural Livelihoods Mission and National Skill Development Corporation. Going forward, other proposed offerings under MUDRA are MUDRA Card, Portfolio Credit Guarantee and Credit Enhancement.

### Recommendation

- Mudra Loan Yojna should be the regular in order to bring all financial institutions of micro and small sector under one roof.
- It should cover Self Help Groups (SHGs), Non-Banking Finance Companies (NBFCs), Micro Finance Institutions (MFIs), Trust, Societies etc. which are lending money to small business but are governed by multiple authorities and laws.
- MUDRA should be true to its role as a Developmental Agency, much like the National Housing Bank which is a regulator as well as a Development Agency.
- The design of MUDRA Bank will not only cater to the financial problems of MSMEs but also provide moral support to vast pool of young population to materialize their dreams of becoming an entrepreneur.

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## Banking and Financial Sectors Development

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### Abstract

*The Banking sector and Financial sector are the largest spender and beneficiary sectors from Information Technology. These sectors are growing rapidly to cater the needs of various societal segments. The Indian banking sector is one of the strongest drivers of Indian economic growth. With the potential to become the fifth largest banking industry in the world by 2020 and third largest by 2025 as prescribed in the KPMG - CII report ,India's banking and financial sector is expanding rapidly. It is the role of technology who has bought paradigm switch in the functioning of banks. The Indian Banking industry is currently worth Rs.81 trillion (US \$1.32 trillion). Financial sector of India is intrinsically strong and flexible besides being sensitive to India's economic aims of developing of market-oriented economy. The growth of financial sector in India at present is nearly 8.5% per year. The banking sector will generate 7-10 lakh jobs in the coming decade and the sector would be among top job creator in 2016. The banking and financial services industry is expected to recruit about 84 million people as the growth rate each year. The rate of recruitment by 2022 is expected to be about 4.2 million. The banking sector plays a major role in stabilizing the economic development and growth of the country. The paper reflects the impact of banking and financial sector on consumers.*

**Keywords:** Banking sector, Narasimhan committee, Recommendations, Report

### Introduction

Banking sector is gaining vital importance because of financial sector. Banks play a vital role for the economic development of a modern nation. The present financial system would be miserable without the existence of an effective and efficient banking system. The very existence of the financial sector is built on the banking system operation. The banking sector is dominant in India as it accounts for more than half of the assets of financial sector. Accounting for millions in assets worldwide the banking system is a crucial component of the global economy. Most of the banks provide various services such as mobile banking, SMS banking, net

banking and ATM's to their clients. The Indian banking sector has made undoubtful advancements in the last few years, even during the times when other countries were struggling with their financial crises. These banking reforms act as a catalyst in boosting the strength of Indian economy.

### Objective of the Study

1. Over viewing the reforms introduced in the banking sector in India since 1992.
2. Analyzing the positive outcome of the reforms towards consumers.



3. Studying about the growth of banking sector.
4. Enhancing customer satisfaction and transparency of banking industry.

## Literature Review

The study focused on finding the reforms introduced in the banking sector since 1992 under the chairmanship of Sri.M.Narasimham, ex-governor of RBI.

### Narasimham Committee Report - I – 1991

#### 1. Reduction in the SLR & CRR

The SLR & CRR ratios were very high at that time. This high amount of SLR and CRR meant locking the bank resources which hindered the productivity of banks so the SLR was recommended to reduce from 38.5% to 25% and CRR from 15% to 3 to 5 %..

#### 2. Phasing Out Directed Credit Programme

This committee recommended phasing out of this programme as they compelled banks to earmark financial resources for the lower segments of the society at lower rates of interest, thus reducing the profitability of banks.

#### 3. Interest Rate Determination

The committee recommended elimination of government control and regulation on interest rates. The determination of interest rates should be subjected to market forces. It recommended phasing out of constellation interest rates for the priority sector.

#### 4. Removal of Dual Control

The committee recommended stepping out of the system which was under the dual control of RBI and Banking Division of Ministry of Finance. Thus, stating that RBI should be the only agency to regulate the banking system in India.

### Narasimham Committee Report –II – 1998

#### 1. Non Performing Assets

The Narasimham Committee II highlighted the need for

zero non-performing assets for all Indian banks and creation for Asset Reconstruction Funds and Asset Reconstruction companies to take over the bad debts of banks

#### 2. Entry Of Foreign Banks.

The committee suggested that for any foreign bank to setup business in India, should have a minimum startup capital of \$ 25 million against the existing requirements of \$ 10 million and the foreign banks are allowed to setup the subsidiary and joint ventures which would be treated on a par with private banks.

#### 3. Structural Reorganization of Banking Sector.

The committee recommended the three tiers a banking structure in India by establishing large banks with International presence 8 to 10 national banks and large number of regional and local banks. However this led to mergers of banks in India during the late 90s & early 2000s

#### 4. Review of Banking Loss.

The committee recommended an urgent need for reviewing and Implementation of laws governing Indian Banking Industry like RBI Act, SBI Act, Banking Regulation Act etc. This up gradation would help in coping up with the needs of the banking sector in India.

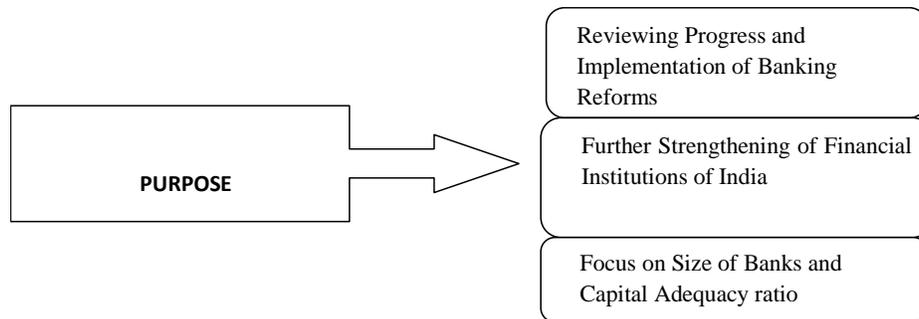
Apart from the above recommendations, the committee also recommended fast computerization, and technology upgradation, training to staff etc.

### Implementation of Recommendations

1. Concept of Universal Banking was finally introduced in India by ICICI Bank
2. IT banks were considered eligible for autonomy
3. CRR and SLR were gradually brought down over the years.
4. There were a string of mergers in banks during late 90s and 2000s

## Banking and Financial Sectors Development

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### Impact Due To Reforms In Banking Sector

1. Recommendation were far ahead of their times
2. Recommendation were well received and successfully implemented to most of it
3. Impact of Narasimham Committee I and II have been significant that the professionals of the economic sector have been appreciating its positive contribution
4. Successful Implementation with references to capital adequacy norms and the recapitalization of public sector banks stated in Narasimham Committee II were observed
5. During the 2008 economic crises, performance of Indian banking sector was far better than their International counterparts.

### Today's Scenario

1. Bad debts are rising as borrowers default due to high interest rates.
2. ARCIL expects to acquire Rs 1000 to 1300 crores of assets this year, up from Rs 20-24 crores in the last fiscal.
3. Bad debts in the banking industry have crossed Rs.1 trillion as against the slowing economy growth, which fell to 6.5% in the last fiscal from 8.4% in the previous year.

4. A government advisory group on ARCS suggested that they should be allowed to buy the bed debts from non banking financial companies (NBFSC). This would facilitate greater negotiating power to the ARCS and in hands their pool of assets available.
5. India has more than 50 ARCS, with Arcil controlling more than 70% of the distress assets market.
6. A major issue between banks and ARCS is that the banks prefer to get cash payment against larger assets whereas Arcil issue Security Receipts (SRs) that they redeem after recovering loans from defaulters.

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## Commuting as a determinant affecting Job Satisfaction

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### Abstract

*Commuting is a vital part of a life for employees or professionals those who are working in Metropolitan Cities. As these Cities serve as a business hub, connecting many towns, villages, districts and other small areas, many professionals and Employees daily commute from one place to another for Job purpose. The present research aims to investigate the relationship of Commuting with Job Satisfaction. The study aims to find out whether commuting is an important facet of Job Satisfaction or not. **Sample Size:** Sample size of 220 respondents randomly selected working in Mumbai City. The survey was conducted using self administered Questionnaires. **Results:** The finding of the results reveals that respondents agree and had positive response for the questionnaires put forth and had given valuable opinions. **Conclusion:** It can be concluded that commuting has positive influence on employees Job Satisfaction and it is an important factor or determinant of Job Satisfaction.*

**Keywords:** *Commuting and job satisfaction, positive influence of commuting.*

### Introduction

Commuting is a part of life for employees working in Business cities. It is not possible always to get Job close to place of residence in most of the Metropolitan Cities. Therefore people commute from home to workplace and back to the residence on daily basis. An Average professional spends much part of his/her daily life in travelling. According to data available with Pay Scale, a US-based salary tracking firm, the average time spent in commuting by an employee in Mumbai is 47.26 minutes followed by 42.96, 37.91 and 36.08 minutes spent by employees in Delhi, Bangalore and Chennai respectively. A factor related to the commute which was more commonly adhered to when selecting a new location was the distance between home and work. Some people described searching within a radius. Maximum tolerable commute distances varied, and were described

in terms of distance or time (Jones Caroline HD and Ogilvie David, 2012). Therefore professionals take much concern while choosing job, taking travel time and Job Destiny in considerations. Also study by Batoul Aminjafari, 2012 also reveals that Job location plays a very important role in creating stresses among employees.

Employees who spend more time in commuting from home to workplace often get tired and it reduces their productivity (Adolfo Sachida et al., 2008). Also the surveys conducted in Serbia during the 1980s showed that around 30 per cent of commuters expressed desire to move to their place of work (Lukic Vesna, 2013). Travelling time and distance is not only the factor but hectic journey due to overcrowded local trains or ill time bus services due to traffic and complex journey directions and routes also plays a very important role

for professionals to choose a Job or to leave a Job. Therefore present study aims to investigate whether Commuting should be considered as one of the important facet of Job Satisfaction or not for professionals working in Metropolitan Cities.

### **Job Satisfaction**

The concept of job satisfaction has received much attention in the past 65 years. Maslow's (1954) hierarchy of needs theory forms the basis of many researchers' discussions and assessments of job satisfaction (Evy George, 2008). Job satisfaction is the sense of well-being, good feeling and positive mental state that emerge in an incumbent worker when his obtained reward consequent upon his performance is congruent with his equitable reward ( Henry Ndubuisi Onukwube, 2012). Job satisfaction plays an essential role on the success of any organizations (Zahra Boroumand, 2013). It can also be defined as a pleasurable or positive emotional state, resulting from the appraisal of one's job or job experiences. Also, it should be recognized that no work in society and especially in an organization is more important than leading and growth of human beings and technology cannot move without their satisfaction (Saeid Baseri, 2013). Employees are considered the most vital and valuable resource of any manufacturing organization; their JS play critical role in an organization's success (Ferit Olcer, 2015).

Employees who are satisfied produce superior quality performance in optimal time and lead to growing profits. They become creative and innovative to come up with breakthroughs that allow any organization to grow and change positively with time and cope with the challenges in the changing global markets (Dr. Myra C. Britiller et al., 2015). Therefore, it is most important that the employees are satisfied with their job. If answer is no, then survival of the organization becomes difficult (Nasir Saifullah, 2015).

### **The Proposed Study**

The main aim of the present Study is to investigate the relationship of Commuting with Job Selection and Job

Satisfaction. The main research area of the study is Mumbai city which is a business capital of India. Because of its ability to provide large employment opportunities people from around the country migrate and commute from one place to another in and around the city on daily basis. Therefore the study tries to find out the relation between Commuting with Job and Job Satisfaction.

### **Literature Review**

Adolfo Sachside et al. (2008) investigated the effect of place of residence over an individual wage. A total of 1,104 people from 4 administrative counties in the state of the Distrito Federal in Brazil were interviewed out of which 779 were selected for getting data. They answered a sixty-question questionnaire regarding socio-economical and behavioral characteristics. It was concluded that part of the wage differential between counties was attributed to factors linked to worker productivity, such as time spent commuting from home to workplace.

Evy George et al. (2008) examined the role of extrinsic and intrinsic factors in determining job satisfaction amongst urban secondary-school teachers in Namibia. Also, the correlation between burnout and job satisfaction was investigated A sample of 337 secondary-school teachers randomly selected from 17 government schools, in the Windhoek region of Namibia. The research indicates significantly high levels of dissatisfaction with the intrinsic factors of work and also the variables of school resources and rank seemed to play an important role. It was concluded that continuing research on teachers' levels of burnout and job satisfaction could eventually lead to realistic and successful burnout intervention and prevention programs. Such intervention and prevention may ultimately result in higher levels of job satisfaction.

Batoul Aminjafari (2012) investigated different factors influencing employees to have more stress in a hydropower unit located in city of Esfahan, Iran. A total of 81 respondents were selected those who were working in customer service department. Self Administered



Questionnaires consists of two sections i.e. Personal Characteristics and factors relevant to employees stress were used to collect the information. The finding of the study shows that among different factors, difficulty of working condition as well as work pressure are two most important factors increasing stress among employees.

Jones Caroline HD and Ogilvie David (2012) aimed to explore experiences and motivations regarding travel behavior around the period of relocation, in an effort to understand how active commuting might be promoted more effectively. Respondent size was 26 commuters from Cambridge study cohort in the UK. The research finding suggests that providing good quality public transport and free car parking within walking or cycling distance of major employment sites may encourage the inclusion of active travel in the journey to work, particularly for people who live too far from work to walk or cycle the entire journey.

Saeid Baseri (2013) examined the job satisfaction of auditors of audit organizations in comparison to accountants in Business enterprise. The study was conducted on professionals working in Iranian firms. The results reveals dissatisfaction among auditors is more than accountants are. The result also shows that job position and salary to be the most important factors influencing job satisfaction among auditors.

Zahra Boroumand et al. (2013) investigated the influence of some factors such as Working Condition, pay, promotion, supervision and co- workers on job satisfaction. The research was conducted on employees from one of Iranian electricity distribution firm and the sample size of 130 employees was selected. The result reveals that higher wages will significantly influence their job satisfaction. In addition, having friendly environment where all co- workers are working together well will also contribute to work condition as well. The research also indicates that all employees were satisfied with their jobs.

Dr. Myra C. Brittler et al. (2015) aimed to determine the predictors of job satisfaction of faculty members of

Al Ghad International College for Health Sciences. Demographic characteristics such as age, civil status, educational attainment and length of experience and the level of job satisfaction in terms of intrinsic factors, extrinsic factors and general factors were assessed. Intrinsic, Extrinsic and General Job Satisfaction Scale of the Minnesota Satisfaction Questionnaire (MSQ) and open-ended interview were the primary tools utilized for data collection. The results of the study revealed that the demographic characteristic has significant role in attaining Job Satisfaction. The intrinsic factors such as meaningful use of time at work, collegial relationship, work values, chances and opportunities and work independence were the predictors of level of Job Satisfaction. The study concluded the importance of work cohesion and collaboration, work independence and values among faculty members. Salary and quality of tasks performed is regarded as essential components of the overall satisfaction of faculty members.

Ferit Olcer (2015) investigated the relationships among the four components of psychological empowerment (i.e. meaning, self-determination, competence, and impact), job satisfaction and job performance. Data from sample size of 238 employees from private textile manufacturing company in Turkey manufacturing was collected. On the basis of results, the present study implied that the higher the level of Psychological Empowerment, the greater the level of Job Satisfaction and Job Performance in Turkish employees. Also autonomy, independence, feeling of meaning and enhancing their impact would also reason to increase the employees' Job Satisfaction and ultimately the perspective organizational overall productivity will increase. It can be concluded that Job Satisfaction plays a very important role in increasing Job performance.

## **Purpose and Objectives**

To investigate the relationship between Commuting and Job Satisfaction.

## **Hypothesis**

There is positive significant relationship between

## Commuting as a determinant affecting Job Satisfaction

Commuting and Job Satisfaction.

### Sampling and Research Methodology

A Simple Random Sampling method is used for the proposed Study. Survey as a Methodology selected for this research. A total size of 220 respondents working in Mumbai is selected. As the aim of the study is to collect data from general mass those who are commuting from home to Work place through Railways, Buses and

Cars, the study was not concentrated on a particular profession rather respondents from various professions were allowed to participate. Self Administered Questionnaires will be used to collect the information. The Questionnaires are unique and design in such a way that it can relate commuting with Job Selection and Job Satisfaction so that the objective of the study can be accomplished. Also care is taken to make it simple and easy to understand so that the respondent can express their opinion well. A pilot test and Expert opinions were taken at the time of designing questionnaires.

### Personal Characteristics of Respondents

	Personal Characteristics				
1	Age	<b>less than 25</b>	<b>25-40</b>	<b>40-55</b>	<b>above 55</b>
		83 no/37.72%	80 no/36.36%	42 no/19.09%	15 no/6.81%
2	Gender	<b>Male</b>	<b>Female</b>		
		152 no/69.09%	68 no/30.90%		
3	Qualification	<b>SSC</b>	<b>Undergraduate</b>	<b>Graduate</b>	<b>Post Graduate</b>
		92 no/41.8%	43 no/19.54%	67 no/30.45%	18 no/8.18%
4	Experience	<b>less than 05</b>	<b>05-10</b>	<b>10-15</b>	<b>above15</b>
		71 no/32.27%	102 no/46.36%	35 no/15.90%	12 no/5.45%
5	Mode Of Commuting (travelling)	<b>Train</b>	<b>Bus</b>	<b>Car</b>	<b>Other</b>
		127 no/57.72%	44 no/20%	16 no/7.27%	33 no/15%

### Results and Findings

Sr. No	Questionnaires	Mean
1	You would prefer a <b>Job</b> with <b>convenient Commuting facility</b> despite of having <b>marginally less salary</b> .	3.595
2	You would wish to switch to a <b>new project</b> of your company that is closer to your <b>home</b> .	3.447
3	You would prefer <b>commuting facilities(Company Bus/Car)</b> over <b>travel allowance</b> provided by your company.	3.875
4	You would avoid a <b>workplace</b> with <b>hectic and tiresome</b> journey despite of <b>higher salary</b> offers.	3.44
5	You would not take a Job with a <b>longer journey</b> which prevents you from spending quality time with your <b>family</b> .	3.875
6	You are not satisfied with a <b>job location</b> where traveling causes negative impact on your <b>health</b> .	3.69
7	You are doing a Job with <b>dangerous (hazardous) journey</b> only due to <b>financial issues</b> .	1.735
8	You would avoid a Job that does not assign you a <b>specific Workplace</b> .	4.00
9	Your <b>Job Satisfaction</b> level will <b>decline</b> if you frequently face Hectic journey issues like <b>Overcrowded trains/buses, Traffic Congestions</b> etc.	3.345
10	<b>Commuting</b> is an important <b>factor</b> which affects employees <b>Job Selection</b> and <b>Job Satisfaction</b> .	3.55



	Range
Agree	5-3
Neutral	3-2
Disagree	2-1

### Explanations of Questionnaires with Results findings

- Q1. The first question was a link between job, commuting facility and salary and the mean average is 3.595, which means most of the respondents agree and responded positively for the Q1
- Q2. The Second question was about choosing new project and its distance from home and the mean average was 3.447, which resembles that most of the respondents agree and responded positively for the Q2
- Q3. The third question was about preferring traveling facilities over travel allowance and the mean average was 3.875, which resembles that most of the respondents agree and responded positively for the Q3
- Q4. The fourth question was about preferring good job location over higher salary job with hectic journey and the mean average was 3.44, which means most of the respondents were ready to work at a lower salary than choosing difficult and tiresome journey. Therefore they responded positively for the Q4.
- Q5. The fifth question was about rejecting Job with longer journey for spending time with family and the mean average was 3.875, which means most of the respondents were ready to avoid far distance jobs for the sake of family. It indicates that respondents agreed and responded positively for the Q5
- Q6. The sixth question was a link between Job and health and the mean average was 3.69, which means most of the respondents were ready to avoid longer journey jobs for the sake of health. It indicates that respondents agree and responded positively for the Q6
- Q7. The seventh question was a link between Job journey with financial issues and the mean average was 1.735, which means most of the respondents disagree and will prefer safe journey over financial issues.
- Q8. The eight question was about preferring Job with specific work place over jobs which do not have a specific job location and the mean average was 4.00, which means most of the respondents strongly agree and do not like moving workplaces for a particular job.
- Q9. The ninth question was a link between commuting for job and Job Satisfaction and the mean average was 3.345, which means most of the respondents agree that Job commuting plays a important role to attain Job Satisfaction.
- Q10. The tenth question was about asking personal opinions of respondents regarding Job commuting and Job Satisfaction and the mean average was 3.55, which means most of the respondents agree that Job commuting is an important factor affecting Job Satisfaction and the Q also positively satisfies the research Hypothesis.

### Conclusion

As the results from the questionnaires indicates positive response and satisfies the research hypothesis that Commuting has positive relationship with Job Satisfaction. The questions were self administered and developed in such a manner that it should have a relation between Commuting and Job Satisfaction and extract valuable opinions of the respondents. The above result shows that most of the respondents were agree with the questions put forth in front of them. So from the above research finding it can be said that Commuting is an important factor of Job Satisfaction. Therefore it can be concluded that Commuting is a determinant which affects Employees Job Satisfaction. Also the research will be helpful and plays a vital role in further studies related to the topic.

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## Socio-Political and Cultural Implications in Sustainable Biodiversity in Amitav Ghosh's *The Hungry Tide*

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### **Abstract**

*With an ever increasing human population and technological developments and the consequent environmental pollutions, the biodiversity of any region invariably becomes vulnerable to the extent that it creates imbalance in the ecology of the region. It is therefore very important to maintain the biodiversity not only to maintain a balance in the ecosystem of any region but also because it provides sustainable development for the human population and others that are dependent on it. However, in several occasions it has been noticed that political intervention with an objective of developing and maintaining biodiversity of a region actually invite a large array of problems instead of working out a plan for smooth flow and existence of biodiversity. The present paper deals with Amitav Ghosh's *The Hungry Tide* that explores the consequences of unjust political intervention for some very lucrative state purposes that not only pose problems and conflicts in Sunderban regions in West Bengal but also how by this the state agencies also deliberately marginalized the inhabitants of the place, (who were actually refugees from east Bengal post partition) so that they ultimately relocate themselves and vacate the region.*

**Keywords:** *Amitav Ghosh's - The Hungry Tide, Social ecology Biodiversity, inhabitants of sunderban. Morichjhapi massacr, sundaree trees, purpose of novel, conflict between exploitation and conservation.*

### **Introduction**

Biodiversity, a contraction of 'biological diversity', generally refers to the variety and variability of life on Earth. It also includes the variability within species, between species and between ecosystems. Thus, biodiversity can be said as the variety of life on Earth. It is the lifeblood of sustainable development and green economies. It is a general concern that biodiversity is being depleted at an unprecedented rate as human

populations, and their levels of consumptions increase. Biodiversity underpins the delivery of a wide range of essential goods and services on which we all depend: food, fodder, fibres and medicines. Poor people in rural areas of developing countries are disproportionately dependent on these goods and services to meet their day-to-day survival needs. To them, biodiversity is a safety net, a natural health service and an insurance strategy. Thus it becomes a responsibility and obligation on the part of several governmental and non

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governmental agencies to maintain biodiversity on the earth. However, there are instances where not very equal or convincing efforts have been made to maintain biodiversity so as to obtain a sustainable life in some specific areas.

Literature which is considered a mirror of the society, its culture and socio political status; also serves the purpose of bringing out the hidden bitter truths of the society and its several governmental and non-governmental agencies. The biodiversity in one of India's most beautiful regions, the delta areas of Ganga and Brahmaputra, i.e. in the Sunderban areas of West Bengal have been captured by Amitav Ghosh in one of his most successful novels, *The Hungry Tide*. However, he does not allow himself to be lost in the charming beauty of the region; rather he delves deep into the political intervention of the state government and its agencies in the name of maintaining biodiversity of the area and the after effects of it that led to an incessant conflict between the wild life and the inhabitants of the place.

The novel, *The Hungry Tide* explores the tenets of Social Ecology to provide a logical proof for the antagonistic relationship between human beings and wild and aquatic life of the region. The new branch of ecology, called Social Ecology explains how environmental problems are closely related to social, economic, and political problems. In his essay "*What is Social Ecology?*" Bookchin defines social ecology as a branch of ecology that is based on the conviction that nearly all of our present ecological problems originate in deep-seated social problems. It follows, from this view, that these ecological problems cannot be understood without a careful understanding of our existing society and the irrationalities that dominate it.

In *The Hungry Tide*, Amitav Ghosh portrays the lives of the inhabitants of the islands of the Sundarbans. It provides a picture of an uninhabitable place like the Sundarbans and its inhabitants who are so dependent on its resources for survival that they risk their life everyday living in these crocodile and tiger infested islands. It is an accepted fact in the region that many of them have

lost their lives and will lose their life in the untameable region of the Sunderbans, "dozens of people perish in the embrace of that dense foliage, killed by tigers, snakes and crocodiles."(THT) However, it is not only the adventurous nature of the place that drove them to such unpredictable livelihood. Rather it is the pain of hunger that drove the inhabitants of the islands of Sundarbans to hunting and fishing with the result that they became preys to other wild animals' hunger. In fact, so unpredictable and so frequent are deaths that when men go fishing it is the custom for their wives to change into the garments of widowhood.

The wretched condition of the Sunderban dwellers that force their life to all sorts of natural calamities and bestiality of the wildlife can be traced back to the Morichjhapi Massacre, a brain child of the then ruling political party of West Bengal. The Morichjhapi episode, the fate of Sunderbans with its human and wildlife populations, are all intricately linked and goes back to the history of Partition of India. In Economic and Political Weekly, Annu Jalais in his article '*Dwelling on Morichjhapi*' analyses the events that led up to the Morichjhapi massacre. After the Partition of India in 1947, when East Pakistan became more or less a place for Bangla speaking Muslim majority, Hindu refugees were left with no choice than to relocate in India, mainly in West Bengal. While the rich, upper class Hindus comfortably relocated and settled themselves in the new state, the poor who belonged to the lower class faced opposition from the ruling government, and were forcibly relocated in uninhabitable and infertile places like Dandakaranyaa, semi-arid rocky place in Orissa, Madhya Pradesh and Andhra Pradesh. When the refugees arrived in West Bengal, the then opposition party, CPI (M) supported them in their appeal for settlement in the Sunderbans against the ruling government. However, when the CPI (M) came into power in 1977, not only did they go back to their promise, but also got hostile towards the refugees. They defended their stand by emphasising on the point that any effort of converting the inhabitable Sunderban to a habitable place would mean risking the wildlife and the ecosystem of the place. This eventually led to the violent eviction of the refugees



from Morichjhapi leading to the infamous massacre. However, it is interesting to note that the government that wanted to save the wildlife actually cleared the Morichjhapi Island to grow coconut and tamarisk to boost the state revenue.

Thus the Morichjhapi Island of Sunderban region becomes the space where unequal fights between different species are contested. It becomes the space where the conflict between forest exploitation and forest conservation to preserve the wildlife of the region, especially the Royal Bengal Tigers becomes evident. The main reason, as per the government, for the eviction of the refugees from Morichjhapi was the dire need to protect the Bengal Tigers. For years, the Sunderbans, home to the endangered Bengal Tigers, and numerous other flora and fauna, had been a global concern because of the dangers being posed to its ecosystem due to human activities.

Before exploring the conflict that infested the region, Amitav Ghosh gives a graphic picture of Sunderban to show its vulnerability in the lap of nature. The region, Sunderban, has derived its name from the Sundari Trees, a common species of mangrove whose spread protects the entire region from the fury of cyclonic destructions at the same time providing stability to the whole region by preventing erosion due to tidal action. The rivers of the delta are also of varying nature, ranging from very small ones to the large ones that cover the region like net, "The rivers' channels are spread across the land like a fine-mesh net, creating a terrain where the boundaries between land and water are always mutating, always unpredictable." (*The Hungry Tide* 6-7)

Through a graphic description of the hostile and shifting nature of the Sundarbans Amitav Ghosh unveils several issues related to life and existence on the delta region with its diverse ecosystem in which man, animal and other beings strive for their own eco-space thereby trying to find their means of survival. Ghosh juxtaposes everyday problems of living from the residents' point of view with the nonhuman creatures. The novelist deftly depicts the conflict between man and wildlife, especially

with the most powerful of the species, the tiger that is in a constant conflict with man. Another major concern that Ghosh tries to address in the novel is the ever depleting richness of the biodiversity due to salinity that foretells the extinction of several rare species and yet how the ecosystem is home to the Gangetic and Irrawaddy dolphins, crocodiles, deer etc., with other fauna and flora at the point of extinction. The land therefore, is the battleground for all sorts of living creatures that engage themselves in a perpetual struggle for their survival.

If on one hand Amitav Ghosh deals with the political problem that the local residents try to fight to make a living for them, on the other hand, he delves deep into the harmonious relation that the residents have developed with the wild living creatures, especially the ocean mammals of the delta region, the huge dolphins. Piya, the research student who has visited the Sunderban region for her work on wildlife under threat in the region is overwhelmed to find how the dolphins cooperate with the humans in their cast-net fishing. In that the Irrawaddy dolphins serve to increase the amount of fish caught by the fishermen thereby proving themselves to be economically valuable to the human lot. She even thinks and also concludes that the movements of the Orcaella adapting itself to the tidal ecology might provide clues to conservation of this endangered species. Even closer to the nature and wild and sea life of the Sunderban region is Fokir. From his childhood he is exposed to both the benign and malign natures of the region. He has developed, rather learned the intricacies of the movements of the creatures of the region. Thus he explains to Piya and Kanai how he knew all about the dolphins and where they go. As a small boy his mother Kusum had told him stories about the dolphins in Garjontola, of how they were Bon Bibi's messengers and brought news of the rivers and floods. They were almost his friends.

The most amazing message that Amitav tries to convey to his readers is that each of the creatures of the ecosystem of the region has a worthy role to play in the larger canvas of the bionetwork. Piya also comes across

## **Socio-Political and Cultural Implications in Sustainable Biodiversity in Amitav Ghosh's *The Hungry Tide***

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the estuarine crocodiles apart from smaller creatures like the horseshoe crabs. In spite of the efforts on the part of the inhabitants of the region to build a harmonious relationship with the wildlife, they are left helpless by the Government's over ambitious projects to preserve the tigers at the cost of the lives of the inhabitants. The novel becomes a curious study of political intervention in conservation and preservation of natural resources that often lead to adverse socio cultural effects on the region. The government that showed its deep concern for preserving the heritage tigers of the region and blamed the inhabitants of the place as disturbing the ecosystem of the region themselves invited more imbalances in the biodiversity of the cluster of islands by launching advanced technology in the area. But it is not the inhabitants who can be blamed for this imbalance. The novelist in the novel tries to bring home the point that the dangers of exploitation are the direct result of anthropogenic intervention in the form of globalization, economic development and eco-tourism. One such lucrative and ambitious project, that Fokir tells Piya and Kanai was that of the Sahara India Pariwar that put forward its multimillion project proposal of creating an eco-village, floating restaurants, wild life tourism and several water ways in the region. The second one is that of the technologically developed fishing machines and water vehicles that are used either for patrolling the water body, or for tourism like the motorboats. The third is that of the over protective concern of the state Government to protect and privilege the wild tigers of the region that are considered as endangered species and therefore all efforts are been put to conserve under the Project Tiger.

The Sundarbans is the only mangrove forest in the world that houses the tiger with the highest tiger population in the world being found in this tiger reserve. The local residents are in direct combat with this animal not only because of its ferocious bestiality but also because of the several conservation projects undertaken by the state and environmentalists that privileged the wild beasts over the poor humans of the place. By converting the status of Sunderbans from just a cluster of uninhabitable islands to that of an important tourist place, the

authorities have put the tigers in the centre and marginalized the people of the islands.

Amitav Ghosh interrogates the availability of space marked by the authorities for the natives of the region as against the tigers. Since no fixed demarcations were made by them for the wild beasts, the tigers wander into human space/habitation and end up eating men, women, children and cattle. With the increasing population of the tigers and their free movement in to the habitats of the natives, Ghosh interrogates the irresponsibility of the state authorities that is over concerned to protect and conserve the tigers but not to provide protection to the local residents from the wild beats. Thus it builds a seething rage in the natives the result of which is killing of a tiger by the local mob as soon as the beast trespasses into the zone of the human beings. Though the forest officials often find the natives at wrong and are punished for poaching wild animals, the natives have a reason to defend themselves. The residents of the place have started killing the animals because the tigers have encroached upon human habitation having killed a buffalo and revisiting a second time is caught by the furious mob waiting to kill it. The narrative beautifully portrays how the angry mob awaits the tiger to approach into the village:

When they neared the crest of the embankment Horen pointed to a large mark in the dust and gestured to indicate that this was the place from which the animal had surveyed the village and picked its prey. . . By the light of the torches they saw that the village was made up of clusters of mud huts, so arranged as to run parallel to the embankment. Directly in front of them, a few hundred meters away, was a small mud-walled structure with a thatched roof. More than a hundred people had gathered around this little hut: most of them were men and many were armed with sharpened bamboo poles: they were plunging in to the hut over and again. Their faces were contorted in such a way that they seemed to be in the grip both of extreme fear and uncontrollable rage. Many of the women and children in the crowd were shrieking, Maar! Maar! Kill! Kill! (THT 291- 292)



The naive Piyda, a hardcore lover of environment develops an inclination for the wild animals of the region and exhibits a strong desire to save the animal that is about to be attacked by the inhabitants of the region. However, the predator that has already killed two people, and many livestock of the village, she is shocked to realize that both Fokir and Kanai too join the mob in setting fire to the animal. Piya, the would-be-environmentalist, prioritises her sensitivity to the rights of animals over the men who tried killing the animal. She fails to understand the tricky situation wherein human beings were fighting for survival against this animal. And ironically the next day the government agencies approached the village for taking actions against them for their attempt to kill the tiger.

The sole purpose of Amitav Ghosh on writing the novel seems to unveil how the state in order to increase its revenue through eco tourism tries to invest a huge sum on the Royal Bengal Tigers of Sunderban region and ignores completely the economic development and sustainability of the poor natives of the region, for whom survival means a dependence on the wild resources of the place, like fishing, collecting honey, leaves, barks, seeds and fruits for eating as well as for medicinal purposes. According to Ramachandra Guha in *Social Ecology*, a collection of essays, two types of conflicts can be there around the use of forest: one, originating because of the intensification of forest exploitation, and the second, arising from the conservation process of forest and its wildlife. And in the case of Morichjhapi, both exploitation and conservation of forest and its wildlife seemed to have led to the massacre. The novel, *The Hungry Tide* registers this conflict between the exploitation and conservation plans as thought of and implemented by the state government and other proactive environmentalist and NGOs that have marginalized the human dwellers to such an extent that they are left almost with no preoccupation to feed themselves and sustain their life in the Sunderban regions.

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## To study the variation of inflorescence in Commelinaceae with the aid of suitable key

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### Abstract

Tropical and warm temperate family Commelinaceae is one of the five families in the order Commelinales, consist of about 50 genera and 731 species (Christenhusz, 2016). The family is diverse in India and represented by 15 genera and 95 species (Nandikar, 2015). The family is very diverse in morphology especially in reproductive characters and is considered to be exceptionally high amongst the angiosperms. Comparative inflorescence diversity within the family has been discussed in the present paper. Some of the taxa from three old world genera viz. *Murdannia*, *Commelina* and *Cyanotis* from Mumbai and adjoin have been studied and key out for the ease of identification.

**Keywords:** *Commelinaceae*, *inflorescence diversity*, *Murdannia*, *Commelina*, *Cyanotis*

### Introduction

A taxonomic key is a simple tool used to identify a specific object. It is one of the most useful tools available to scientists trying to identify an unknown organism. Systematists rely on keys to help identify known plants and determine whether they have discovered a new plant entirely. Taxonomic keys are useful tools guiding researchers towards the known name of a plant specimen. However, all taxonomic keys are not created equally. They are often created on a regional level or for a particular group of organisms. So it is important to pick a key that represents the diversity of the region or group of organisms you are interested in examining.

Present study is carried out to key out the inflorescence characters of some of the taxa from three old world genera viz. *Murdannia*, *Commelina* and *Cyanotis* from Mumbai and adjoin region.

### Need for this study

The traditional way to identify a plant depends on the factors viz. habit, habitat, and morphological characters (vegetative and reproductive) etc. Family Commelinaceae is very diverse in morphology and under continuous evolution. Due the diversity in taxa and infraspecific taxa the family is always in flux. Though, the family has been studied well by many Indian and foreign authors, regionally endemic species of the Commelinaceae still needs a special attention. Treatment of the family Commelinaceae in most of the regional flora's also not significant at many occasions. Present attempt has been made to highlight the inflorescence of some genera in Commelinaceae and key out for regional level for ease of identification.

Material and method

**Area of study:** Sanjay Gandhi National Park, Aarey Milk Colony, Nagla block, Ovalekar wadi, Tansa Wildlife



Bird Sanctuary

**Duration of study:** June 2015-December 2015, June 2016-November 2016

**Key referred:** The Flora of Presidency of Bombay by Theodore, Cooke

### Result and Discussion

In the present study area total 3 taxa were enlisted in various flora's viz. (Cooke, 1903), Almeida (2010). In present study, I have studied for inflorescence characters. Total 4 spp. of *Murdannia*, 2 spp. of *Cyanotis* and 5 spp. Of *Commelina* have been studied and documented below.

### COMMELINACEAE R.Br.

#### Key:

1. Inflorescence enclosed in a foliaceous spathes.....*Commelina*
1. Inflorescence panicle without foliaceous spathes or with overlapping bract and bracteoles ...2
2. Flowers in terminal thyrses or in axillary few flowered cyme .....*Murdannia*
2. Flowers in scorpioid cymes .....*Cyanotis*

#### 1. MURDANNIA Royle

1. *Murdannia versicolor*(Dalzell) G. Brückn. Nat. Pflanzenfam. ed. 2 15a: 173 1930. (Syn: *Aneilemaversicolor* Dalzell; *Phaeneilemaversicolor* (Dalzell) G.Brückn.);

Inflorescence axillary few flowered cymes, Flowering starts out pink in bud, flowers open yellow, and mature to blue before withering. Petals symmetrical; stamens 3, staminodes 3, both bearded.

**Flowering period:** August-November

2. *Murdannia spirata* Murdannia spirata G.Brückn. —

Nat. Pflanzenfam., ed. 2 [Engler & Prantl] 15a: 173. 1930 (IK) (Syn. *Aneilema spiratum* (L.) Sweet ;.);

Inflorescence axillary and terminal panicle, thyrses pedunculate. Petals symmetrical. Stamens 3, with bearded filaments. Staminodes 3, filament glabrous.

**Flowering period:** July-October

3. *Murdannia nudiflora* (L.) Brenan, Kew Bull. 7: 189 1952.

Inflorescence reduced thyrses, with sub sessile flowers. Flowers bluish purple, in Petals asymmetrical, Stamens 2, lateral; medial stamen rudimentary; staminodes 3 bearded.

**Flowering period:** July –November

4. *Murdannia edulis*(Stokes) Faden, Taxon 29: 77 1980. (Syn. *Aneilema scapiflorum* (Roxb.) Wight ...; *Commelina edulis* Stokes;

Inflorescence on lateral scape, with reduced terminal thyrses. Flowers laterally oriented, pedicel short or sub sessile; petals asymmetrical; stamens as in above.

**Flowering period:** May-June

#### 1. CYANOTIS

1. *Cyanotis cristata* (L.) D.Don Prodr. Fl. Nepal. 46, adnot. 1825 [26 Jan-1 Feb 1825]

Flowers deep pinkish to purple; cymes 2.0-2.5 x 1.0-1.5cm, recurved, solitary; bracts: ovate-lanceolate. Flowers are usually in terminal clusters subtended by ovate-falcate, 1.5 cm long, acute, folded spathes. (Cymes scorpioid)

**Flowering period:** July-November

2. *Cyanotis fasciculata*(B.Heyne ex Roth) Schult.f. Syst. Veg., ed. 15 bis [Roemer & Schultes] 7(2): 1152. 1830 [Oct-Dec 1830(Tradescantia fasciculata B.Heyne ex Roth

Nov. Pl. Sp. 189. 1821 [Apr 1821]

Flowers Pinkish to purple, in compact, axillary and terminal, peduncled, bracteate cymes. Flowers occur in 6-15 mm long cymes, either at the leaf axils, or at the end of branches. The flower cyme looks like a blue bunch of hair, with a few yellow anthers visible in between. The flower cyme seems to be carried on a hairy lance-like curved bract which is 1 cm long (cymes not scorpid)

**Flowering period:** August-November

## 2. COMMELINA

### 1. *Commelina benghalensis*

Flowers: blue in 2-3 flowered, spathaceous cymes. Spathe is about 1.5 cm across, funnel-shaped, flat at apex, velvet-hairy. Sepals are nearly equal, about 2.5 mm long, outer ones linear, inner ones orbicular. Petals are blue, larger ones about 4 x 4.5 mm, broadly ovate.

**Flowering period:** July-December

### 2. *Commelina diffusa* Burm. f., Fl. Ind. 13, t. 7, f. 2. 1768;

Flowers are sky-blue, about 1.5 cm across, with sepals 3 mm long. Paired petals are 7 mm wide,. The third petal is 5 mm wide. 1-3 flowered, spathaceous cymes, spathes 2.5-3.0cm long, ovate or ovate lanceolate Flowers are borne in 2-flowered clusters.

**Flowering period:** June-January

### 3. *Commelina maculata* Edgew., Trans. Linn. Soc. London 20: 89 1851.

Flowers blue, in simple racemes; spathes 2.0-2.5cm long, as broad as long, solitary or crowded, in terminal heads, infundibuliform. Involucre bracts are 2 or 3, forming heads at the tip of branches, stalk less or with stalks less than 5 mm, funnel-shaped, 1.5-2 cm, hairless or sparsely multicellular hispid. Proximal margins are joined together, tip is shortly pointed. Cincinni arise with 3 or

4(or several) flowers slightly exerted only at anthesis and included in fruit. Flower stalks are about 3 mm. Sepals are 4 mm, membranous. Petals are blue, 2 anterior ones to 1 cm, posterior one 4 mm.

**Flowering period:** August-November

4. *Commelina paleata* Hassk., Pl. Jungh. 139 1852. (Syn: *Trithyocarpus oligospatha* Hassk.; *Trithyocarpus paleatus* (Hassk.) Hassk.); Flowers blue, in 1-4 flowered cymes; spathes 2.0-2.5cm long, cucullate, ovate, acute or acuminate

**Flowering period:** July-September

5. *Commelina suffruticosa* Blume, Catalogus 35 1823. (Syn: *Commelina rugulosa* C.B. Clarke; *Commelina simsonii* C.B. Clarke; *Spathodithyros suffruticosus* (Blume) Hassk.);

Small white flowers are borne in 4-flowered clusters, carried on stalk about 8 mm long. Flower stalks are about 3 mm, twisted in fruit. Sepals are about 4 mm, membranous. Petals are white, about 4 mm Flowers in terminally peduncled, spathes 2-3 x 1.5-2.5cm, pubescent.

**Flowering period:** July-October

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## Study of Financial Inclusion in Rural Areas

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### Abstract

*Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players. – defined by RBI. This study of financial inclusion in rural area highlights the areas of financial inclusion, financial literacy and stability. In the process of research and evaluation suggestions to improve the above parameters are given. The onus is on the government and its agencies to cater to the financial needs of the people from rural area for the purpose of financial inclusion.*

**Keywords:** *Financial Inclusion; rural area; financial literacy financial stability;*

### Introduction

In my research “ To Study Financial Inclusion In Rural Area”, I took sample size of 70 working people who are residing in Vasai-Virar constituency, I have interviewed, observed, and asked them set of question and on the basis of their response I have made this research paper. Also I have interviewed Finance field expert Dr. Hiresuh Luhar, Director of Viva Institute of Management & Research, Dr. Somnath Vibute, Chief Economist, Prof. Karan Khana & Prof. Erica Fernandes and according to their opinions I have interpreted data and gave Qualitative & valuable suggestion for improving financial inclusion & financial Literacy in rural area. I have set hypothesis for my research paper and tested it with “Z” test to select significant hypothesis based on research data. The motto behind doing these research is to find out Financial Inclusion in rural areas, so they can be aware about various financial literacy which will

help them for their development & will educate them with my little effort so that Vasai Virar constituency get benefit of financial inclusion.

### Literature Review

- The Rangarajan Committee recommended that extending outreach on a scale envisaged under NRFIP would be possible only by leveraging technology to open up channels beyond branch network.
- Adoption of appropriate technology would enable the branches to go where the customer is present instead of the other way round. This, however, is in addition to extending traditional mode of banking by targeted branch expansion in identified districts.
- The Business Facilitator/Business Correspondent (BF/BC) models riding on appropriate technology can deliver this outreach and should form the core

## Study of Financial Inclusion in Rural Areas

- of the strategy for extending financial inclusion.
- The Committee has made some recommendations for relaxation of norms for expanding the coverage of BF/BC. Ultimately, banks should endeavour to have a BC touch point in each of the 6,00,000 villages in the country.

### Hypothesis

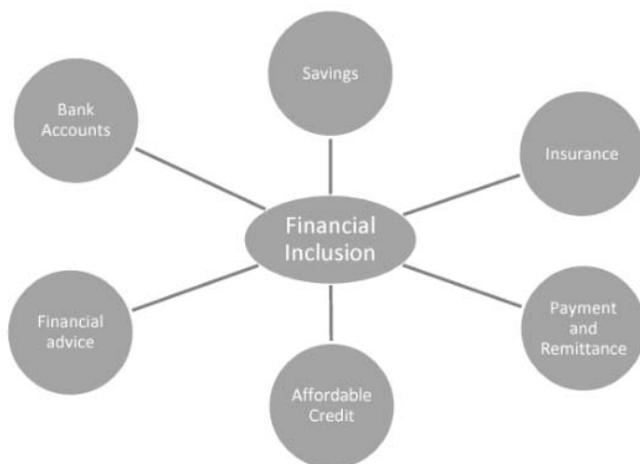
1. H0 (Null Hypothesis) = Financial literacy will not have an impact on Financial Inclusion.
2. H1 (Alternative Hypothesis) = Financial literacy will have positive impact on Financial Inclusion.

### Objective of Research

- 1) To study needs of financial inclusion in rural areas.
- 2) To study financial inclusion through financial literacy.
- 3) To study steps taken by government & RBI

To Study Needs of Financial Inclusion In Rural Area  
Financial Inclusion – Who are these People?

Underprivileged section in rural and urban areas like, Farmers, small vendors, etc., Agricultural and Industrial Labourers, People engaged in un-organised sectors,



It facilitates efficient allocation of productive resources, and thus can potentially reduce the cost of capital.

- Easy access to appropriate financial services, which

can significantly improve the day-to-day management of finances.

- An all-inclusive financial system enhances efficiency and welfare by providing avenues for secure and safe saving practices and by facilitating a whole range of efficient financial services.

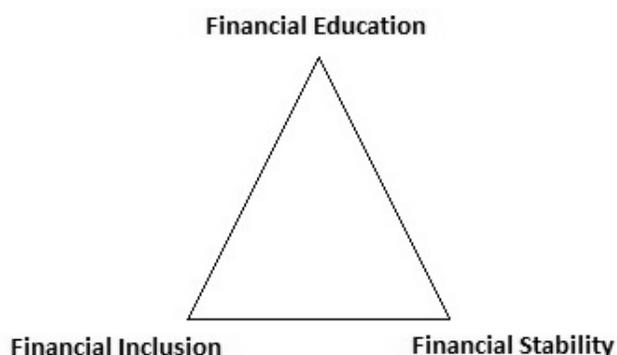
### To Study Financial Inclusion through Financial Literacy

Financial Inclusion and Financial Literacy are twin pillars. While Financial Inclusion acts from supply side providing the financial market/services what people demand, Financial Literacy stimulates the demand side – making people aware of what they can demand.

### Issues in Financial Literacy in India:

- A large population of alphabetically illiterate population - requiring basic financial knowledge
- A large section of financially excluded population-need to be told of benefits of financial inclusion and also to be provided
- A large growing segment of educated middle class-requiring financial education
- A growing capital market with increasing retail participation-requiring financial education and consumer protection

Financial education, financial inclusion and financial stability are three elements of an integral strategy:



- Financial inclusion works from supply side of providing access to various financial services.



- Financial Stability Development Council (FSDC) has explicit mandate to focus on financial inclusion and financial literacy simultaneously.
- Financial education feeds the demand side by promoting awareness among the people regarding the needs and benefits of financial services offered by banks and other institutions.

**To Study Steps Taken by Government & RBI**

In India, RBI has initiated several measures to achieve greater financial inclusion

- Opening of no-frills accounts: Basic banking no-frills account is with nil or very low minimum balance
- Relaxation on know-your-customer (KYC) norms
- Engaging business correspondents (BCs)

**Use of technology**

- Opening of branches in unbanked rural centre's: Ensuring reasonableness of bank charges
- Financial Stability Development Council

- Pradhan Mantri Jan Dhan Yojana

**MAKE IN INDIA**

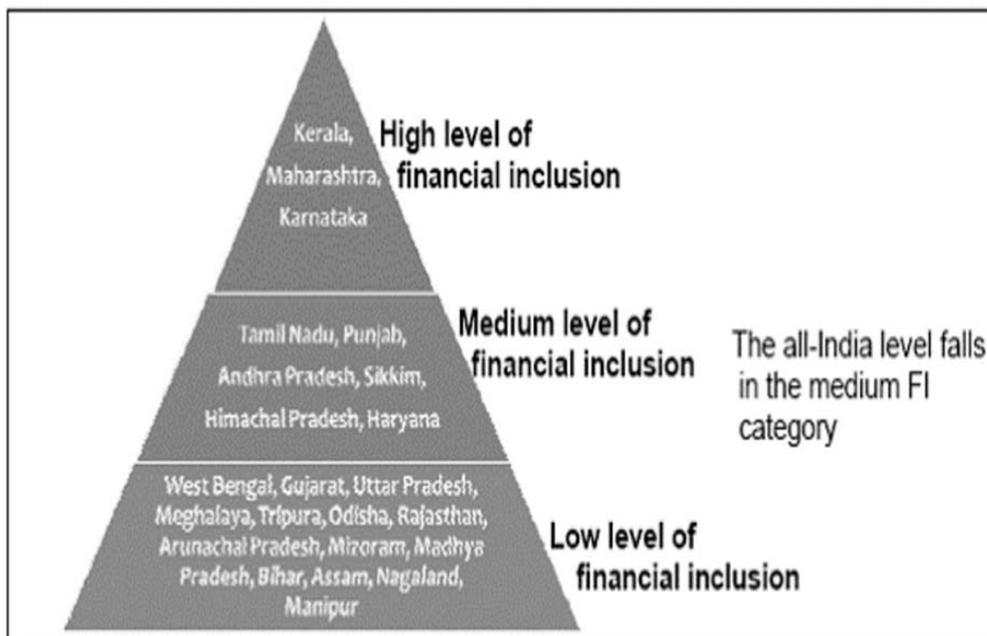
- Demonetization of Rs. 500 & Rs. 1000 notes from 8<sup>th</sup> November, 2016.
- RBI has adopted a bank-led model for achieving financial inclusion and removed all regulatory bottle necks in achieving greater financial inclusion in the country.
- Further, for achieving the targeted goals, RBI has created conducive regulatory environment and provided institutional support for banks in accelerating their financial inclusion efforts.

**Financial Inclusion Initiatives by Private Corporates:**

A few large private corporate have undertaken projects such as —

- EChoupal/ E- Sagar(ITC),
- Haryali Kisan Bazaar (DCM),
- Project Shakti (HUL), etc.

**State-wise index of financial inclusion**



## Study of Financial Inclusion in Rural Areas

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### Research Analysis

Methodology is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge.

**Primary data** is collected by interviewing Financial & Economic experts.

**Secondary data** is collected through Internet from various site, Books etc.

Data Analysis of Financial & Economic Experts:

- Such as strengthening SHG models; the functioning

of microfinance institutions, specialized rural credit institutions such as cooperatives; introducing institutional reforms to open up credit for women; supporting development of SME sector etc.

- The long-term bond market needs to be promoted for expanding inclusive infrastructure;
- Stock markets must play a bigger social role including through the idea of 'social stock exchanges.'
- Providing basic banking services to population without discrimination
- Making the banking system self-sustaining
- leads to increase in savings, investment and thereby, spurs the processes of economic growth

### Data Analysis — Residential workers of Vasai-Virar Constituency:

#### Q 1) Are you finance savvy?

OPTION	RESPONDENT	TOTAL	PERCENTAGE
YES	22	40	55.00%
NO	18	40	45.00%

#### Interpretation:

According to the analysis, majority of people are finance savvy i.e 55% & remaining are not finance savvy i.e 45%.

#### Q 2) Do you have BANK Salary account?

OPTION	RESPONDENT	TOTAL	PERCENTAGE
YES	13	40	32.50%
NO	27	40	67.50%

#### Interpretation:

According to the analysis, majority of people don't have BANK Salary account i.e 67.50% and the remaining of 32.50% have BANK Salary account.

#### Q 3) What are the most popular Product of BANK?

OPTION	RESPONDENT	TOTAL	PERCENTAGE
Saving	19	40	47.50%
Net-banking	18	40	45.00%
Credit card	3	40	7.50%
Other	0	40	0.00%

**Interpretation:**

According to the analysis, the most popular product of BANK is Saving A/c with 47.50% rather than Net-banking, Credit card and others.

**Q 4) What add-on facility do you enjoy on credit card?**

OPTION	RESPONDENT	TOTAL	PERCENTAGE
Rebate	12	40	30.00%
Money Back	12	40	30.00%
Discount	16	40	40.00%

**Interpretation:**

According to the analysis, Discount is the add-on facility which customer enjoy on credit card with majority of 47.50%.

**Q 5) What are the Credit card usage?**

OPTION	RESPONDENT	TOTAL	PERCENTAGE
E-rail	5	40	12.50%
E-pay	10	40	25.00%
Product purchase	23	40	57.50%
Other	3	40	7.50%

**Interpretation:**

According to the analysis, Credit card usage is more utilize on product purchase with 57.50% majority.

**Q 6) Do you know about No-frill A/c?**

OPTION	RESPONDENT	TOTAL	PERCENTAGE
Yes	13	40	32.50%
NO	27	40	67.50%

**Interpretation:**

According to the analysis, Majority of people do not know about no-frill account with no. of percentage of 67.50%.

**Q 7) Minimum balance to be kept in Saving A/c without cheque book?**

OPTION	RESPONDENT	TOTAL	PERCENTAGE
RS.250/-	8	40	20.00%
Rs.500/-	13	40	32.50%
Rs.1000/-	19	40	47.50%

## Study of Financial Inclusion in Rural Areas

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### Interpretation:

According to the analysis, Minimum balance to be kept in Saving A/c without cheque book is Rs.1000/- with 47.50%.

### Q 8) Interest provided in saving a/c?

OPTION	RESPONDENT	TOTAL	PERCENTAGE
5%	14	40	35.00%
6%	10	40	25.00%
7%	12	40	30.00%
Other	4	40	10.00%

### Interpretation:

According to the analysis, Interest provided in saving a/c is 5% with majority of 35.00%.

### Q 9) Fixed deposit provide taxation benefit according to I.T Act, 1961, FD is also used to get loan as security so what is percent of loan provided on F.D?

OPTION	RESPONDENT	TOTAL	PERCENTAGE
Aware	15	40	37.50%
Not Aware	25	40	62.50%

### Interpretation:

According to the analysis, Majority of people are not aware about percentage of loan provided on fixed deposit with 62.50%.

### Q 10) Are you aware of Bank Assurance?

OPTION	RESPONDENT	TOTAL	PERCENTAGE
Yes	23	40	57.50%
NO	17	40	42.50%

### Interpretation:

According to the analysis, Majority of people are aware about Bank Assurance with 57.50% of people knowing about it.

### Q 11) Which is the most popular insurance product which we get in BANK?

OPTION	RESPONDENT	TOTAL	PERCENTAGE
Life insurance	11	40	27.50%
various product	8	40	20.00%
Not Aware	21	40	52.50%

**Interpretation:**

According to the analysis, majority of people are not aware about product of BANK with 52.50%.

**Q 12) E-statement facility send by BANK is it free or it charges fees?**

OPTION	RESPONDENT	TOTAL	PERCENTAGE
Free	24	40	60.00%
Charges fees	16	40	40.00%

**Interpretation:**

According to the analysis, E-statement facility send by BANK is free with majority of 60%.

**Q 13) Do you use electronic medium for shopping?**

OPTION	RESPONDENT	TOTAL	PERCENTAGE
Yes	17	40	42.50%
NO	23	40	57.50%

**Interpretation:**

According to the analysis, 57.50% of people are don't use electronic medium for shopping

**Data Interpretation of Residential worker of Vasai-Virar Constituency**

From the following research some of the following informations have been interpreted

- Majority of people are finance savvy, as they like to do investment for securing their future.
- Less no. of employees salary account is linked by BANK salary account.
- Saving account is the most popular product of BANK.
- Discount is the main thing from which customer get satisfy always and BANK follow the same it give discount to its customer on usage of credit card by them.
- Product purchase seems to be trends in customer through use of credit card as they like to purchases through it.
- Majority of customer don't know about no-frill account of BANK.
- Minimum balance to be kept in saving account without cheque book is Rs,1000/-.
- Interest provided on saving account is 5%.
- Many customer of BANK are not aware of loan granted in fixed deposit.
- Its sounds good that many customer of BANK are aware about Bank assurance of BANK.
- Many people are not aware about Insurance product of BANK but few are aware, as per them BANK-life insurance is highly rated,
- E-statement sent by BANK is free of cost as they think it is basic service & everyone should enjoy it benefits.
- Majority of People don't shop online or through electronic medium

**Suggestion**

- Aadhaar card should be used automatically to open a bank account.

## Study of Financial Inclusion in Rural Areas

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- Interest subsidies and loan waivers should be abolished. Instead govt. should transfer benefits directly to farmers.
- Banks should do away with the system of lending below their respective base rates to the farm sector.
- Bank interest rates should be over and above the prevailing rate of Wholesale Inflation
- NBFCs (non-banking financial companies) should be appointed as agents of banks and their services should be taken in increasing financial inclusion
- With the improvement of connectivity, online transaction model to be implemented.
- Web based kiosk/ mobile based model to be made available at villages
- Introduction of combo card (smart chip with magnetic stripe) to enable payments through ATMs.

### HYPOTHESIS TESTING

Z test is applied to test Hypothesis:

$$Z = \frac{p - \mu}{\sqrt{\frac{\mu(1-\mu)}{N}}}$$

$$Z = 12.77$$

As the value of Z at 0.05= 1.64 (as per Z table), and calculated value of Z (12.77) falls in the rejection, the null hypothesis is rejected, and the alternate hypothesis is accepted and therefore, it can be concluded that To Study Financial Inclusion in rural area will have positive impact.

### Limitation & Future Scope of Research

#### Limitations:

This research is conducted in a rural area in the State of Maharashtra (India).

Other study may have different outcomes due to different geographical locations, respective environmental and economic situations and conditions.

#### Future Scope:

In future, we could continue the study regarding the benefits that the rural population got from the implementation of the recommendations in above literature review.

Also we can further research how technology can be leveraged to reach out to the rural population and how that can be used to overcome the barrier of financial literacy in the path of financial inclusion.

### Conclusion

Financial inclusion has, in reality, far reaching positive consequences, which can help resource poor people to access the formal financial services in order to pull themselves out of abject poverty. The focus on the common man is particularly imperative in India as he is the more often ignored one in the process of economic development. Indeed, with the process of financial inclusion, the attempt should be to lift the resource poor from poverty through coordinated action amongst the banks, the government and other related institutions in order to facilitate access to bank accounts and other related services.

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## The Domestic and International Business activities of Indian Information Technology (IT) Industry: A Review

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### **Abstract**

*Today, Indian IT industries have become a pioneer in enhancing the FDI inflows in the country. Indian IT industry also plays significant role in global economy through its presence in different countries. It provides employment and other opportunities to developed countries like US. Rapid growth of economic activity with advancement in information technology adoption, increasing competition among the industry, enhanced focus by the Indian government and emergence of new business models, will all lead Indian IT industry into a big phase of inclusive and speedy economic growth. We will briefly analyze the following aspects of domestic and international activities of IT and ITeS industries in India: dynamic demand of IT customers due to massive competitive landscape, transition from the traditional services segments of IT and adopting emerging technologies like artificial intelligence (AI), internet of things (IoT), platform IT, big data and SMAC. All these activities will increase the scope of domestic and international activities of IT industry. Global IT spending, major IT export destinations, various components and segments are explained extensively.*

**Keywords:** *dynamic demand, competitive landscape, transition, artificial intelligence (AI), internet of things (IoT), platform IT, big data and SMAC etc.*

### **Introduction**

The domestic and international activities of IT and ITeS industries have increased tremendously due to comparative advantage. The nature of activities of IT sector keeps changing with the pace of competitive landscape. The pace of outsourcing for cost saving changed to value addition. The increasing innovative trends in which Indian IT and ITeS industries involve

attributes such as increasing productivity, quality of service, improving efficiency without human error. The global efficiency delivery model has assisted IT sector to deliver quality work with cost control through automation and robotic delivery. The revenue growth of various segments clearly shows the positive side of IT businesses. Emerging new services offered in domestic and international markets such as artificial intelligence (AI), big data, platform systems, emergence of social,



mobility, analytics and cloud (SMAC), new buyer segments in emerging markets and good governance, will all help Indian IT sector to maintain and sustain its position in the global market.

### Objectives of the study

To evaluate the contribution of IT industry in domestic as well as international trade sector of Indian economy and suggest some policy implications for improving productivity and efficiency.

### Research methodology

While considering the national and international wide scope of IT industry, researcher has adopted secondary sources of data collection and used analytical, comparative and descriptive methodology for this paper; dependence has been placed mostly on books, journals, NASSCOM reports, newspapers and online databases. Dynamic demand in services offered by global customers India is a leading IT destination with 55 per cent share of global outsourcing business and occupied first position in outsourcing business in 2015-16. India ranked fifteenth in global innovation index as the most innovative country. India maintains its position due to a set of unique factors that proliferate India's success. Cost saving advantage is unparalleled. The global efficiency delivery model has assisted IT sector to deliver quality work with cost control through automation and robotic delivery.

Competitive landscape from emerging low cost countries Even though India maintains the top most position in IT outsourcing by occupying 55 per cent of world's IT outsourcing businesses, emerging geographies like China, Philippines, Malaysia, Vietnam, Brazil, Russia, Continental Europe and Latin America are posing threat to Indian outsourcing businesses.

### Activities or segments of Indian IT industry

Indian IT industry has a varied character with a wide

array of activities and related segments. In India, IT sector, based on their lines of production and products can be broadly classified into three segments such as services, products and hardware. Analysis of IT and ITeS industries on the basis of proprietorship, through numerous types of activities, has shown the path of dynamism in the sector. IT service providers of India are the major players in IT services segments with 75 per cent along with foreign Global In-house Centers (GICs) with 10-12 per cent and Foreign Service providers with 10-15 per cent of market share. BPM sector of India has a share of 45-50 per cent, whereas rest of the business is shared by foreign GICs with 21-23 per cent and that of Foreign Service providers with 15-20 per cent in 2016. Activities of Indian IT industry are depicted in the flow chart given below:

### Export earnings of Indian IT industry

Exports are the main source of earning for Indian IT industry and plays a very important role in exchange earnings of the country. Exports contribute more than 83 per cent of the revenue earnings for the Indian IT industry. Amalgamation of solutions through new disruptive technologies like social media, mobility, analytics and cloud (SMAC), artificial intelligence, embedded systems etc. are the major forces behind the export earnings of the industry and achieved CAGR of 12.81 per cent from 2011-12 to 2015-16. Segment wise exports revenue contribution of Indian IT sector for five years from 2011-12 to 2015-16 is shown in the table.

IT industry's exports reached nearly \$108 billion in 2015-16, with a rate growth over 9 per cent compared to 2014-15. This is over 83 per cent of the revenue from exports, excluding hardware revenue earnings. In 2015-16, exports of IT services excluding BPM, engineering, R&D and software products has achieved year on year growth of more than 10.3 per cent. This generated exports of \$61 billion mostly driven by communication, collaboration, business intelligence projects and integration of SMAC services with traditional offerings. ITES/BPM exports were \$24.4 billion with a growth rate of 8.4 per cent over 2014-15. Software products and R&D segment generated exports of \$22.4 billion

## The Domestic and International Business activities of Indian Information Technology (IT) Industry: A Review

**Table 1: Segment wise exports revenue trends from 2011-12 to 2015-16 (in \$Billion)**

Segments	2011-12	2012-13	2013-14	2014-15	2015-16	CAGR % (2011-16)
IT Service	39.9	42.9	49.2	55.3	61	12.73
ITeS/BPM	15.9	18.3	20.4	22.5	24.4	11.43
Software Products, Engineering Services, R&D	13	15.3	17.7	20	22.4	14.46
<b>Total IT-ITeS</b>	<b>68.8</b>	<b>76.5</b>	<b>87.3</b>	<b>97.8</b>	<b>107.8</b>	<b>12.81</b>

Source: Ministry of Electronics & Information Technology, Government of India.

with year on year growth 12 per cent in 2015-16. The domain specific focus on convergence, customizing, efficiencies and localization, M2M technology and newer technologies around SMAC, are playing a significant role in driving the growth of R&D and software products. With more than 3,100 emerging firms, India has become a hot spot for software products with SMAC and supportive environment making successful stories.

### Domestic market activities

The IT industry is also involved with all the above mentioned activities in Indian domestic market. Increasing trends in domestic market through digitization, digital economy, digital connectivity, make in India, smart

cities etc. initiatives will boost the growth of Indian IT and ITeS industry. The cloud based market has been increasing due to increasing number new startups in India. New startups prefer infrastructure as a service (IaaS) to set up and they try to minimize the IT infrastructure cost for operation. As the startup base increased from 4200 to 4400 in 2016, it will increase the business growth of traditional Indian IT industry. Increase in IT adoption among the domestic enterprises and various initiatives by the government to make India technology enabled through digital efficiency and delivery will assist IT industrial sector to sustain and improve the growth momentum. The following table presents the domestic revenue contribution by the various segments of Indian IT industry from 2011-12 to 2015-16.

**Table 2: Segment wise domestic revenue trends from 2011-12 to 2015-16 (in \$Billion\*)**

Segments	2011- 12	2012- 13	2013- 14	2014- 15	2015- 16	CAGR % (2011-16)
IT Service	12.3	12.2	12	13.4	13.3	12.3
ITeS/BPM	3.1	3.2	3.2	3.8	3.5	13.0
Software Products, Engineering Services	3.8	3.8	3.7	4.2	4.1	11.9
<b>Total IT-ITeS</b>	<b>19.2</b>	<b>19.2</b>	<b>18.9</b>	<b>21.4</b>	<b>20.9</b>	<b>12.4</b>

Source: Ministry of Electronics & Information Technology, Government of India.

IT services segment dominated the domestic revenue earnings of Indian IT industry. Annual revenue earnings of IT services increased from \$1229.29 million in 2011-12 to \$1328.81 million in 2015-16 with CAGR of 12.33

per cent. Business process management or ITeS revenue enlarged from \$309.87 million in 2011-12 to \$346.64 million in 2015-16 with CAGR of 12.97 per cent. Domestic revenue from software products, engineering



services was \$375.92 million in 2011-12, which increased to \$414.05 million with CAGR of 11.91 per cent growth rate from 2011 to 2016.

The domestic IT sector is expected to grow at 13.5 per cent per annum. There will be enormous opportunities for IT industry with the increasing demand for IT enablement in domestic market for banking, finance and insurance, micro finance, consumer products, education, telecom, internet penetration, healthcare, rural medicine etc.

### FDI inflows into IT industrial sector of India

The liberalization, privatization and globalization (LPG) initiated in 1991, helped to attract Foreign Direct Investment (FDI) from all the major countries of the world. Services sector is the major sector which attracts the FDI inflows into India. IT sector occupies nearly 50

per cent of FDI inflows in services sector and has become a core segment of services sector to attract the FDI inflows. The innovative competencies of Indian IT industry have attracted FDI inflows. FDI plays a significant role in mobilizing resources from one country to another country. FDI helps in improving the economic growth and development of the host countries through stabilization of balance of payments (BoP) situation and value of rupee. It brings new innovations which transform the economy. It also assists in creating employment opportunities and extension of core markets. IT sector of India has attracted cumulative FDI inflows of \$21.02 billion between the years 2000-01 to 2015-16 which was 7 per cent of total FDI inflows into India. IT sector alone attracted nearly 50 per cent of services sector's FDI inflows into India. In 2015-16, services sector has attracted total FDI inflows of \$6.88 billion whereas IT sector alone attracted \$5.90 billion of FDI inflows into India. Share of top five countries attracting FDI inflows in Indian IT industry is shown in the table below.

**Table 3: FDI inflows from the top five countries in Indian IT industry: (2000-2013)**

Ranks	Countries	FDI inflows (In \$ million)	% inflows
1	Mauritius	6060.33	49.45
2	USA	1516.31	12.37
3	Singapore	1423.83	11.62
4	Netherlands	769.94	6.28
5	UK	309.62	2.53
<b>Total</b>		<b>10080.03</b>	<b>82.25</b>

Source: [http://dipp.nic.in/English/Publications/SIA\\_NewsLetter/AnnualReport2013/Chapter6.2](http://dipp.nic.in/English/Publications/SIA_NewsLetter/AnnualReport2013/Chapter6.2)

In the above table, distribution of FDI equity inflows from the top five countries in Indian IT industry starting from January 2000 to December 2013 is shown. Mauritius is the leading country that invests in Indian IT industry. Indian IT industry received the highest FDI inflow from Mauritius i.e. \$6060.33 million with 49.45 per cent, followed by USA with \$1516.31 million, Singapore \$1423.83 million, Netherlands \$769.94 million and United Kingdom (UK) \$309.62. Total FDI attracted by the Indian IT industrial sector from January 2000 to December 2013 stood at \$10080.03 million with 82.25 per cent. Strong inflows of FDI into India

assisted the country to stabilize the balance of payments (BoP) situations and the value of rupee.

Prospects, sustainability and way forward of IT industry Rapid growth of economic activity with advancement in information technology adoption, increasing competition in the industry, enhanced focus by the Indian government and emergence of new business models all will lead Indian IT industry into a high phase of inclusive and speedy economic growth. Indian IT industry is recognized and known for its quality work across the world. Most of the Indian IT companies are ISO and

## The Domestic and International Business activities of Indian Information Technology (IT) Industry: A Review

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Capability Maturity Model (CMM) level 2, 3,4,5,7 certified. This is the core strength of Indian IT industry and will encourage more business in the near future. New business models like artificial intelligence (AI), big data, emergence of social, mobility, analytics and cloud (SMAC), new buyer segments in emerging markets and good governance will help Indian IT and ITeS/BPM maintain their position in the global market. Revival of US economy has improved IT expenditure by banks and other sectors which will result in great deals to benefit Indian IT industry and post resilient growth. According to PwC India technology leader Sandeep Ladda, “Ongoing trends in technology upgrades for infrastructure as well as applications such as data center modernization and virtualization, emerging areas such as artificial intelligence, automation, IoT (Internet of Things), collaboration and design technology will drive the market in future.” According to Infosys Ltd. CEO, Vishal Sikka, “the better idea was to innovate and move towards automation, artificial intelligence. That is the future which customers are looking for, that is what they are looking to India for.”

Indian government and its technology centric initiatives in different areas such as infrastructure development, revised National e-Governance Plan (NeGP), ‘Digital India’ campaign and development of ‘Smart Cities’, Make in India will boost the domestic prospects of the IT and ITeS/BPM industries. “Growth of multichannel and SMAC led BPM services will continue to weigh on the industry as a whole,” said ITeS/BPM services provider, Aegis’s global CEO, Sandip Sen. He further added that “traditional ITeS/BPM companies have driven tremendous efficiencies and cost reductions, in 2015 the trend would be on prioritizing and aligning them in the age of digitalization.” Growing demand for IT from emerging economies and an integrated service delivery models will assist IT industry to lead in alliances, partnerships, joint ventures, merger and acquisitions. India is considered as fourth largest base for emerging new companies with more than 4200 tech startups. According to NASSCOM, “If the landscape continues to evolve at this pace, then by the end of 2020, more than 11,500 startups are projected to get established in

India which will generate employment opportunities for 2,50,000 people.” NASSCOM further added, “The major growth drivers like big domestic market, access to capital/mentors, whitespace opportunities and increased M&A (merger and acquisition) activities are accelerating the startups growth.” The startup landscape is mainly dominated by the young entrepreneurs with more than 73 per cent founders who are under the age of 36 years. As per NASSCOM, “Start-ups today have access to multiple sources of funding from VC (venture capitalists), PE (private equity), angel investors, banking and financial institutions as well as incubators.” From 2010 to 2014, \$3 billion is estimated to have been invested in startups’ IT industry. IT industry is the largest private sector employer in India. There are approximately 11-12 per cent of domain specialists in Indian IT sector out of 3.1 million manpower.

### Recommendations for improving productivity and efficiency of the IT sector

- Indian IT industry should concentrate on increasing the segments in domestic and international markets.
- Indian IT industry is more of services oriented instead of product oriented. Therefore, Indian IT industry should focus on developing new software products.
- More Special Economic Zone (SEZ) and Software Technology Park of India (STPI) should be opened in rural and semi-urban areas to achieve balanced regional economic development and growth. This will generate employment for the poverty ridden rural educated youth.
- The domestic spending on information technology must increase to a large extent to improve socio economic development of the country which will boost productivity and efficiency of the economy.
- The government of India must take appropriate measures to tackle the US protectionism and anti-outsourcing policy through restrictions on visa. The changes in macroeconomic policy, protectionism



measures are a few important risks looming large on the sector. IT sector needs to adopt an innovative approach to tackle the situation by finding alternative markets, adopting different business models, improving the quality of services, diversifying service line and most important focusing on other emerging verticals to boost the performance.

- Increase access to customers by tapping new markets and setting up offices thereby enabling better customer interaction, higher investments, less dependence on intermediaries. This will increase the earning margins.
- Build vibrant domestic market by encouraging financial institutions, banking, real estate, health, education, automobiles, consumer durables and telecommunications sectors to adopt IT and ITeS to enhance their business.
- Creating a talent pool by providing specific training and certification courses for information technology (IT) and information technology enabled services (ITeS).
- The government of India must grant more tax holidays to small and medium categories of information technology industry to boost the growth and development and help to extend their business to tier II and tier III cities.

## Conclusion

Indian IT industry has contributed significantly towards the economic growth by contributing more than 9 percent of GDP in 2015-16. The activities of Indian IT industry in domestic and international markets have increased tremendously due to large competitive landscape. The emerging segments of IT industry are growing at a very fast rate and this will increase automation and transformation of manual work. The sector accounts for almost 25 percent of India's \$200 billion worth exports. Besides, the sector has facilitated other industries such as real estate, transportation, catering services, organised retail, automobile, aviation, real estate, banking and

financial sectors. It has thus modernized various sectors and generated many employment opportunities in the country.

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## An Empirical Study on Problems faced by Customers with E-Commerce

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### Abstract

*E-Commerce is not a new buzzword for Indian customers. Over the last decade, Indian markets have witnessed tremendous changes in the buying pattern and psychology of the customers. Customers love buying online and that is why businesses through E-Commerce have grown manifolds in the nation. However, E-Commerce is still not preferred by many not just because they are not computer savvy or IT ignorant. The reason is obvious and that is problems faced by the customers in online buying. E-Commerce is widely accepted tool for sustainable development. However, the problems faced by customers with E-commerce are certainly posing a threat for the E-Commerce companies. This paper on “An Empirical Study on Problems faced by Customers with E-Commerce” is an attempt to comprehend the problems faced by customers through E-Commerce and also suggest some measures to improve the sustainability.*

**Keywords:** E-commerce, customers, empirical study

### Introduction

#### What is E-Commerce..??

Electronic commerce or e-commerce is a term for any type of business, or commercial transaction, which involves the transfer of information across the Internet. It covers a range of different types of businesses, from consumer based retail sites, through auction or music sites, to business exchanges trading goods and services between corporations. It is currently one of the most important aspects of the Internet to emerge.

E-commerce allows consumers to electronically exchange goods and services with no barriers of time or distance. Electronic commerce has expanded rapidly over the past five years and is predicted to continue at this rate, or even accelerate. In the near future the boundaries between “conventional” and “electronic” commerce will become increasingly blurred as more and more

businesses move sections of their operations onto the Internet.

#### Recent Trends in E-Commerce in India

The e-commerce market in India is expected to nearly double to Rs. 2,11,005 crore by 2016 December, according to industry body Internet and Mobile Association of India (IAMAI) and IMRB. The market grew 30% between December 2011 and December 2015 and was valued at Rs. 1,25,732 crore by the end of December 2015, led by the online travel industry which accounted for 63% of the overall share. Online travel, which includes domestic air ticket and railways booking, is expected to grow around 40% to reach Rs. 1,22,815 crore by end of 2016. The hotel booking business grew 165% year over year to Rs. 5,200 crores in December 2015, while spend on online railway ticket booking grew at around 34%, to Rs. 21,708 crore in 2015. E-tailing continued to remain the most dominant category among



non-travel online spend. The report says that the 57% growth in e-tailing was driven by mobile phone and mobile accessories.

It is found that online shoppers mostly belong to top eight and small metros. Most of these shoppers fall in the age group 16 to 34 years, and are predominantly male (around 64%). Apparel and footwear sale almost doubled as compared to the previous year, to Rs. 7,142 crore in December 2015. This segment is expected to gain further momentum and reach Rs. 72,639 crore by end of 2016. Other online services including booking movie tickets and tickets for other events, online commuting or cab hire, online grocery and food delivery, accounted for Rs. 3,823 crore last year.

## Purpose and Scope

### Objectives of the Study:

Following are the main objectives of the paper:

- 1) To understand the concept of E-Commerce
- 2) To gain the knowledge on latest trends in E-Commerce in India.
- 3) To comprehend the problems faced by customers in online buying
- 4) To recommend solutions to solve these problems

### Scope of Study:

At its core, e-commerce refers to the purchase and sale of goods and/or services via electronic channels such as the Internet. However, E-Commerce also includes the entire online process of developing, marketing, selling, delivering, servicing and paying for products and services. The paper is restricted with its scope on problems faced by customers while shopping online. Thus paper is narrowed down at one of the key aspects of E-Commerce i.e. online buying. Moreover, the respondents are from the city of Ulhasnagar, a small but contemporary town in Thane District, Maharashtra. Ulhasnagar is a business centre for products like textiles, garments, electronics, confectionery, pharmaceuticals, cosmetics and much more with number of small to medium manufacturing enterprises. The population comprises of families mainly from lower middle income

to higher middle income with a very little proportion of higher income group.

## Methodology

The paper comprises of primary as well as secondary data. As the study is empirical in nature, data has been collected with the help of a structured questionnaire. 100 respondents randomly selected for the study have given their views and expressed their opinions on problems faced by them with online buying. Secondary sources include the data that has been extensively collected through review of books, magazines, periodicals, journals and websites. Details of the same are mentioned in the reference section.

## Literature Review

Office of Fair Trading Market Study, (2007) examined that people were ready to use internet, but not to shop online because of lack of trust and fears about their personal security. Confidence and trust are essential to the success of internet shopping.

Lee and Turban Efraim, (2001) reviewed nature of consumer trust in online shopping and proposed model for consumer trust in internet shopping that shows four main likely antecedents: trustworthiness of the Internet merchant, trustworthiness of the Internet shopping medium, infrastructural (contextual) factors and other factors had relationship with consumer trust in online shopping.

Gordan and Bhowan, (2005) found that security is the major factor that discouraged the target consumer from purchasing on the internet.

Jush and Ling, (2012) reported that consumers low perception and trust of online merchants responsible for making consumers unwilling to make purchases online. Michal Pilik, (2012) found that on-line users have some worries while purchasing on-line. People are afraid of complaining the products or their testing. Misuse of personal data and security also marked as important

barrier against Internet shopping acceptance.

Jush and Ling, (2012) found that shopping environments on the internet may be doubtful for the majority of online shoppers. Most recognized perceived risks are financial, product performance, social, psychological and time/convenience loss.

Forouhandeh Behnam et al., (2011) presented Lack of physical contact, Riskiness, Learning cost, Tediousness as barrier to online shopping adoption.

Pew internet and American life project (2008) found that more than half of internet users encounter frustrations and other frictions while using the internet to find out about or buy goods or services.

Celick, (2011) contributed that usage of internet as a shopping medium creates additional uncertainty and risk perceptions due to its intangible nature, which further heightens a customer's anxiety level.

Hardly, there are some studies which concentrate on the issue of problems faced by online buyers. Considering the gap, present study has been undertaken.

### **Findings: Problems faced by Customers with E-Commerce / Online Shopping:**

Online shopping has changed the way of shopping of the ordinary people. Online shopping is becoming part of every other person and it has made shopping the most convenient to people. It also saves time and money of people as one can shop from home or office or any place and can get the delivery of the products at the doorstep. But there are some major problems also which one can face in online shopping. Some of the common problems that have been narrowed down for the study are as follows:

#### **Complications**

While shoppers are attracted to complex-looking sites, they are increasingly frustrated by complicated site navigations, overwhelming options and irrelevant

details. Studies in the past estimated that approximately 50% of potential sales are lost because visitors can't find what they are looking for. Visitors shouldn't have to learn how company want them to navigate their site, it should come naturally. In the survey undertaken, it is estimated that near about 60% of the respondents feel that many a time's websites are quite complicated to navigate and seek the information.

#### **Not able to touch the products**

Humans are tactile beings and sensory experiences are a fundamental part of their shopping experience. Not being able to physically try out and touch a product is probably one of the biggest cons of online shopping. To make up for this disadvantage, online retailers have to go the extra mile and sell an experience, not just a product. 46% of respondents feel that sometimes online shopping is not worth as they are not able to touch and see the product.

#### **Missing Product Information**

Consumers hate dealing with returns just as much as retailers or brand manufacturers do. They refuse to buy a product online, if they cannot capture it mentally or cannot imagine how it will look like once unpacked. Not offering detailed product information that address the shopper's questions about a product is a crucial mistake. It reduces company's trustworthiness and triggers the visitors to leave the store in a hot second. According to the study undertaken, 82% of customers are likely to abandon an online purchase if they can't find a quick answer to their question.

#### **Lack of Choosing Support:**

It's a common perception that having a large assortment of products is a key to online domination. However, psychology experts suggest that choosing between a large number of products can be physically exhausting. Offering too many choices without any choosing support is a source of great consumer frustration that you have to be mindful of. Once your shoppers are stressed out, there's every chance that they won't choose anything at all. In the present study, 53% respondents feel that they get frustrated with many choices without any support of



human element.

### **Delays in Delivery of Products**

The main problem of online shopping is, one cannot receive the product immediately. One has to wait until the product arrives. Many a times company face problems in their own supply chain. They fail to keep their promises regarding delivery of products on scheduled dates. In the present study, 34% of the customers are not satisfied with the timely delivery of products ordered through online mode. Many of the customers have faced problems in receiving the delivery of their orders.

### **Inferior product**

Sometimes the description of the product might be different than the actual product. As a result one might end up with inferior quality product. Sometimes what is being offered on the website is quite different from what customers get in actual. Many websites fail to keep promises in terms of quality of products also. 23% of the respondents feel that they have been cheated at one or the other time as they did not get the products, they way they expected in terms of quality.

### **Becoming Shopaholic**

Since it's very easy to search & purchase different items very quickly from online, many people ends up being a online shopaholic. In this survey, 38% of the respondents felt that, of late they had developed a habit of shopping online and their purchases have increased over a period of time. Many a times, these customers end up buying some products which they never needed also. In simpler terms, they are becoming shopaholic day after day.

### **Online Scams and Security Concerns**

As online shopping is increasing, so are the types and frequency of online frauds. Many new types of scams have come up. Online theft, phishing, web spoofing, cyber-squatting, no delivery of goods after payment, credit card charge back, technically created frauds like worms, viruses, Trojan horse, etc. have really been a matter of concern with regard to security of online

transactions. Hacking of user's information and putting him into a soup is very common scam practised religiously online by many. In the study only two respondents have actually witnessed online fraud, one in form of hacking and other in form of non delivery of products.

### **Some items are better to buy from the real Store**

Some customers feel that there are certain products which are better to buy from the real store. This is applicable more in case of gems and jewellery, consumer durables, handicrafts for home decor and interiors, products which have medicinal use like condoms, sanitary pads, etc. In the current study, 34% of the respondents feel so. They feel that some products like gems and jewellery or consumer durables are very expensive and that's why they don't take risk in buying them online.

### **Returning of a Product**

Returning an item is difficult in case of online shopping. Although seller accepts sells return, they usually want the item within a short period of time and you also have to pay for the shipping charges. Some of the respondents who had ordered for sales return were never satisfied with the return policy and practise made by the online company. No. Of such respondents in the survey was 18%.

### **Warranty issues**

After sales service is one of the important elements of sales promotion activities performed by the businesses. Guarantee and Warranty issues are one amongst them. Very often businesses promise warrantees in case of unsatisfactory purchase transactions by the customers. This is true in case of online shopping also. It is observed that many websites fail to keep their promises on warranty matters also. This is a case with 16% of respondents in the survey undertaken.

### **Recommendations**

Online shopping needs to be a life time experience for the buyers. Creating confidence and developing trust is a must in case of online shopping. Companies need to

## An Empirical Study on Problems faced by Customers with E-Commerce

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take utmost care in case of accountability towards the buyers shopping experience. Certain recommendations are must for the company to ponder upon while making the online businesses more viable and sustainable. Some of the major recommendations are as follows:-

- Online Shopping companies should rethink upon their navigation and site structure. Attempt shall be made to remove all the clutter that can distract visitors and allow them to get a good feel for the company and the products offered for selling. An effortless and intuitive navigation not only reduces shopper frustration, it's also a great confidence builder.
- Creating rich, enjoyable adventures that resonate with today's impatient shoppers can be another suggestion lined up. Integrating approaches and technologies that make shopping more interactive and engaging, such as: gamification techniques, interactive product guides, social shopping, etc. are great ways to sustain shopper's attention.
- Companies should remember to always design their website with speed in mind. Not all customers have access to the same high-speed Internet. Kissmetrics studies reports that 25% of visitors will abandon the site if it takes more than 4 seconds to load.
- To avoid ticking online shoppers off, online stores shall help them assess the product properly and give them all the information they need to feel comfortable purchasing product. Using the same structure and spec labels for similar products to help customers compare and decide is necessary.
- It's crucial to always consider the mind and purchase path of customer. Many consumers, especially millennials, shop online not knowing what they want exactly, but they know they want it fast. It's chance to step up as passionate and knowledgeable expert who helps them discover products they'll love and offers them ways to easily and intuitively pick the product that's right for them.
- Another yet important suggestion is to entice the shoppers with compelling product descriptions that highlight the benefits of each feature and appeal to their imagination. The best product descriptions go beyond telling shoppers what the product is and instead explain why it's great for them. Describe how the product feels, how it helps them solve a problem, save time, or how it makes them happier. Complement the text with photos, graphics and videos.
- The most valuable suggestion is to perform the promises as made. This is very necessary because performance according to promises can either make or break the customers. Company who fails to keep the promises face serious consequences.

### Conclusion

Above discussion clearly indicate that online shopping has become a regular part of our lives, mainly because it is so convenient. Every day, millions of people go online to do research about products and make purchases from thousands of different online merchants. The web allows customers to compare shops for the best deals and locate products that might otherwise be difficult to find. But while online shopping provides with a high level of convenience, it also provides opportunities to cybercriminals to steal shopper's money and information through various online scams. That is why it is so important for customers to know how to stay safe while shopping online. It is equally important for the online companies to ponder upon certain issues that create problems for shoppers while making online purchases.

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## Green Marketing in India: Challenges and Opportunities

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### Abstract

*With the emergence of a large number of environmental problems all over the world, there arises a need to preserve and protect the earth's natural environment and resources. Now a day's marketers and consumers are focusing on green products and services. Companies are adopting green marketing and are producing green products that have less harmful effects on environment. Consumers are aware of the environmental issues like, global warming and the impact of the environmental pollution. Consumers in their life have increasing awareness about the environmental problems. There has been a change in consumer attitudes towards a green lifestyle. In the emerging world the concept of pollution free activity is given more importance. Today the young consumers are more concerned about keeping the environment safe. They want to reduce the pollution. Green marketing is the marketing of products that are presumed to be environmentally safe. It is a phenomenon which has developed particular importance in the modern market and has emerged as an important concept in India. It incorporates a broad range of activities including product modification, changes in the production process, sustainable packaging as well as modifying advertising campaigns. The development of green marketing has opened the door of opportunity for companies to co-brand their products into separate line. It may take a long time to accomplish this task but it will certainly be very profitable. The paper examines the present trends of green marketing in India and explores the challenges and opportunities have with green marketing.*

**Keywords:** *Green Marketing, Environment, Consumer, Green Products*

### Introduction

First of all, environment and environmental problems have one of the reasons why the green marketing emerged. Green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. Yet defining green marketing is not a simple task where several meanings intersect and contradict each other; an example of this will be the

existence of varying social, environmental and retail definitions attached to this term. Yes, green marketing is a golden goose. As per Mr. J. Polonsky, green marketing can be defined as, "All activities designed to generate and facilitate any exchange intended to satisfy human needs or wants such that satisfying of their needs and wants occur with minimal detrimental input on the national environment." Green marketing is also called environmental marketing/ecological marketing. As resources are limited and human wants are unlimited, it



is important for the marketers to utilize the resources efficiently without waste as well as to achieve the organization’s objective. So green marketing is inevitable. As a result of this, green marketing has emerged which speaks for the growing market for sustainable and socially responsible products and services.

Prothero, A. (1998) introduces several papers discussed in the July 1998 issue of ‘Journal of Marketing Management’ focusing on green marketing. This includes; a citation of the need to review existing literature on green marketing, an empirical study of United States and Australian marketing managers.

Oyewole, P. (2001). In his paper presents a conceptual link among green marketing, environmental justice, and industrial ecology. It argues for greater awareness of environmental justice in the practice for green marketing.

**Green Marketing**

According to the American Marketing Association, green marketing is the marketing of products that are presumed to be environmentally safe. Thus green marketing incorporates a broad range of activities, including product

modification, changes to the production process, packaging changes, as well as modifying advertising. “Green Marketing” refers to holistic marketing concept wherein the production, marketing consumption a disposal of products and services happen in a manner that is less detrimental to the environment. Both marketers and consumers are becoming increasingly sensitive to the need for switch in to green products and services. While the shift to “green” may appear to be expensive in the short term, it will definitely prove to be indispensable and advantageous, cost-wise too, in the long run.

**Green Marketing Process**

Green marketing process comprises with external and internal Ps. After integrating external and internal Ps, green success will automatically come through four Ss. Here external 7 Ps consists of Paying customers, Providers, Politicians, Pressure groups, Problems, Predictions and Partners; internal 7Ps consists of Products, Promotion, Price, Place, Providing information, Processes and Policies. After integrating external and internal 7Ps, we can find out the green successes through 4 Ss such as Satisfaction – of stakeholder needs, Safety – of products and processes, Social acceptability –of the company and Sustainability – of its activities.

**GREEN MARKETING PROCESS**



Source: (Peattie (1992), p. 104)

### Golden Rules of Green Marketing

- 1. Know your Customer:** Make sure that the consumer is aware of and concerned about the issues that your product attempts to address. For example Whirlpool learned the hard way that consumers wouldn't pay a premium for a CFC-free refrigerator.
- 2. Educating your customers:** It is not just a matter of letting people know, whatever you're doing is to protect the environment, but also a matter of letting them know why it matters.
- 3. Being Genuine & Transparent:** It means that you are actually doing what you claim to be doing in your green marketing campaign and rest of your business policies are consistent with whatever you are doing that's environment friendly. These conditions have to be met for your business to establish the kind of environment that will allow a green marketing campaign to succeed.
- 4. Reassure the Buyer:** Consumers must be made to believe that the product performs the job, in this firm should not forget product quality in the name of the environment.
- 5. Consider Your Pricing:** If you are charging a premium for your product and many environmentally preferable products cost more due to economies of scale and use of higher-quality ingredients.
- 6. Giving Customers an Opportunity to Participate:** It means personalizing the benefits of your environmentally friendly actions, normally through letting the customer take part in positive environmental action.
- 7. Leading Brands should Recognize that Consumer Expectations have Changed:** It is not enough for a company to green its products; consumers expect the products that they purchase pocket friendly and also to help reduce the environmental impact in their own lives too.

### Examples of Green Marketing in India

- 1. Digital Tickets by Indian Railways:-** Recently IRCTC has allowed its customers to carry PNR no. of their E-Tickets on their laptop and mobiles. Customers do not need to carry prints.
- 2. No Polythene carry bags for free:-** Forest & Environmental Ministry of India has ordered to retail outlets like BigBazar, Central, D-Mart that they could provide pcarry bags to customers only if customers are ready for pay for it.
- 3. Green IT Project: State Bank of India:-** SBI is entered into green service known as "Green Channel Counter". SBI is providing many services like; paper less banking, no deposit slip, no withdrawal form, no checks, no money transactions form all these transaction are done through SBI shopping & ATM cards.
- 4. Lead Free Paints from Kansai Nerolac:-** Kansai Nerolac has worked on removing hazardous heavy metals from their paints. The hazardous heavy metals like lead, mercury, chromium, arsenic and antimony can have adverse effects on humans. Lead in paints especially poses danger to human health.
- 5. Wipro's Green Machines:-** Wipro Infotech was India's first company to launch environment friendly computer peripherals. For the Indian market, Wipro has launched a new range of desktops and laptops called Wipro Greenware.
- 6. Samsung:-** Samsung, was the first to launch eco-friendly mobile handsets (made of renewable materials) – W510 and F268- in India.
- 7. ONGC:-** Oil and Natural Gas Corporation Ltd. (ONGC), India's largest oil company, has introduced energy-efficient Mokshada Green Crematorium, which saves 60% to 70% of wood and a fourth of the burning time per cremation.



## Challenges in Green Marketing

Now a day's we can see that large number of firms are practicing green marketing, and they are trying their best to save our environment. Use of Green Marketing in the firms is not an easy job; there are a number of problems which we have to face while implementing Green marketing. The major challenges faced while implementing Green marketing are:

**1. Consumer Attitude Vs Behavior:** Worldwide consumers have become environment conscious. Some scholars believe that consumers are ready to pay premium for green products because they often prefer attributes over traditional product attributes i.e. price and quality.

**2. New Concept -** Indian literate and urban consumer is getting more aware about the merits of Green products. But it is still a new concept. The consumer needs to be educated and made aware of the environmental threats. By India's Ayurveda heritage, Indian consumers do appreciate the importance of using natural and herbal beauty products. Indian consumer is exposed to healthy living lifestyles such as yoga and natural food consumption. In those aspects the consumer is already aware and will be inclined to accept the green products.

**3. Patience And Perseverance -** Green Marketing will require a lot of patience. Since it is a new concept and idea, it will have its own acceptance period. There are no immediate results but consumer will understand and use the green products. The marketers need to look at the long-term benefits from this new Green Environment.

**4. Need For Standardization -** It is found that only 5% of the marketing messages from Green campaigns are entirely true and there is a lack of standardization to authenticate these claims. There is no standardization to authenticate these claims. There is no standardization currently in place to certify a product as organic. A standard quality control board needs to be in place for labelling and licensing.

**5. Cost Factor-** Green marketing involves marketing

of green products/services, green technology, green power/energy for which a lot of money has to be spent on R&D programmes for their development. This may lead to increased costs.

**6. Convincing customers-** Because of new concept customers may not believe in the strategy of Green marketing. The firm therefore should ensure that they undertake all possible measures to convince the customer about their green products. The firm may use Eco-labelling schemes.

**7. Sustainability-** Initially there is no profit since renewable and recyclable products and green technologies are more expensive. Green marketing will be successful only in long run. Hence the firms need to plan for long term rather than short term. At the same time they should not use unethical practices to make profits in short term.

**8. Non Cooperation-** The firms practicing Green marketing have to strive hard in convincing the stakeholders and many times it may fail to convince them about the long term benefits of Green marketing as compared to short term expenses.

**9. Avoiding Green Myopia-** Green marketing must satisfy two objectives: improved environmental quality and customer satisfaction. Misjudging either or overemphasizing the former at the expense of the latter can be termed green marketing myopia. The first rule of green marketing is focusing on customer benefits i.e. the primary reason why consumers buy certain products in the first place. Do this right, and motivate consumers to switch brands.

In order to overcome the challenges, green marketing firms must Clearly state environmental benefits, Explain environmental characteristics and how benefits are achieved, Ensure comparative differences are justified, Ensure negative factors are taken into consideration, Only use meaningful terms and pictures.

To meet the need of firms greenmarketing concept the

firm should know your customers, empowering the Consumer, being Genuine & transparent, consider your pricing, giving your consumers an opportunity to participate.

### Opportunities in Green Marketing

In India, most of the consumers prefer environment friendly products, and many consumers may be considered health conscious. Hence this may help the firms to produce the green products. Therefore, green marketers have diversified to fairly sizeable segment of consumers to cater to. The opportunities in Green Marketing are as follows –

- 1. Competitive advantage:** As demand changes, many firms see these changes as an opportunity to exploit and have a competitive advantage over firms marketing. Some examples of firms who have strived to become more environmentally responsible in an attempt to better satisfy their consumer needs are Xerox introduced a “high quality” recycled photocopies paper in an attempt to satisfy the demands of firms less environmentally harmful products. McDonald’s replaced its clam shell packaging with waxed paper because of increased consumer concern relating to polystyrene production and Ozone depletion.
- 2. Cost Reduction:** Reduction of harmful waste may lead to substantial cost savings. Sometimes, many firms develop a symbiotic relationship whereby the waste generated by one company is used by another as a cost-effective raw material.
- 3. Competitive Pressure:** Another major force in the environmental marketing area has been firms’ desire to maintain their competitive position. In many cases firms observe competitors promoting their environmental behaviors. In many cases this competitive pressure has caused an entire industry to modify and thus reduce its detrimental environmental behavior.
- 4. Social Responsibility:** Many companies have started realizing that they must behave in an environment

friendly fashion. They believe both in achieving environmental objectives as well as profit related objectives respecting the principle of Extended Producer Responsibility (EPR).

- 5. Governmental Pressure:** Various regulations are framed by the government to protect consumers and the society at large such as Government legislation and receiving subsidies from Government. The Indian government too has developed a framework of legislations to reduce the production of harmful goods and by-products. These reduce the industry’s production and consumer’s consumption of harmful goods, including those detrimental to the environment such as ban of plastic bags, prohibition of smoking in public areas, etc

### Future of Green Marketing

In the last two decades the companies are feeling stressed about the environmental concerns to ensure the sustainable growth of the society at large. The marketing companies have the challenges to make the consumers aware of the need for green products as they are more beneficial compared to non-green ones and the benefits the consumer can gain in the future. The Government is also supporting the green marketers. There are many lessons to be learned to avoid green market-ing myopia, the short version of all this is that effective green marketing requires applying good marketing principles to make green products desirable for consumers. Evidence indicates that successful green products have avoided green marketing myopia by following principles:

- 1. Consumer Value Positioning:** Design environmental products to perform better than other one. Promote and deliver the consumer desired value of environmental products and target relevant consumer market segments. Broaden mainstream appeal by bundling consumer desired value into environmental products.
- 2. Calibration of Consumer Knowledge:** Educate consumers with marketing messages that connect environmental attributes with desired consumer values.



Frame environmental product attributes as “solutions” for consumer needs.

Looking into the advantages of green marketing, the consumers also do not mind paying more for a cleaner and greener environment. Green marketing assumes even more importance and relevance in developing countries in the world like India which should be path breakers and trendsetters for all others to follow.

### Conclusion

Now this is the right time to select Green Marketing globally. With the ill effects of global warming, green marketing has become almost compulsory for all the organizations, consumers, industrial buyers and suppliers. It will come with drastic change in the world of business if all nations will make strict roles because green marketing is essential to save world from pollution. Government should make the strict rules to save the world from pollution and its negative effects. Recycling of paper, metals, plastics, etc., in a safe and environmentally harmless manner should become much more systematized and universal. In green marketing, consumers are willing to pay more to maintain a cleaner and greener environment. Final consumers and industrial buyers also have the ability to pressure organizations to integrate the environment into their corporate culture and thus ensure all organizations minimize the detrimental environmental impact of their activities.

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## Spectral, Biological and Catalytic studies of Ru(III) NSO chelating thiosemicarbazone complexes

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### Abstract

*The synthesis and characterization of hexa-coordinated Ruthenium(III) complexes of the type  $[RuLCl_2H_2O].2H_2O$  (Where L = monobasic tridentate ligand derived by condensation of 5 – substituted salicylaldehyde with thiosemicarbazide) are reported. Elemental, spectroscopic (I.R,  $^1H$  and  $^{13}C$ -NMR, Electronic), molar conductivity, magnetic susceptibility measurements and thermal analysis studies of the complexes are discussed. The thiosemicarbazone ligands appear to behave as tridentate coordinating through the deprotonated phenolic oxygen, azomethine nitrogen and thione sulphur atom hence an octahedral geometry has been proposed for all the complexes. The ligands and the metal complexes have been screened for their antibacterial and antifungal activity and the results indicate that they exhibit significant activity. The complexes exhibit catalytic activity in the oxidation of benzyl alcohol to benzaldehyde.*

**Keywords:** salicylaldehyde, thiosemicarbazone complexes, spectroscopic analysis, catalytic studies.

### Introduction

Thiosemicarbazones can act as uni, bi or multidentate chelating agents for metal ions producing highly coloured complexes<sup>1</sup>. They have emerged as important Nitrogen - Sulphur containing ligands because of potentially beneficial biological i.e. antibacterial and antifungal<sup>2</sup>, antimalarial, antiviral, antitumor activities<sup>3</sup> as well as physiochemical effects. Ruthenium thiosemicarbazones have been found to be very efficient catalyst in the oxidation of alcohols and alkenes<sup>4</sup>.

The synthesis and structural investigations of thiosemicarbazones and their Ruthenium complexes are

of considerable centre of attention because of their potentially beneficial pharmacological properties and a wide variation in the modes of bonding and stereochemistry<sup>5-7</sup>. It is well known that several metal ions enhance the biological and catalytic activities of thiosemicarbazones. The quest for effective catalytic systems that use clean, inexpensive primary oxidants, such as N-methyl morphine-N-oxide, molecular oxygen or hydrogen peroxide, i.e. a green method for converting alcohols to carbonyl compounds on an industrial scale remains an important challenge<sup>8</sup>. This paper deals with the synthesis, characterization, biological and catalytic activities of Ru(III) NSO chelating thiosemicarbazones complexes.

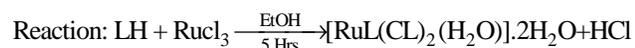


## Experimental Methods

All the chemicals used were of AR Grade. 5-chloro salicylaldehyde was obtained from Alfa Aesar, Lancaster and 5-nitro salicylaldehyde obtained from Aldrich, Metal salts from S.D Fine Chem Limited, Mumbai and were used without further purification. Distilled solvents were used throughout the experiments.

**Synthesis of ligands:** The ligands 5-chloro salicylaldehyde thiosemicarbazones (L<sup>1</sup>H) and 5-nitro salicylaldehyde thiosemicarbazone (L<sup>2</sup>H) were prepared by condensing equimolar quantities of 0.01 mol of each 5-chloro salicylaldehyde (1.567g) and 5-nitrosalicylaldehyde (1.671g) in 25mL ethanol with aqueous ethanolic solution of thiosemicarbazide (0.911 g). The reaction mixture was refluxed for five hours on water bath and the resulting mixture was poured in crushed ice whereby precipitate was obtained. It was filtered off, washed several times with water, recrystallised from ethanol and finally dried. (Yield:70%)

**Preparation of Ru complexes:** The hot ethanolic solution of ligand (0.001mol) was mixed with ethanolic solution of hydrated Ruthenium chloride (0.261, 0.001mol) and the resulting mixture was heated under reflux for 5 hours. The precipitates formed was allowed to stand for 24 hours, then filtered off, washed with hot water, ethanol and dried in oven at 120°C. The yields were 60-70%.



**Instrumentation:** Elemental analysis was carried out in the Micro-analytical laboratory, IIT Powai, Bombay. The metal content for the metal complexes were determined on ICP-8840 supplied by plasma labton, Australia. The complexes were examined for solubility using polar and non-polar solvents. The magnetic susceptibility measurements of the complexes were made on Guoy balance using Hg[Co(SCN)<sub>4</sub>] as the standard. Molar conductivity of ligands and metal complexes were recorded using 1 x 10<sup>-3</sup> M solution at DMF on Equiptronics Conductivity meter EQ 660A. The electronic absorption spectra of ligands and complexes were

recorded in the UV-Visible region using DMF as solvent on UV-2401PC UV-Vis spectrophotometer supplied by Shimadzu. IR spectra were recorded using KBr pellets on FTIR-Spectrum One FT-IR spectrometer supplied by Perkin Elmer. <sup>1</sup>H and <sup>13</sup>C NMR spectra were recorded in DMSO solution using Bruker 300MHz spectrometer. TGA and DTA measurements were obtained from Pyris Diamond TG/DT Analyser by Perkin Elmer.

The compounds were tested for their antimicrobial activity for *Staphylococcus aureus*, *Escherichia coli*, *Aspergillus fumigants* and *Candida albicans* by the well diffusion method<sup>9</sup>.

## Results and Discussion

All the metal complexes are air stable and decomposes at higher temperature (>300°C). The complexes are insoluble in water, ethanol, methanol, chloroform, carbon tetrachloride etc. but soluble in DMF and DMSO. The analytical data along with some physical properties of the ligand and metal complexes are reported in Table 1. The molar conductance are in the range of 24 – 55 S cm<sup>2</sup> mole<sup>-1</sup> indicating their non-electrolytic nature<sup>10</sup>. The Ru(III) complexes exhibit magnetic moments of 1.73 and 1.90 B.M. for [Ru(L<sup>1</sup>)Cl<sub>2</sub>H<sub>2</sub>O].2H<sub>2</sub>O and [Ru(L<sup>2</sup>)Cl<sub>2</sub>H<sub>2</sub>O].2H<sub>2</sub>O respectively attributed to octahedral structure<sup>11</sup>.

**IR spectra:** The IR spectra of the free ligands were compared with those of the complexes formed in order to confirm the coordination of the thiosemicarbazones. The spectra of the ligands exhibit three bands in the 3400-3100cm<sup>-1</sup> region, corresponding to  $\tilde{\nu}_{(\text{O-H})}$  and two  $\tilde{\nu}_{(\text{N-H})}$  bands, the highest energy band being assigned to  $\tilde{\nu}_{(\text{O-H})}$ . The two absorption bands for  $\tilde{\nu}_{\text{a}(\text{N-H})}$  and  $\tilde{\nu}_{\text{s}(\text{N-H})}$  at 3460-3405 cm<sup>-1</sup> and 3180-3150 cm<sup>-1</sup> respectively in the free ligands remain at almost the same positions in the metal complexes suggesting that the terminal amino group is not involved in chelation<sup>12</sup>.

The broad and strong absorption band in the region 3520 – 3170 cm<sup>-1</sup> confirms the presence of  $\tilde{\nu}_{(\text{O-H})}$  absorption for lattice water<sup>13</sup>. The phenolic oxygen, after

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**Table 1. Physical and Analytical data of Ligand and Metal Complexes**

Ligand/ Complex (colour)	Mol. Wt. (Colour)	$\hat{\nu}_M$ (S cm <sup>2</sup> mole <sup>-1</sup> )	Elemental analysis (%)found (Calculated)					
			C	H	N	S	Cl	Metal
L <sup>1</sup> H (pale yellow)	229.50	---	41.45 (41.83)	2.92 (3.48)	18.41 (18.30)	13.65 (13.94)	15.26 (15.47)	---
[Ru(L <sup>1</sup> )Cl <sub>2</sub> H <sub>2</sub> O].2H <sub>2</sub> O (dark green)	453.57	55	21.02 (21.16)	2.49 (2.87)	9.02 (9.26)	7.22 (7.05)	23.25 (23.48)	22.05 (22.29)
L <sup>2</sup> H (bright yellow)	240.00	---	39.80 (40.00)	3.34 (3.33)	23.65 (23.33)	12.93 (13.33)	---	---
[Ru(L <sup>2</sup> )Cl <sub>2</sub> H <sub>2</sub> O].2H <sub>2</sub> O (brown)	464.07	27	20.38 (20.69)	2.72 (2.80)	12.56 (12.06)	6.53 (6.89)	15.55 (15.08)	21.92 (21.78)

the loss of OH proton gets co-ordinated to the metal. This is supported by the shift in the stretching frequency of the  $\tilde{\nu}_{(C-O)}$  to lower wave numbers by 20–35cm<sup>-1</sup> from its position in the free ligands<sup>14</sup>.

The coordination of azomethine nitrogen is confirmed by the presence of bands in the 1600-1650cm<sup>-1</sup> region in the ligand which underwent a shift to a lower frequency after complexation<sup>15</sup>. The  $\tilde{\nu}_{(C=S)}$  band, is still present in the complexes but shifted to a lower wave number indicating that thiocarbonyl Sulphur is also involved in coordination. All complexes show extra bands in the 560-520 cm<sup>-1</sup>, 485 -470 cm<sup>-1</sup> and 430-410 cm<sup>-1</sup> region assigned to  $\tilde{\nu}_{(M-N)}$ ,  $\tilde{\nu}_{(M-O)}$  and  $\tilde{\nu}_{(M-S)}$  stretching vibrations. This data is in good agreement with literature value<sup>16</sup>. Selected IR bands for the ligands and their metal complexes along with their tentative assignment are given in Table 2.

**<sup>1</sup>H and <sup>13</sup>C NMR spectra:** The <sup>1</sup>H-n.m.r spectra of the free thiosemicarbazone ligands and their metal complexes were recorded in deuteriated DMSO. The -NH<sub>2</sub> group gives a sharp singlet at  $\delta$ 2.48 - 2.60ppm in the free ligands and remains almost unchanged in the complexes<sup>17</sup>. This shows that the -NH<sub>2</sub> group is not

taking part in the complexation. Significant azomethine proton signal due to CH=N was observed at 8.30 and 8.87 ppm in ligands, and in complexes it showed a downfield shift indicating the involvement of nitrogen in coordination. The signal due to N-H protons appeared at 10.2 – 11.8 ppm in the spectra of metal complexes i.e., a downfield shift of the -NH group signal occurred. This can be correlated to a decrease in electron density and a deshielding of the proton because of the participation of the adjacent thiocarbonyl and azomethine group upon coordination<sup>18</sup>. The OH protons that appeared as a singlet in ligands at 11.40 and 11.54 ppm disappeared in Ru(III) complexes indicating the loss of OH proton due to complexation. The multiplets in the region 6.5 - 8.0 ppm were assigned to aromatic ring protons.

The <sup>13</sup>C n. m. r. spectra of the ligand exhibit a strong band at  $\delta$  177 – 179 ppm and are assigned to C=S group. This band undergoes upfield shift and occurs at  $\delta$  170 – 172 ppm indicating the involvement of thione sulphur in coordination. The signal due to azomethine carbon occurred at  $\delta$  155 – 163 ppm and on complexation they showed upfield shift due to resonance supporting the involvement of nitrogen in coordination<sup>19</sup>. Table 2



lists the signals for free ligand and their metal complexes, recorded in deuteriated DMSO.

**Table 2. IR Spectral bands (cm<sup>-1</sup>) and NMR Spectral data (δ ppm) of ligand and their metal complexes**

Ligand/ Complex	IR Spectral data (cm <sup>-1</sup> )							<sup>1</sup> H NMR Chemical shift (δ ppm)			<sup>13</sup> C NMR (δ ppm)	
	ν <sub>(O-H)</sub>	ν <sub>(C=N)</sub>	ν <sub>(C-O)</sub>	ν <sub>(C=S)</sub>	ν <sub>(M-N)</sub>	ν <sub>(M-O)</sub>	ν <sub>(M-S)</sub>	OH	NH	HC=N	C=N	C=S
<sup>1</sup> L <sup>1</sup> H	3405	1656	1287	829	---	---	---	11.40	9.68	8.30	155.2	177.9
[Ru(L <sup>1</sup> )Cl <sub>2</sub> H <sub>2</sub> O] 2H <sub>2</sub> O	3455	1614	1265	821	557	471	415	---	10.21	8.87	154.3	170.8
<sup>2</sup> L <sup>2</sup> H	3421	1662	1283	848	---	---	---	11.54	10.31	8.86	163.0	178.6
[Ru(L <sup>2</sup> )Cl <sub>2</sub> H <sub>2</sub> O] 2H <sub>2</sub> O	3445	1599	1248	835	524	472	419	---	11.58	9.13	162.2	171.8

**Electronic Spectra:** Low spin Ru(III) is a d<sup>5</sup> system with ground state <sup>2</sup>T<sub>2g</sub> and the first excited state doublet levels in order of increasing energy are <sup>2</sup>A<sub>2g</sub> and <sup>2</sup>T<sub>1g</sub> which are known to arise from t<sub>2g</sub><sup>4</sup> e<sub>g</sub><sup>1</sup> configuration<sup>20</sup>. The Ru(III) complexes display bands at 13500-14000, 17240-18300 and 23280-23800 cm<sup>-1</sup> which is assigned to <sup>2</sup>T<sub>2g</sub> → <sup>4</sup>T<sub>1g</sub>, <sup>2</sup>T<sub>2g</sub> → <sup>4</sup>T<sub>2g</sub> and <sup>2</sup>T<sub>2g</sub> → <sup>2</sup>A<sub>2g</sub>, <sup>2</sup>T<sub>1g</sub> in increasing order of energy.

**Thermal Analysis:** TGA and DTA analysis of the complexes were conducted in air within the range 30–1000°C at 10°C/min. The thermogram Ru (III) complexes showed an initial endothermic weight loss in the range 60-90°C with a mass loss of about 8.0% due to removal of two hydrated water molecules<sup>21</sup>(dehydration process). These complexes then show a second weight loss in the range 175-200°C of about 4.0% corresponds to the elimination of coordinated water molecule. With further increase in the temperature all the anhydrous complexes

show thermal stability upto 250°C that decompose exothermally due to the loss of organic moiety and chlorine molecules resulting in formation of corresponding metal oxides.

**Antimicrobial activity:** It has been observed that thiosemicarbazones and their complexes exhibit a great variety of biological activity<sup>22</sup>. The thiosemicarbazones and their metal complexes were assayed in vitro for their ability to inhibit the growth of representative Gram positive (*Staphylococcus aureus*) and Gram negative (*Escherichia coli*) bacteria and the fungus *Candida albicans* and *Aspergillus fumigatus*. The results (given in table 4) exhibit that the thiosemicarbazone ligands are more active against the fungus *Candida albicans* and *Aspergillus fumigatus* than their complexes and though the ligands are inactive against *E.coli* and *S.aureus*, all the complexes were found to be active against these bacteria.

**Table 4. The in-vitro antimicrobial activities of thiosemicarbazones and their complexes**

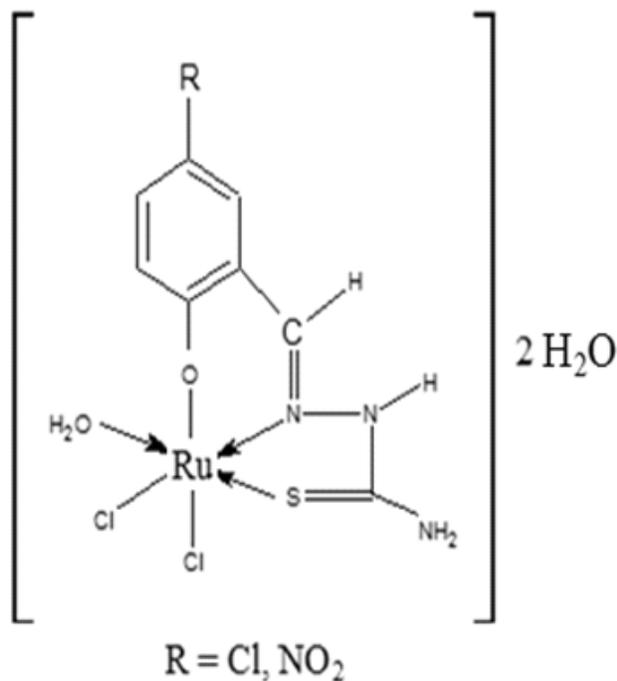
No	Compound	Diameter of zone (mm)			
		<i>C.albicans</i>	<i>A.fumigatus</i>	<i>S.aureus</i>	<i>E.coli</i>
1	L <sup>1</sup> H	16	14	---	---
2	L <sup>2</sup> H	14	10	---	---
3	[Ru(L <sup>1</sup> )Cl <sub>2</sub> H <sub>2</sub> O].2H <sub>2</sub> O	10	09	12	09
4	[Ru(L <sup>2</sup> )Cl <sub>2</sub> H <sub>2</sub> O].2H <sub>2</sub> O	12	06	10	07
	Echinocandin	20	14	---	---

## Spectral, Biological and Catalytic studies of Ru(III) NSO chelating thiosemicarbazone complexes

### Catalytic oxidation

The oxidation of benzyl alcohol was carried out with different ruthenium complexes as catalysts in presence of N-methylmorpholine-N-oxide (NMO) as co-oxidant in dichloromethane<sup>23</sup>. Benzaldehyde was formed from benzyl alcohol after 3h of stirring at room temperature. The aldehydes formed were quantified as their 2,4-dinitrophenyl hydrazone derivatives. In no case was there any detectable oxidation of benzyl alcohol in the presence of NMO alone and without the Ru(III) complex. The complexes were found to exhibit 55% and 42% yields for  $[\text{Ru}(\text{L}^1)\text{Cl}_2\text{H}_2\text{O}]\cdot 2\text{H}_2\text{O}$  and  $[\text{Ru}(\text{L}^2)\text{Cl}_2\text{H}_2\text{O}]\cdot 2\text{H}_2\text{O}$  respectively.

### Conclusion



Proposed structure of complex

Hexa-coordinated Ru(III) complexes of the type  $[\text{LRuCl}_2\text{H}_2\text{O}]\cdot 2\text{H}_2\text{O}$  were synthesized. The ligands and their metal complexes were characterized by elemental analysis, conductance measurements, spectral (IR, <sup>1</sup>H and <sup>13</sup>C NMR, UV-VIS), and thermal studies. On the

basis of above data these 5 – substituted thiosemicarbazones appear to behave as tridentate N,S,O chelating ligands coordinating to the metal ion through the deprotonated phenolic oxygen, azomethine nitrogen and thione sulphur atom and exhibit octahedral structure. Moreover the complexes exhibit catalytic activity for the oxidation of benzyl alcohol in presence of N-methylmorpholine-N-oxide as co-oxidant.

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## Perceptions Of Software Engineers about select Hr Practices, working in Small Scale IT firms in Maharashtra

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### Abstract

*IT is relatively young - one of the fastest growing sector in India and grown tremendously and performing very well. There is a high demand of engineers and skilled professionals. These IT firms can be classified into several headings like those who employ twenty five and below, those who employ twenty five and above, those who employee more than hundred and have offices in other countries and Foreign IT firms. Small scale IT firms who employ engineers 25 and below are not popular by their brand names but they are providing jobs to the software engineers mostly Indians. Those who are working in these firms are mostly freshers or with little experience. IT engineers joined these firms to get experience and aimed to join in a reputed IT firms in future.*

**Keywords:** IT, HR practices, Training, Small scale, Fresher

### Introduction

Software professionals who are working in small scale sector are less experienced or mostly freshers they are working for low salary to gain experience Providing training and retaining their employees these firms are not undertaking any efforts. Small scale software firms employ mostly engineers who do not have long experience, They are not in a position to adopt latest technology and fulfill demands of their clients. More over they are not good paymasters. There are many small scale IT firms in Mumbai, Navi Mumbai and Pune whose total employee strength is below twenty five but they are also playing a very important role in developing software and contributing to the National income of

India. In this the researcher has tried to get views of such software engineers on select Human resource practices.

### Literature Review

1. Reddy Vijay (2015), Director, Invenio Business solutions in his article "Times of India" observed that Potential candidates from established firms apply with an anticipation of landing a larger role within the organization and having a bigger scope of work. According to him India will be a hot bed for talent in the years to come.
2. Lock (2003) carried out research on retaining IT professionals in the British Columbia province of



Canada suggests that various workplace factors such as challenging work; rewards for innovation are the key components in attracting and retaining IT professionals

3. William M Mercers'(1998) In his study "Money and benefits help to attract candidates to an organization, primitive organizational culture and learning environment are the main inducement factors for employee satisfaction and retention. Job satisfaction is also an important fact.
4. Nakache in 1997 study holds that sociable work environment builds strong friendship among employees. The social environment leads to low turnover because employees are reluctant to leave their friends behind.
5. (Aurora 2001) In software industry human capital is intensive. Engineering graduates join as software professionals most of the IT firms hire graduates from private training institutes, having diploma. Majority of engineers are not trained
6. (Pratibha, 2013) She concluded that that Information and communication technological environment it is inevitable to expect challenges out of such working conditions. With changing work dynamics, employees are facing lot of challenges

**Aims and Objectives**

Main objectives of my research are as follows

1. To know the views of Software engineers working in small scale I T firms in Maharashtra
2. To know the views on select H R practices
3. To know the views on Training and other policies of employers

**Research Design**

As it is a pilot study, Researcher has decided to consider 70 IT engineers working in small scale software firms employing less than 25 engineers as a sample for the research. Out of this only 43 have responded to the

questionnaire. The researcher has discarded three from 43 to make percent aging effortless. The researcher included few aspects of HR practices in the questionnaire and the rest were general questions

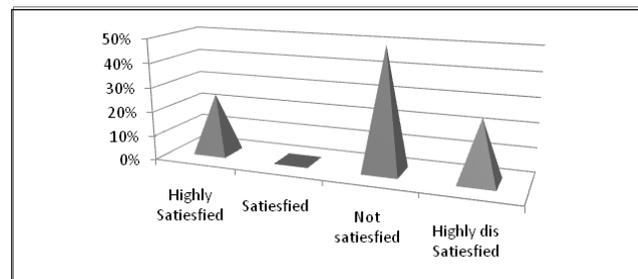
**Quantitative data technique**

Since it is a pilot study "Mixed questionnaire " format is followed to collect primary data. The data has been expressed in different graphical pattern such as Bar diagrams, pie chart, etc and conclusion will be drawn.



**Fig.1: Regarding Training obtained from the company**

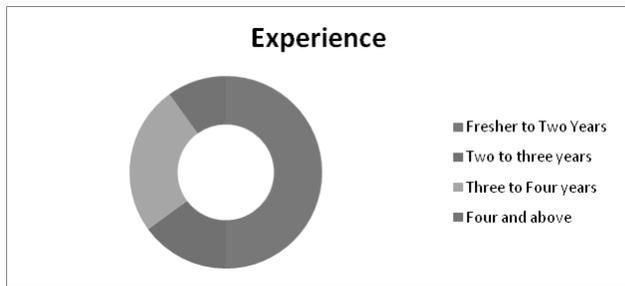
Above chart explains about Training, Majority of the engineers are of the opinion that the firm in which they are working is not providing any type of training, Since majority of Engineers are with less experience they wish to get required skills from other sources.



**Fig.2: Regarding salary and perks**

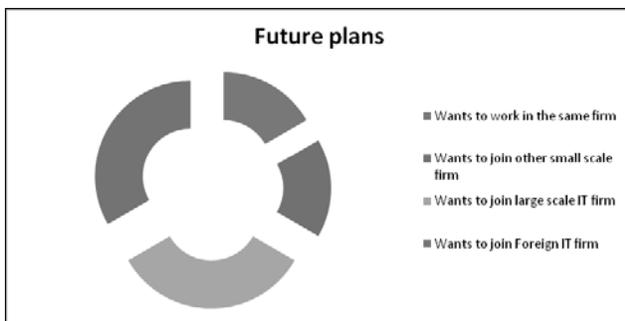
Above chart shows that majority of Engineers agreed that they are not satisfied with the salary and other benefits offered to them by their employers.

## Perceptions Of Software Engineers about select Hr Practices, working in Small Scale IT firms in Maharashtra



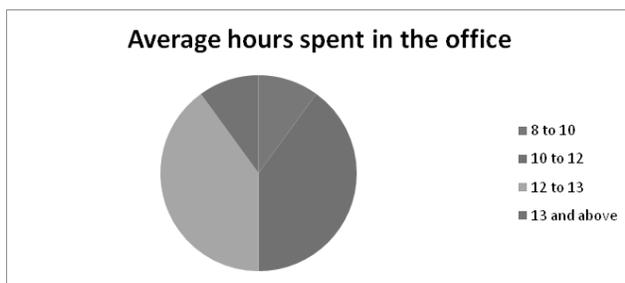
**Fig. 3: Experience**

Majority of the engineers working in the small scale IT firms are having experience less than two years, Some of them are freshers. It indicates that these IT firms focusing on less experienced and wants to pay less to their staff.



**Fig. 4: Future plans**

From the above we can conclude that Software Engineers from small scale IT firms wants to join big and foreign IT firms. They are working to get exposure and experience and their next immediate step is to apply and get job in reputed, big or foreign IT firm.



**Fig. 5: Average time spent in the office.**

Above diagram shows that 80% engineers are spending more time in their office working above 12 hours per day. Since working hours are long and no extra benefits are given to them the engineers tend to lose interest and get de-motivated.

### Conclusion

Since most of the colleges have started self financed courses like B.Sc. in IT, as a result large number of professionals are out every year. As the colleges and Universities in India are pushing large number of graduates exceeding demand in the market, There is a large scale unemployment among IT engineers. These engineers are ready to work for low salary to get experience in a small scale IT firms. During their stint in the initial stages they are working hard and trying to balance their life with new technology, new skills etc. initial months of their employment they are facing lot of challenges and hurdles, Many are in touch with their superiors or seniors or IT experts from coaching institutes to clarify their doubts. They are facing a difficult and uphill tasks initially but after two years they feel confident and doing their work effectively. The researcher has observed that these engineers are exploited by their employers in many ways.

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## Mangrove forest and its conservation: A study for sustainable development of Mumbai

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### **Abstract**

*The coastline of Mumbai is intended with creeks and estuaries and has wide spread mangrove forest. Dense mangrove cover is observed in Versova, Bandra, Madhisland and Thane region, moderate mangrove cover in Gorai and Sewri- Mahul and sparse in Malabar hill, Colaba and Carter road. The mangrove Avicenia marina was found to be dominant species in Mumbai and its suburbs. Mangrove forests and their waterways are important in supporting many species birds, reptiles, aquatic animals and terrestrial mammals. According to the Forest Survey in 2015, Mumbai city has 2 sq.km and its suburbs has 48sq.km mangrove cover which provide open green space to the Mumbai city and its suburbs. Mumbai has lost 40% of its mangroves to land reclamation for slum rehabilitation, garbage dumps, construction of developmental projects and industrial effluents. The present paper analyzes the potential danger of mangrove destruction, the need to restore it for the sustainable development of Mumbai city. This paper further suggests mitigation measures for mangrove conservation and its management.*

**Keywords:** mangrove, conservation, mitigation, sustainable development

### **Introduction**

The city of Mumbai is situated at the mouth of river Ulhas off western coast in the Konkan region of Maharashtra on the bank of Arabian Sea. The coastline of Mumbai is about 100km which is inundated by bays and creeks. In Mumbai mangroves are dominant along the tidal estuaries and creeks. According to the Forest Survey in 2015, island city has open mangrove cover of 2 sq.km and suburbs has 48 sq.km of mangrove cover which provide open green space to the Mumbai city and its suburbs (The Indian Express, 2015). The mangrove forest has been destroyed due to reclamation, salt pans, garbage dumping and chemical pollution. Mumbai has

lost 40% of its mangrove forest in last decade (Rita, 2009). Mumbai being an island city built on reclaimed land is prone to flooding during heavy rains, storm surge and disastrous waves. The climate change and increase in sea level will add to the woes of Mumbai city. The present study aims to suggest the need to protect mangroves along the Mumbai coast and suggest mitigation measure for the conservation and management of mangroves for the sustainable development.

### **Need for Mangrove conservation in Mumbai**

Mumbai is made up of seven islands called Salsette



islands. The lands in Mumbai were consistently reclaimed and have expanded tremendously. Mumbai is prone to erosion due to the long coastline and reclaimed land. In the last three decades, the wave action has eroded 500 metres of the 16km long coastline of Mumbai (Kaujalgi, 2010). Mangroves hold the silt and maintain the integrity of Mumbai's shoreline. Global warming and climate change is leading to the increase in sea level. Mangroves can protect Mumbai from increasing sea level and disastrous waves like tsunami. The aerial roots of mangroves can absorb the waves and hold the water back, thus avoid flooding (Baldwin, 1995). The roots of mangroves become embedded in the mud and form tangled network and form a base for the deposition of silt and other materials carried by wave. Mangroves are also important for carbon sequestration. They can store up to five times more carbon than the equivalent area of tropical forests (India's Endangered, 2016). Mangroves attract more than 100 species of migratory birds (Bhagat, 2010). Mangrove forest provides resting and breeding space for 300 species of birds; 35-40 species of reptiles, 16 species of crabs, prawns, fishes and several terrestrial mammals (Kaushik, 2009). Various parts of mangrove plant are used as medicine. Mangroves provide timber, fuel and food to the coastal communities of Mumbai (Balaji, 2008).

## Material and Method

1. Survey of mangrove forest from January 2009 to December 2012 across various places in Mumbai city, Thane and Mumbai suburbs
2. Identification of mangrove species from mangrove identification key (Spalding et al., 2010)
3. The present study of mangroves were compared with the data obtained by Vijay *et al.* (2005) from Indian remote sensing satellite IRS-ID of 2001 to 2002, IRS-1C of 1996 and field survey data of IIT Mumbai in 1990-1991 and 1996-1997.
4. Secondary data was collected from Environment impact assessment reports of Mumbai mangrove, literature review of various authors, newspaper

articles, Reports of Forest department and NGO

## Results

### Areas of mangroves in Mumbai during present study

Thane	Vasai- Virar, Mira-Bhayander, Mumbara-Diva, Manori, Thane-Airoli, Navi Mumbai, Dahanu, Dandi, Vaitarna river
Mumbai suburbs	Malad, Madh island, Gorai, Mahim-Bandra, Versova, Sewri-Mahul
Mumbai city	Colaba, Malabar hill, Carter road, Elephanta

Dense mangrove cover:- Versova, Bandra, Madh island and Thane

Moderate mangrove cover:- Gorai and Sewri- Mahul

Sparse mangrove:- Colaba, Carter road, Elephanta and Malabar hill

Species of Mangroves found in Mumbai during the present study

1. *Avicenia marina*
2. *Sonneratia apetala*
3. *Acanthus ilicifolius*
4. *Bruguiera cylindrica*
5. *Ceripostagal*
6. *Rhizophora mucronata*

## Discussion

During the present study dense mangrove cover was observed in Mumbai suburbs along Madhisland, Versova, Bandra, and entire Thane region. Moderate mangrove cover was observed in Gorai and Sewri- Mahul region. Mumbai city had a sparse open mangrove cover in Malabar hill, Carter road, Elephanta and Colaba.

Estimates of mangroves according to various studies revealed that in 1957 the area of mangroves was

248.7sqkm (Qureshi 1957), in 1975 it reduced to 200 sq km (Blascoet *al.*, 1975). Drastic reduction in mangroves to 92.94 sq.km was observed in 2000 (Inamdaret. *al.*, 2000) and further to 56.4sq km in 2005 by Vijay *et al.* (2005). There was a decrease of 39.32% of mangroves in a span of 5 years. The data by Forest Survey of India revealed that Mumbai suburbs has about 48sq km of mangrove in 2015 while the Island city has about 2sq km of open mangrove cover. The Forest department and government claim that there is increase in mangrove cover, but the data reveals that the mangrove cover has decreased further over the span of 10 years though in Mumbai and its neighbouring areas more than 5,800 hectares of mangroves are designated as protected forests.

According to the study by IIT, Mumbai from 1990 to 1996 the area of sparse mangroves declined considerably whereas areas of dense mangroves increased. The loss is estimated to be about 44.28 sq km in sparse mangroves and a gain of 7.74% in the dense mangrove during 1991 to 2001. Vijay *et al.* (2005) pointed out that there is loss of a large areas of mangrove on Malad creek close to Millat Nagar and some areas of Mahul creek to construction of developmental projects and other purposes. The data by Forest Survey of India has revealed a loss of 400 acres of mangrove to new Navi Mumbai airport

During the present study *Avicenia marina* was dominant in Mumbai creek. In Thane, *Sonneratia apetala* was observed along with *Avicenia marina*. In highly polluted areas of Mahul, Mahim and Bandra, *Avicennia marina* dominated. Shinde and Donde (2015) and Kulkarni *et al.* (2012) stated that dominance of *Avicennia marina* may be probably due to its high tolerance to salinity and pollution. Other species of mangroves like *Bruguiera cylindrical*, *Cerrostagal* and *Rhizophoramucronata* were sparsely scattered in Malad, Vasai, Thane and Bandra. Mangroves are affected by urban development and infrastructure built on and around them. Many are destroyed due to landfill from residential areas. The existing mangroves are exposed to diseases caused by increased soil salinity due to reduced water flow,

reduction in periodic inundation, nutrient imbalance, sedimentation, flooding and pathogen (Mastaller, 1996). The industrial development and oil spill by the ships around the coastline also pollutes mangroves leading to its destruction.

The mangroves in Mumbai are protected legally under the following acts: Forest conservation act 1980; Maharashtra tree act 1984; Environment protect act 1986 and Coastal regulatory zone notification 1991. In December 2005, Mumbai High court made a monumental decision to freeze destruction of mangrove forests in Maharashtra and banned construction within 50 meters of them. Still the destruction of mangroves for urbanisation continued in Mumbai. In December 2013, High court passed an order that all civic bodies will enforce a ban on reclamation or construction of wetland. In March 2014 an interim ban on reclamation and construction in wetland areas across Maharashtra was ordered and again in January 2016 high court strictly warned the state based on contempt petition that the Wetlands to be strictly protected as rampant destruction is continuing to take place in all areas. In spite of various court orders Mumbai and its suburbs are still experiencing serious destruction of the mangroves due to increasing population and developmental projects.

Destruction of mangrove forest can lead to release of carbon dioxide into the atmosphere contributing to global warming and climate change. The sustenance of Koli community who are the actual inhabitants of Mumbai depends on mangrove. As per the report of McDermott 2011 in terms of ecosystem services, mangroves can be valued anywhere between 2000-9000\$ per hectare. The author further states that by preserving mangroves Mumbai can save 2.7 billion Rupees every year as they can protect the coast from storm surges and disastrous waves which can at times break the concrete walls and sand berms.

### **Conservation measures to be adopted for sustainable development**

The sustainable management of the mangrove ecosystem or an integrated management of the coastal wetland is



essential for the very existence and further growth and development of the Mumbai city and its suburbs. The 5800 hectares of mangrove land around Mumbai has ensured more than 2500 hectares of open green space in the city and its suburbs. Some of the mitigation measures to be adopted for the conservation of mangroves is as follows:

- Mangroves should be continuously monitored for any unfair means adopted to destroy it.
- A survey of mangrove using remote sensing satellite should be done every six months and the data should be uploaded on government websites. Continuous monitoring of the mangroves and its reporting should be done.
- Areas of specific conservation, economic or community values should be highlighted and made public.
- There should be strict implementation of Coastal Regulation Zone to safe guard mangrove.
- Mangrove management planning should involve government, non government, mangrove dwellers and scientific community.
- Researchers should carry out more study on mangroves and may suggest measures to protect and conserve it.
- Sparsely populated region of mangroves should be restored by planting new saplings.
- Dumping of garbage and other land filling materials near mangroves forests should be banned and strict punishment for violating the rules.
- Locals and activists should be encouraged to support sustainable growth of mangroves.
- Awareness campaign should be developed in schools and colleges for protecting mangroves.
- Future coastal development should be planned in an ecologically sustainable manner.

## Conclusion

The city of Mumbai and its suburbs will continue growing due to its commercial business centres. Though the further expansion of the city is more inwards away from the coastal zone still it needs to be connected with the main city with proper infrastructure. A proper integrated management plan safeguarding the wetlands, forest and mangroves will promote urban development with balance of environment and maintain landscape of the city. There is great scope for lot of researches to be done to protect the ecosystem of Mumbai. The city and its suburbs have great potential to establish itself as a vibrant, self sustained and balanced coastal city.

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## Rupee Depreciation

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### **Abstract**

*We all know that each country has its own currency (except in Europe where a group of countries have a common currency). The rate at which we can convert one currency into another currency is known as conversion rate between those two currencies. Therefore, if I have Rs.1,000/- with me and I wish to get US \$ by surrendering the above INR, I need to go to a bank or an authorized currency dealer for this transaction. They will convert my INR into US \$ at that day's rate. Thus, it becomes clear that there is a foreign exchange market where you can buy one currency in lieu of another currency. The rate at which this happens is called conversion rate.*

*This rate changes on daily basis depending on the demand and supply of each currency. Now we will try to understand what does appreciation and depreciation refers to when we read such news on daily basis.*

*Let us assume that in case, you go to a bank and asks the bank that you intend to buy US \$100, please tell me what is the amount of INR you have to pay. Bank informs you that you need to pay Rs. 5410/-. This means you can buy US\$ @ Rs.54.10 per dollar. This is the selling rate of the said bank for US \$ for that day.*

*Now after one month, you go to bank and again ask the bank that you wish to buy US\$ 100, and bank tells you that this time you have to pay Rs.5490. This means you have pay more to receive the same amount of US \$. This means the local currency has depreciated.*

*This will be known as Depreciation of Indian Rupee. In the above example, it is clear that value of INR has gone down when compared to US\$.*

*On the other hand, if the rate quoted by bank on second occasion is say Rs. 5380/- it will be considered as appreciation of INR as this time you have to pay less amount to buy the same amount of US\$.*

**Keywords:** Depreciation, Exchange rate.

### **Objectives of the study**

- To understand the concept of Rupee Depreciation
- To understand the causes of Rupee Depreciation
- To understand the impact of Rupee Appreciation and Depreciation
- To understand the effects of Rupee Depreciation on Economy

## Rupee Depreciation

Impact of Depreciation and Appreciation of Rupee on Indian's living in India. We are assuming that initially the exchange rate of US\$-INR is Rs.50/- :

Effect on	If Rupee DEPRECIATES (For example, when US\$-INR moves from Rs.50/- to Rs.55/	If Rupee APPRECIATES (For example, when US\$-INR moves from Rs.50/- to Rs. 47/-
Importers	Imports become costly as for each USD we have to pay Rs5/- more  IMPORTS BECOME COSTLIER	Imports become cheaper as for each USD we have to pay Rs3 less  IMPORTS BECOME CHEAPER
Exporters	Exporters will have higher revenue. For exports of each Dollar, the exporter will get Rs 5 higher  EXPORTERS EARN MORE	Exporters will earn lower revenue. For exports of each dollar, now the exporter will get Rs 3 less.  EXPORTERS EARN LESS
Indian Who Wish to Go on Holidays Abroad	For each dollar taken abroad for spending, the traveller has to pay Rs 5 more and thus his trip will become costlier  TRIP IS COSTLIER	For each dollar he intends to take abroad for spending, the traveller has to pay Rs3 less and thus his trip will become cheaper.  TRIP IS CHEAPER

**When the rupee moves from 50 per US dollar to 60 per US dollar, why do we call it 'depreciation' and not 'appreciation' given that the rupee has risen against the dollar?**

Let's replace rupee with potatoes. Today, US\$ 1 can buy 50 pieces of potatoes. Tomorrow, 1 US\$ can buy 60 potatoes.

This means that potatoes have gotten cheaper since you can buy more pieces for the same US\$ 1. Alternatively, it means that potatoes have depreciated or declined in value.

The same is true for rupee. When US\$ 1 can buy 50 rupees today, and 60 rupees tomorrow, it means that the value of the rupee has depreciated or declined. On the other hand, if the Rs. per US\$ rate moves from 45 today to 40 tomorrow, it means that the value of the rupee has appreciated or risen against the US dollar.

**How depreciating rupee will make things expensive.**

The rupee depreciation will not make just about everything expensive. It will only make those things expensive that we import from outside India.

Crude oil (that is used to make petrol, diesel, kerosene and LPG) is one such commodity that we import in huge quantities. Let's assume you can buy 1 barrel of crude oil for US\$ 100 today. But you don't have US\$ 100 with you. So you go to a bank, pay it Rs 5,000 and get US\$ 100 in return (assuming US\$ 1 = Rs 50 currently).

Now assume, that the rupee depreciates to Rs 60 per US\$ (as it has), and you again need to buy 1 barrel of crude oil. Now you need to give the bank Rs. 6,000 to get US\$ 100 in return to pay for oil.

While the international oil price has remained at US\$ 100 per barrel, it has still gotten expensive for you to buy it because the rupee has depreciated to Rs 60 per



US\$, from Rs 50 earlier.

Now convert 1 barrel of oil with everything we import in India. Rupee's depreciation would mean that these imported things will become expensive for us.

As for oil, since we consume it in so many places – for cooking, transportation, and power generation – these will also become expensive due to rupee's depreciation against the US dollar.

Alternatively, when the rupee appreciates against the US dollar, our imports (like crude oil) become cheaper.

### **If India exports**

With depreciating rupee, exports will become lucrative for Indian companies. This is simply because every US\$ 1 of export income can now be converted into Rs. 60, as against Rs. 50 earlier.

So even if a company earns US\$ 1 from exporting one unit of its product (like it was earning earlier) its income will increase in Indian rupee terms.

All in all, depreciating rupee is bad for companies that import things and good for companies that export. Alternatively, appreciating rupee is good for companies that import things and bad for companies that export.

By the way, one negative impact that companies feel when rupee depreciates is on their foreign borrowings. Suppose a company borrowed US\$ 100 in 2010 and then converted it into Rs 4,500 (at Rs 45 per US\$) to spend on its expansion. Now, when it has to repay that loan of US\$ 100, it needs to pay the bank Rs 6,000 because the rupee has depreciated to Rs 60 per US\$.

So, in an environment of depreciating rupee, companies with US\$ borrowings face a negative impact on their balance sheets.

### **Impact on stock market investors**

As we discussed above, rupee's depreciation negatively impacts imports. Thus, Indian companies that import a

lot of raw materials will face pressure on their profits if the rupee continues to weaken against the US dollar, or even if it remains at the current weak levels.

The companies that import oil derivatives (crude or palm oil) as raw materials – like those from the paint, plastics and FMCG industries – will be especially hurt on their margins in the short to medium term.

Also, companies that have foreign borrowings on their books will see a negative impact on their profits.

On the other hand, Indian companies (like those from the IT and pharmaceutical sectors) that are major exporters, will benefit from the falling rupee.

So, overall while rupee's current depreciation is bad for you as a consumer or an investor in companies that import a lot, it is good if you own a software company or are an investor in one of them.

Also, if you are an Indian working abroad and earning US dollars, you can remit more rupees to your dependents in India.

### **Current Affair: Economics Times**

India Ratings & Research on Wednesday said that the recent regulatory decision on foreign direct investment (FDI) will help attract FDI in India. Increased FDI inflow will help arrest rupee depreciation in the short term. A continuous FDI inflow in the medium-to-long-term will alleviate some current account deficit (CAD) financing issues. India's increasing dependence on volatile portfolio and debt-related capital inflows to finance its CAD is a major weakness for rupee. Although FDI cap on most sectors remains unchanged, major benefit will originate from the route through which FDI is allowed. In the 11 sectors, on which the decision has been taken, FDI will flow from the automatic route as against the earlier foreign investment promotion board (FIPB) route. While in the FIPB route, companies have to submit proposals to FIPB and FDI inflow is subject to approval, in the automatic route a domestic company can sell its equity to or bring in fresh equity from a foreign partner.

## Rupee Depreciation

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Automatic route thus reduces the time of FDI inflow.

India Ratings & Research believes that despite a decline in core inflation in June 2013 and RBI concerns on falling growth trajectory, the probability of monetary easing in RBI's forthcoming monetary policy is low. Macro-economic data [index of industrial production (IIP), consumer price index (CPI) and June trade data] released on July 12, 2013, and head line inflation data released on June 15, 2013, are all pointing towards weak economic fundamentals. The IIP contraction in May 2013 suggests low demand conditions and monetary easing and is supported by a continuous decline in core inflation (declined to 2.09% in June 2013 from 4.27% in January 2013). However, the continuous rupee depreciation suggests otherwise. Ind-Ra believes a tight monetary policy, as followed by Brazil, must be implemented in India. However, the agency expects a status quo in RBI's monetary policy stance and a hawkish tone of monetary policy statement. Ind-Ra's expectation of low probability of monetary easing is based on a sharp depreciation of the rupee.

### Causes:

#### Factors that pushed INR into the well

**Continued Global Uncertainty:** Owing to uncertainty prevailing in Europe and slump in international market, investors prefer to stay away from risky investments (flight to security). This has significantly affected the portfolio investment in India.

**Current Account Deficit:** While a country like China will be more than happy with a depreciating currency, the same doesn't apply for India. China exports more than it imports, thus a depreciating currency makes its exports cheaper in the International market, in turn making China more competitive. India on the other hand does not enjoy this luxury, mainly because of increasing demand of oil which constitutes a major portion of its import basket. The fall of oil price to \$90/barrel has helped India to fight the depreciating rupee up to some extent but at the same time Euro zone, one of the major trading partners of India is under severe economic crisis.

This has significantly impacted Indian exports because of reduced demand. Thus, India continues to see current account deficit of around 4.3%, depleting the forex reserve and thus depreciating INR.

**Capital Account Flows:** Deficit countries need capital flows and surplus countries generate capital outflows. India needs dollars to finance its current account deficit. Institutional investors investing in India are directly impacted by the global market uncertainty. In 2008 India had a net outflow of \$14 billion of FIIs and INR depreciated from 39 level to 52 against dollar. A volatile currency is never good for a foreign investor as it increases the transaction risk. Thus the relation becomes a vicious cycle, thereby further magnifying the volatility. Though RBI has intervened through open market operations to arrest the downfall of INR (managed float) but the reserves of \$290 billion don't provide enough room to make a significant impact.

**Persistent Inflation:** India has experienced high inflation, above 8% for almost two years. If inflation becomes a prolonged one, it leads to overall worsening of economic prospects and capital outflows and eventual depreciation of the currency.

**Interest Rate Difference:** Higher real interest rates generally attract foreign investment but due to slowdown in growth there is increasing pressure on RBI to decrease the policy rates. Under such conditions foreign investors tend to stay away from investing. This further affects the capital account flows of India and puts a depreciating pressure on the currency.

### Effects

**Imported Goods:** Buying imported stuff will become a very costly affair. You will have to shell out extra on imported goods. For instance, if you bought a product valued USD 1, you paid around Rs 54 (weeks ago) but you will now have to shell out close to Rs 61 for the same product.

**Fuel Price:** A weak rupee will increase the burden of Oil Marketing Companies (OMCs) and this will surely



be passed on to the consumers as the companies are allowed to do so following deregulation of petrol and partial deregulation of diesel. If the OMCs increase fuel prices, there will be a substantial increase in overall cost of transportation which will stoke up inflation.

**RBI's Monetary Policy:** If the depreciation in rupee continues, it will further increase inflation. In such a situation RBI will have very less room to cut policy rates. No cut in policy rate will add to the borrower's woes that are eagerly waiting to get rid of the high loan regime.

### Related Stories

- Rupee may weaken further against US dollar: CII
- Every Re 1 dip against dollar impacts by Rs 125-130 crore: SAIL
- Re drops to record low of 61.21, recovers after RBI steps in.

**Students Studying Abroad:** Students who are studying abroad will bear the brunt most owing to depreciating rupee. Expenses incurred towards the university/college fees as well as that of living will shoot up, thereby spelling a huge burden on the students.

**Tourism:** The depreciating rupee will surely be a dampener if you are planning your holiday abroad. Your travel charges as well as hotel charges will escalate drastically.

**Country's Fiscal Health:** A frail rupee will add fuel to the rising import bill of the country and thereby, increasing its current account deficit (CAD). A widening CAD is bound to pose a threat to the growth of overall economy.

The rope that can pull INR out-

### 1. Measures by RBI:

**a. Using Forex Reserves:** RBI can sell forex reserves and buy Indian Rupees leading to demand for rupee.

But using forex reserves poses risk also, as using them up in large quantities to prevent depreciation may result in a deterioration of confidence in the economy's ability to meet even its short-term external obligations and not using reserves to prevent currency depreciation poses the risk that the exchange rate will spiral out of control. Since both outcomes are undesirable, the appropriate policy response is to find a balance. Recent data shows that RBI had indeed intervened by selling forex reserves selectively to support Rupee.

**b. Raising Interest Rates:** The rationale is to prevent sudden capital outflows and ultimately lead to higher capital inflows. But India's interest rates are already higher than most countries. This was done to tame inflationary expectations. So further raising interest rates would lead to lower growth levels.

**c. Make Investments Attractive:** Easing Capital Controls: RBI can take steps to increase the supply of foreign currency by expanding market participation to support Rupee. RBI can increase the FII limit on investment in government and corporate debt instruments. It can invite long term FDI debt funds in infrastructure sector. The ceiling for External Commercial Borrowings can be enhanced to allow more ECB borrowings.

### 2. Measures by Government:

Government should take some measures to bring FDI and create a healthy environment for economic growth. Key policy reforms that should be initiated includes rolling of Goods and Services Tax (GST), Direct Tax Code (DTC), FDI in aviation and retail, Companies Bill and diesel decontrol. Efforts should be made to invite FDI but much more needs to be done especially after the holdback of retail FDI and recent criticisms of policy paralysis.

The ongoing euro zone crisis and declining demand in the developed nations has created risk-aversion in the markets. It explains why China's growth has decelerated so acutely and also India's. It also tells us that it is the global factor that is primarily responsible for India's

## Rupee Depreciation

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economy running into rough weather not coalition politics, lack of leadership, corruption, assembly elections or any of the things we have been hearing about.

### Conclusion

The Indian Rupee has depreciated significantly against the US Dollar marking a new risk for Indian economy. Grim global economic outlook along with high inflation, widening current account deficit and FII outflows have contributed to this fall. RBI has responded with timely interventions by selling dollars intermittently. But in times of global uncertainty, investors prefer USD as a safe haven. To attract investments, RBI can ease capital controls by increasing the FII limit on investment in government and corporate debt instruments and introduce higher ceilings in ECB's. Government can create a stable political and economic environment. However, a lot depends on the Global economic outlook and the future of Eurozone which will determine the future of INR.

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## Mudra Loan : An Opportunity

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### Abstract

*Today we are now face off with the evolving phase of development in such cut-throat competition particularly in Banking and Finance sector in order to obtain the Monetary assistance at all level due to having large population in India. It is the infant stage procedure to redress the grievances and hindrance like red tapism, Work Culture, Procedure, policies etc. while obtaining the loan from the banks so the Indian Government come up and unveil the New policy i.e. Pradhan Mantri Mudra Yojana (PMMY) it is also being known as Mudra Loans, serving the real purpose and bridge the concrete relation between the people and gives impetus the New start-up companies and small business units. That's why it is better to make further stride and manifold the congenial environment for doing ease of monetary assistance and lending practices which it helps to improve the work culture particular in Banking and Finance sector. Of course there is no shade of doubt that such policy in future will reap the dividends to all strata of people across the length and breadth of the country and play the catalytic role in the Financial & Social Inclusion area for the time being as well as in future also.*

**Keywords:** *Congenial Environment, MUDRA, Red Tapism, Financial & Social Inclusion*

### Introduction

The Indian Government ride on a new wave of reforms that replicate the footprints of development on the future generation & contributing towards building and developing the nation. After unveiling the Mudra Loan, that will be the game changing policy for the Small & Medium business units as well as vibrant developing Indian economy in the longer period and of course that will shape the future course of upright development. In

the contemporary world the presence of the lending practices especially to the small & medium business has now gaining its importance rapidly around the different countries even in India. That's why the Indian government launched a new scheme as on 8<sup>th</sup> April 2015 called Micro Units Development and refinance strategy (MUDRA LOAN) which it will provide its financial credit services particular to small & medium entrepreneurs at an affordable cost as compare to the regular Commercial banking practices and we hope that

## Mudra Loan : An Opportunity

such MUDRA bank will stretch its wings to last level by providing the credit facilities to the entrepreneurs.

### Objectives

- ❖ To Comprehend & analyze the objectives of PMMY
- ❖ To retrospect the role of MUDRA LOAN in the vibrant Indian economy.
- ❖ To redefine the strategy while lending the practices towards Non-Corporate Business Sector i.e. Small & Medium Business Enterprises.

### Research methodology of the study

The present study data has been carried out with the help of secondary data sources only. Research was conducted to review the present status of Lending aspects towards small and medium enterprises in India from top to bottom level. The information and data for the research can be collected through secondary data sources only.

### Secondary Data

- Mudra websites
- Journals
- News papers
- Published Articles

### Analysis and Graphical Interpretation:

Pradhan Mantri Mudra Yojana (PMMY) –

#### Mudra Bank Loan Scheme –

Micro units or small business had to be categorized to signify the Initial growth stage, Development & Funding.

Three categories were created for this purpose such as ‘Shishu’, ‘Kishor’ and ‘Tarun’.

#### Shishu (Child) category –

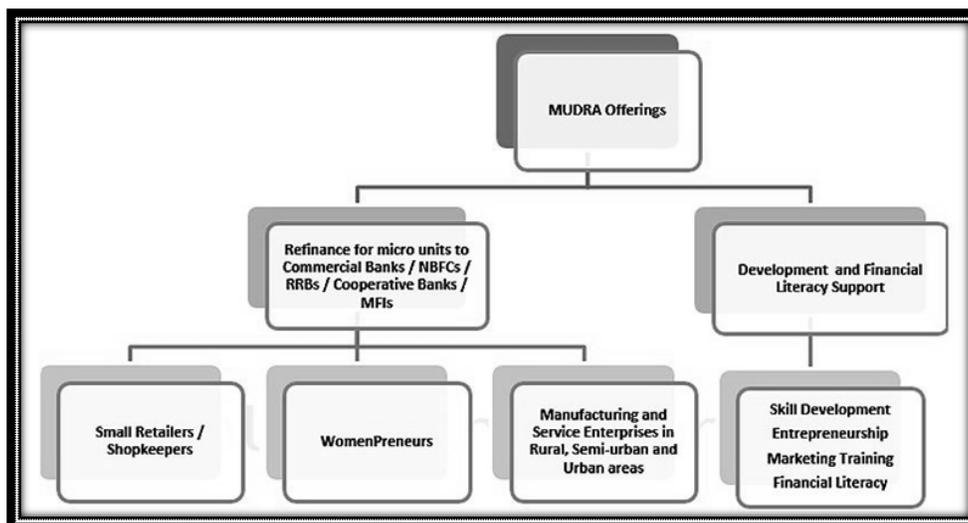
- All those businesses that have been just started and looking for Loan
- A loan up to of Rs. 50,000 will be given to all micro units
- Interest Rate starts from 10 to 12 %

#### Kishor Category –

- Who have started their business but it has be established yet.
- A loan covers from Rs. 50,000 to 5 Lakhs
- Interest rate ranges from 14 to 17% percent

#### Tarun Category –

- All small business which already been set up and established
- A Loan Cover of up to Rs. 10 Lakh.
- Interest rate starts from 16





## Role and Responsibilities of Mudra

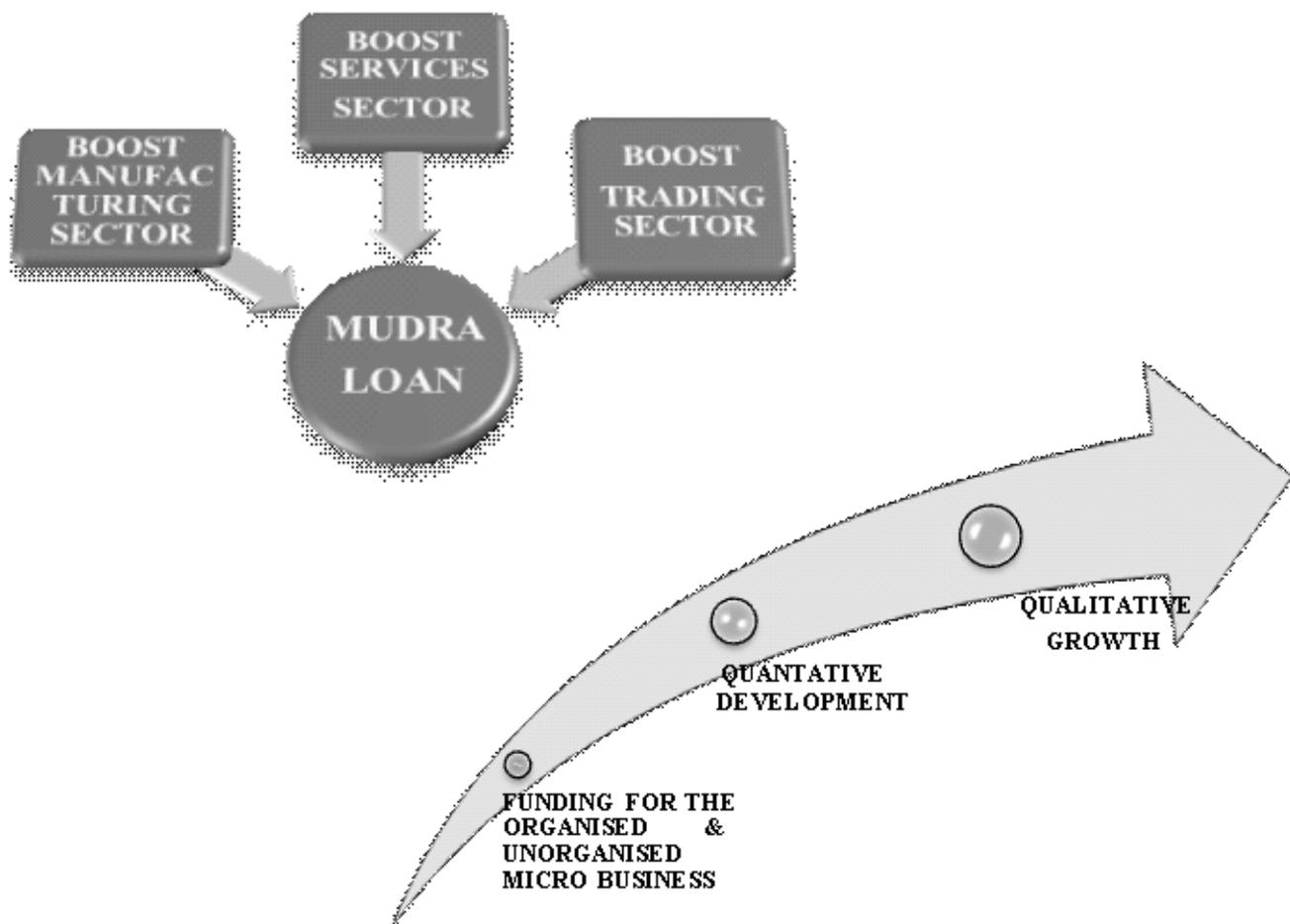
MUDRA has been constituted with the prime objective of developing the Small, Micro & Medium businesses in the country by lending various support including financial support in the form of refinance, so it will help to achieve the goal of **'Funding the Unfunded'**

- \* MUDRA Conceived for Indian scenario
- \* Inclusion of Last Mile borrowers – a game changing policy
- \* Help to expand Access to finance for small enterprises
- \* Lower Cost of Finance

- \* Mass Entrepreneurship Development program and Growth
- \* Apex Refinancer

## Mudra Vision

- “Small, Medium & Micro units comprise a major economic segment in our country and provides large employment after agriculture”
- “To fulfill the needs of all non-corporate small businesses in the form Funding”
- MUDRA BANK has set vision for itself in the following manner, which it leads to the Quantitative Development & Qualitative Growth in the longer period of time.



## Mudra Loan : An Opportunity

Such loan system in India will change the face of the vibrant economy domestic markets, suppliers, manufacturing sector, distributors, as well as service providers. Mainstreaming all these small & medium enterprises. The biggest bottleneck to the growth of entrepreneurship is lack of financial support to this sector. The financial support from the Commercial Banks to this entire sector is negligible, i.e. Less than 15% of bank credit facilities providing only to Micro, Small and Medium Enterprises (MSMEs).

This MUDRA agency would be responsible for developing and refinancing all Micro-enterprises sector by providing the financial support with the help of financial institutions which are in the business of lending to small business entities engaged in different activities.

### Rationale of the Study

WHY MUDRA LOAN IS AN OPPORTUNITY FOR THE MICRO & SMALL BUSINESS UNITS IN INDIA?

Such MUDRA LOAN policy redefine the strategy towards the development activities that give thrust to new development activities around the nation and such micro finance models is nothing but the business centric approach encompassing the Non-Corporate business sector area across the India.

### BROAD COMPOSITION OF MICRO ENTERPRISE SECTOR

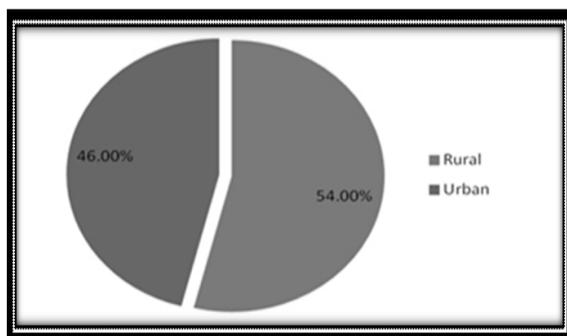


Fig. Composition of 5.7 Cr. Own Account Enterprises

India launched MUDRA Yojana to address the financial and other constraints. So it helps to keep eagle eye on the development process after penetrating the Monetary assistance from top to bottom level in revamp manner and leads to visible difference among the large section of people like women entrepreneurs, young men, artisans, marginalized section, small business units etc. So it the need of the hour to pay more heed to elevate the functions of banking system and to expand the lending practices towards the entrepreneurs and encompassing each section specially in the rural and semi urban areas.

MUDRA is an infant step of the government to provide financial assistance credit facilities for entrepreneurship to the bottom of the pyramid. Loans worth Rs 1.09 lakh Cr. have been provided to entrepreneurs under the Pradhan Mantri MUDRA Yojana. Loans worth over Rs 1.09 lakh Cr. were given to over 2.96 Cr. beneficiaries. There is no shade of doubt such MUDRA LOAN will make significant changes and make deepen impact on the Indian economy, especially in the rural and semi-rural areas of economy, which it will bring radical revolution in providing financial assistance to the new startups companies that will boosts to the Manufacturing sector, Service Sector, Trading Sector etc.

### Conclusion

Such one stop crisis center for entrepreneurs i.e. MUDRA Loan Yojana will be the game changing policy for the Micro, Small & Medium entrepreneurs in the longer run to get into the Social, Economical & Financial mainstream development of Indian economy. So the Central government flexing their muscles to exercise each and every option that boost the Industry as well as manufacturing sector and it requires integrated holistic approach to implement such Mudra Loan program and also needs to create awareness about the various financial products. So that it is the need of the hour to make ensure every stakeholder like Government, Banks, MFIs etc. are making contribution. MUDRA Bank Loan basic purpose is to attain development in an inclusive and sustainable manner by supporting and promoting partner



institutions and creating an ecosystem of growth for micro enterprises sector.

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## Studies on effect of Activated Charcoal as an Adsorbent on Water quality of Mumbai Lakes

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### Abstract

*Adsorption is a widely used as an effective Physical method of separation in order to eliminate or lowering the concentration of wide range of dissolved pollutants (Organic and Inorganic) in water and waste water. In present study Activated charcoal is employed as an adsorbent for removal of pollutants from Lake water which is collected from three sampling station of Powai Lake. As adsorbent Activated Charcoal (Laboratory Grade MERCK) is employed. The concentration of Activated Charcoal from 1g-2g is used. Physico-Chemical parameters and Selected Heavy metals were analyzed before and after addition of Activated Charcoal. The results obtained Shows that activated Charcoal works efficiently and plays a vital role in reduction of pollutants from Powai Lake Water.*

**Keywords:** Activated Charcoal, Physico-Chemical Parameters, Powai Lake.

### Introduction

Activated carbon is a microcrystalline, non-graphitic form of carbon with a porous structure that has been pro-cessed to develop its internal porosity<sup>1</sup>. The most important use of activated carbon is in solution pu-rification and for the removal of taste, color, odors and other objectionable impurities from liquids, water sup-plies and vegetable and animal oils. In recent years it has been increasingly used for the prevention of environ-mental pollution<sup>2</sup>. The use of activated carbons is perhaps the best broad-spectrum control technology available at present<sup>3</sup>.

Activated carbon is a broad-spectrum agent that effectively removes toxic substances such as insecticides,

herbicides, chlorinated hydrocarbons, and phenols, typically present in many water supplie<sup>4</sup>. As we know that activated carbon (AC) is a well known adsorbent that can be used efficiently for removal of a broad spectrum of pollutants from air, soil and liquids<sup>5</sup>.

Water pollution exists today in many parts of the world. The problem is increasing day by day around industrial and urban centers<sup>6</sup>. Water effluents that carry different metals are out into nearby rivers causing contamination of surface waters. Most of the metals are toxic. These toxic metals change the biological system into inflexible and irreversible deformity in the body and finally to death<sup>7</sup>. There are different methods for the removal of these toxic metals present in water and among them adsorption is a notable one<sup>8</sup>. A number of clean up



technologies have been put into practice. It can be achieved by potential microbial (anaerobic and aerobic) as well as physico chemical process such as coagulation, oxidation, adsorption, and membrane processes<sup>9</sup>. Among these processes adsorption is a natural process. Activated carbons are carbonaceous materials that can be distinguished from elemental carbon by the oxidation of carbon atoms found on the outer and inner surfaces. These materials are characterized by their extraordinary large specific surface areas, well-developed porosity and tunable surface-containing functional groups<sup>10</sup>. For these reasons, activated carbon are widely used as adsorbents for the removal of organic chemicals and metal ions of environmental or economic concern from air, gases, potable water and wastewater<sup>11</sup>.

Among the various known forms of pollution, water pollution is of great concern since water is prime necessity of life and extremely essential for the survival of all living organisms<sup>12</sup>. However, years of increased industrial, agricultural and domestic activities have resulted in the generation of large amount of waste water containing a number of toxic pollutants, which are polluting the available fresh water continuously<sup>13</sup>. With the realization that pollutants present in water adversely affect human and animal life, Domestic and industrial activities, Pollution control and management is now a high priority area. The availability of clean water for various activities is becoming the most challenging task for researchers and practitioners worldwide<sup>14</sup>.

As a result of serious efforts of researches all over the world in the field of pollution control and management, the number of methodologies with varying degrees of success has been developed to manage water pollution<sup>15</sup>. Some of them involve coagulation, foam flotation, filtration, ion exchange, sedimentation, solvent extraction, adsorption, electrolysis, chemical oxidation, disinfection, chemical precipitation and membrane process. Among various available technologies for water pollution control listed above, 'Adsorption' process is considered better as compared to other methods because of convenience, easy operations and simplicity of design. Further, this process can remove/minimize different type

of pollutants and thus it has a wider applicability in water pollution control<sup>16</sup>.

Although certain phenomenon associated with adsorption were known in ancient times, the first quantitative studies were reported by C.W.Scheele in 1773 on the uptake of gases by charcoal and clays. This was followed by Lowitz observations who used charcoal for decolorization of tartaric acid solutions. Larvitz in 1792 and Kehl in 1793 observed similar phenomenon with vegetable and animal charcoals, respectively<sup>17</sup>. However, the term 'Adsorption' was proposed by Bois-Reymond but introduced into the literature by Kayser. Ever since then, the adsorption process has been widely used for the removal of solutes from solutions and gases from air atmosphere. Activated carbon has undoubtedly been the most popular and widely used adsorbent in waste water treatment throughout the world<sup>18</sup>. Charcoal, the forerunner of modern activated carbon has been recognized as the oldest adsorbent known in wastewater treatment. Its ability to purify water dates back to 2000 B.C. Lowitz established the first use of charcoal for the removal of bad tastes and odors from water on an experimental basis in 1789-1790. The credit of developing commercial activity carbon however goes to Raphael von Ostrejko whose inventions were patented in 1900 and 1901. Early applications of carbon in water treatment plant to remove chlorophenolics were reported by Baylis in U.S. and Sierp in Germany in 1929<sup>19</sup>.

## Materials and Methods

In present study three sampling stations were selected on the basis of their importance. The Sample collected in month of March-April & Aug-sept 2014 from three different sites were analysed for Physicochemical parameters included pH, Temperature, Electrical conductivity, T.D.S (Total dissolved solid), D.O (Dissolved oxygen), C.O.D (chemical oxygen demand) and B.O.D (Biological oxygen demand), selected heavy metals before and after addition of adsorbent (Activated Charcoal) were analysed<sup>20,21</sup>.

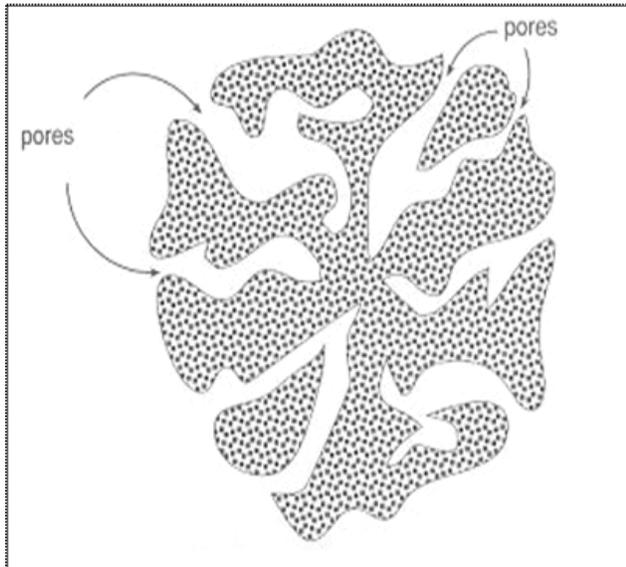


Fig. 1: Atypical carbon particle has numerous pores that provides large surface area.



Fig. 2: Activated Charcoal

### Study Area (Powai Lake)



Fig. 3: Powai Lake, Mumbai

### Methods of Water Sampling

Water samples for Physicochemical parameters were collected from a depth of 1 meter of water. Before sampling 3L polythene bottle were rinse with 0.1N chromic acid then washed twice with distilled water. The samples are collected up to the brim, without leaving

any space so as to prevent the premature release of dissolved gases during the transit period<sup>22</sup>. The Physicochemical analysis was done according to APHA standard method for examination of water and waste water<sup>23</sup>. For heavy metal analysis water samples were acidified with conc.HNO<sub>3</sub> to pH < 2.AAS-ICP-AES were used for analysis of selected heavy metal. As adsorbent



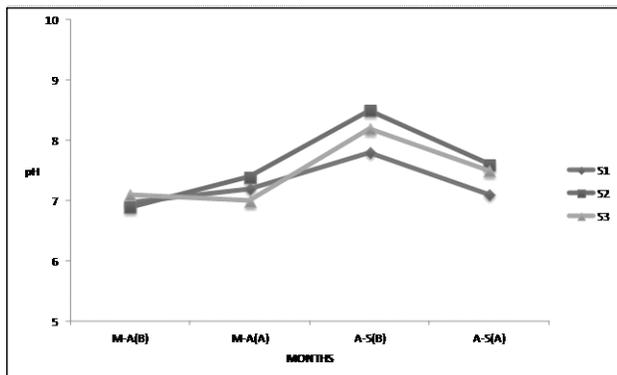
activated Charcoal (Laboratory Grade MERCK) is employed. The concentration of activated Charcoal ranging from 1g-2g is used. It was kept for 24 hrs and observation were taken after 24 hrs.

**Table 1: List of techniques for the analysis of required parameters**

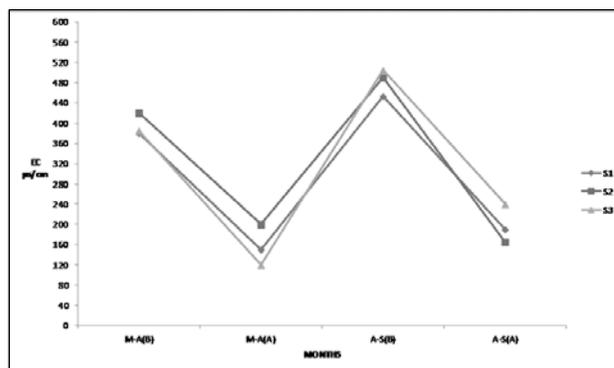
Parameters of water analysis	Methods
Temperature	Reverse thermometer
pH	pH-meter
Conductivity	Conductometric method
D.O	Winkler method
C.O.D	Dichromate reflux
B.O.D	Azide modification
TDS	Argentometric
Selected heavy metals	AAS-ICP-AES

### Results and Discussions

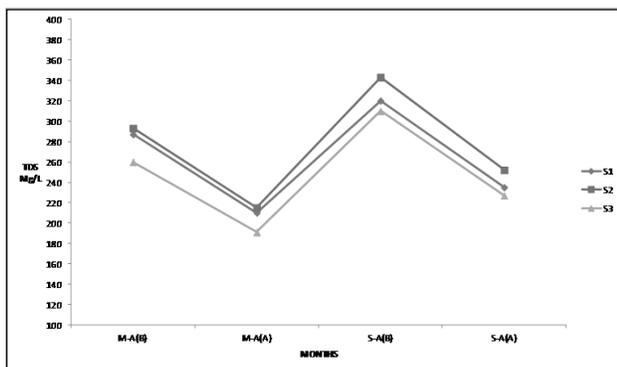
The results of parameter are explained with the help of graphs as mentioned below.



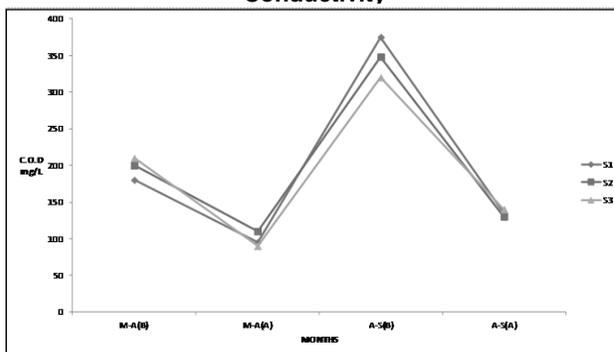
**Fig. 4: Effect of Activated charcoal on pH**



**Fig. 5: Effect of Activated Charcoal on Electrical Conductivity**



**Fig. 6: Effect of Activated charcoal on TDS**



**Fig. 7: Effect of Activated charcoal on C.O.D**

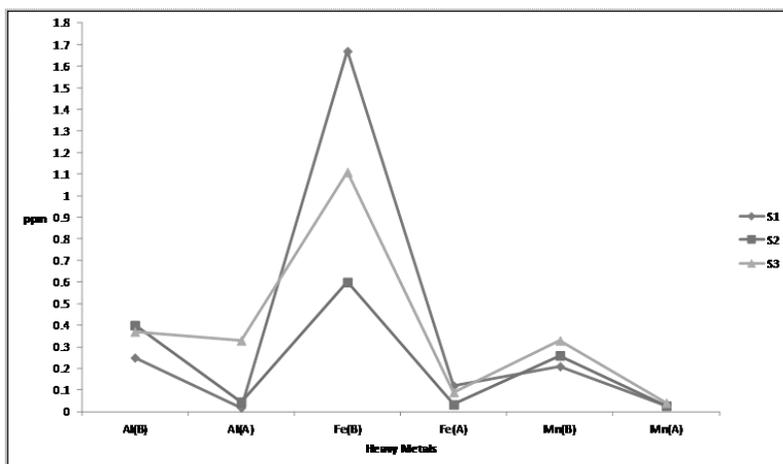


Fig. 8: Effect of activated charcoal on Fe, Mn, and Al.

## Conclusion

Activated charcoal is one of the most important adsorbent that can be employed for reduction of pollutants in polluted water. The use of AC perhaps the best broad spectrum control technology available at present moment. The process of adsorption is influenced by the length of time that AC is in contact with the contaminants in the water & amount of adsorbent. Adsorption with activated charcoal is not only economic but requires less maintenance and supervision.

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## Growth in Financial Inclusion

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### Abstract

*In order to reduce poverty and boost the prosperity of the nation, financial inclusion helps in providing financial services at reasonable cost to the lower section of the society. Relevant regulatory framework structure and modes of delivery helped the people to overcome the barrier. Financial inclusion helps to increase the volume and rate of savings by supplying diversified portfolio of financial instruments, offering investment inducements and choice based on savers preferences. This paper describes the structure of banking and microfinance institutions in India relevant to the developing model of financial inclusion. It assesses and improving financial literacy in today's context.*

**Keywords:** Swabhimaan Campaign, Universal access, Micro Finance, Swavlamban (Pension Scheme), Direct Benefit Transfer, National Financial Education Strategies (NFES)

### Introduction

Even after 70 years of independence, a large section of Indian population still remains unbanked. The concept was first mooted by RBI in 2005. In the year 2011, the government of India gave a serious push to the programme by undertaking the “Swabhimaan” campaign to cover more than 74,000 villages with more than 2000 banking facilities. Comprehensive financial inclusion incorporates ensuring access to financial service and timely and adequate credit to the weaker sections.

The present scenario reflects that one segment of the population has access to assortment of banking services. While the other segment of lower income group is totally deprived of even basic financial services. Financial inclusion has a drastic impact on the overall economic development of a country.

### Objective

1. Universal access to Banking facilities
2. Launching of financial literacy programmes
3. Providing Basic Banking accounts with overdraft and RuPay Debit card
4. Creation of credit guarantee fund
5. Introducing Micro Insurance for lower segments of society
6. Unorganized sector pension schemes like Swavlamban



## Challenges faced in the implementation

**1. Coverage of different areas:** Parts of North East, Himachal Pradesh, Uttarakhand, Jammu & Kashmir and 82 areas left being extremism districts face challenges of infrastructure besides telecom connectivity.

**2. Telecom Connectivity:** Feedback from the banks is that in tribal and hilly areas of the country, the telecom network is not reliable. Therefore banks should utilize the National Optical fibre Network (NOFN) when it reaches the panchayat level.

**3. Awareness:** In order to achieve a “demand” side, it is essential that there should be awareness in Business correspondent model for providing basic banking services.

**4. Keeping the accounts ‘LIVE’:** It is very much necessary that all government benefits should flow to these accounts as duplicity has observed and sometimes states have not followed the service area. The DBT (Direct Benefit Transfer) schemes need to be pushed and BDT in LPG (Liberalization Privatisation Globalization) needs to be restarted.

## Role of major Stakeholders

1. Role of department of financial services
2. Role of other Central Government Departments
3. Role of Reserve Bank of India
4. Role of all Banks
5. Role of Indian Banks’ Association
6. Role of NABARD
7. Role of State Government
8. Role of SLBC (State Level Bankers’ Committee)
9. Role of Local Bodies
10. Role of NPCI (National Payment Corporation of India)

Around 2 billion people don’t use formal financial services and more than 50% of adults in the poorest households are unbanked.

## Strategies for growth in financial Inclusion

1. After technical assistance to design its time for the implementation national or subnational roadmaps and action plans to achieve their objectives.
2. To promote the use of electronic payments schemes as well as to reduce leakages related to corruption and fraud.
3. Improve NPS (National Payment Systems)
4. Increase diversification in financial services so that more individuals gets attracted, with which they get a pathway to full financial inclusion.
5. To take advantage of ‘Fintech’ leverage the technology for financial inclusion.
6. Expand over the points support regulatory & supervisory reforms to open up access for banks and non-banks.
7. For the growth of financial inclusion government should build legal and regulatory framework for consumers to encourage them by protecting, transparency and earning capacity.
8. Government should design National Financial Education Strategies (NFES) to evaluate financial capability programmes.

## Conclusion

Financial inclusion is not a one time effort; it is an ongoing process. It requires a major mind-set change in the minds of every individual involved – banker, bureaucrat, and regulator, therefore creating awareness at all levels. Multipurpose “smart cards” can simplify

the financial inclusion process to reach the unreached.

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## Professionalisation of Management : A Case Study of Urban Cooperative Banks of Delhi State

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### **Abstract**

*Professionalization of management in cooperative banks is nowadays a burning issue in the way of competing their counterparts. The present study deals with the effectiveness of training and development programmes of these banks. There are 19 Cooperative banks including Urban Cooperative Banks of Delhi State. The main objective of the study is to identify the institutional framework for imparting training and developments programmes to all levels of management in these banks. Since the composition of Board of Directors in these Banks are not as per the requirement of RBI and directives of Registrar of Cooperative Societies. They are even not graduate and belongs to the some political parties. The present study also discloses the problems in the way of professionalization of management in these banks in detail.*

**Keywords:** *Professionalisation of Management, Urban Cooperative Banks, Training and Development Programmes.*

### **Introduction**

Genesis and growth of Urban Cooperative Banks of the Delhi State can be traced from the establishment of Delhi Provincial Cooperative Bank in 1921 which later become the Delhi State Cooperative Union Territory of Delhi now the state. It is the banker's bank and it is the patron of all Urban Cooperative bank of Delhi State. Efficiency or Competency of the management can be realized if suitable types of persons at different levels are given right type of training and education. Such professionalization of management means education and training to all members at each level of management in an organization such as General Body, Board of Directors, Chief Executive Officer and its sub

committees for the performance of their functions efficiently.

### **Objectives of the study**

Following are the objectives of the present study:

- a. To analyse present scenario of professionalization of management in Cooperative banks of Delhi State.
- b. To examine the training and educational framework of various institutions involved in imparting training and development of these banks.
- c. To measure the effectiveness of training and development programme at all levels of management in Cooperative banks of Delhi State.

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**Research Methodology**

The research methodology used for this study comprised of descriptive-cum-analytical research with case study. For this purpose, primary and secondary data and information have been collected and the application of economic reasoning, accounting theory, statistical methods and management principles have been made to illuminate the problem.

In order to collect the primary information, structured non-disguised questionnaires were developed for officials of RBI, Training Institutes and individuals Urban Cooperative Banks Separately and through detailed interview as well as discussion on various aspects related to this study. The annual reports of various Cooperative banks, journals and magazines relating to Cooperative sector Government department reports have been analyzed various committee reports like Mclagan Committee, Narasimhan Committee, Khusro Committee, Madhav Das Committee, Marathe Committee etc. were utilized.

**Institutional Framework in professionalisation of Management**

The infrastructure for imparting training to all categories of cooperative personnel has been planned and developed as a results of far reaching recommendation made by Mclagan Committee on Cooperation (1915) Royal Commission on Agriculture (1928), Cooperative Planning Committee (1945), Central Committee for Cooperative Training (1953) Study Team on Cooperative Training (1960) and by the informal expert group on Cooperative education training & Research (1974).

- a. Reserve Bank of India
- b. National Council for Cooperative Training
- c. National Federation of Urban Cooperative Banks and Credit Society Ltd. (NAFCUB)
- d. National Bank for Agriculture and Rural Development (NABARD)

- e. International Cooperative Alliance (ICA), N.Delhi
- f. Delhi State Cooperative Training Centre
- g. Bank Themselves
- h. National Cooperative Union of India (NCUI)
- i. VAMMICOM, PUNE
- j. Registrar of Cooperative Societies (RCS)

**Problems in professionalisation of Management**

Following problems are traced out during the course of the present study relating to professionalization of management in cooperative banks of Delhi State.

- a. The Urban Cooperative banks do not spare their staff for training as they do not have sufficient staff to manage their normal work in absence of so called deputed trainees and have no financial stability to pay their salaries during training period.
- b. It is also found that right type of adequate number of qualified personnel i.e. lecturers, Instructor etc. are not available in the training Institute.
- c. Lack of proper facilities and infrastructure create the academic hindrances for full utilization of these work of these training institutes.
- d. There is a lack of coordination between training institute at the state level i.e. DSCTC and training institute at national level i.e. NCCT.
- e. The duration of the training programmes conducted by DSCTC is very short, for instance 13 weeks and 16 weeks.
- f. The training institutes / centres do not get copies of the circulars or orders well in advance issued by RCS and RBI from time to time regarding training programmes.
- g. The Cooperative bank does not have a body of knowledge of its own which a stepping stone toward professionalism. The Urban Cooperative banks



- of Delhi State are not exception of this.
- h. The unwarranted and unnecessary interference of the RCS and his role in the prevailing administrative set up is the hindrance in the way of making the management of cooperatives more professionalized.
  - i. In the absence of clear cut demarcation of the roles, functions and powers of Board of Directors, CEOs and paid executive the Urban Cooperative Bank fail to introduce professionalisation of management.
  - j. The service condition, work environment, lack of welfare facilities at various levels of the management, absence of better customer services, computer less functioning etc. are various factors that contribute in poor functioning and performance of these banks.
  - k. There is no prescribed educational qualification for the Board of Directors. They are not even graduates. They are not familiar with the principles and practice of banking business and its legal requirements. Some of them are from political background, social workers, school and college teachers, agriculture sector etc. not having knowledge of management, business and banking.
  - l. It has been revealed from the facts that the participation of paid management in various seminars, training programmes, time bound courses and workshop etc. is absolutely nil because of the lack of interest and indifference of these policy makers towards such programmes.
  - m. The minimum educational qualification prescribed for clerical staff in many urban cooperative banks of Delhi state is generally a secondary school certificate and graduation for the post of officers. The faculty recruitment policy for paid management do not attract the efficient and competent in the bank.
  - n. It has been found the lack of accountability at each level of management due to their inherent weakness is also affecting adversely the management of these banks.
  - o. One of the main problems confronting the Urban Cooperative banks is that well qualified and experienced professionals do not enter in these banks because of low pay and perks, lesser freedom and autonomy, too much of external interference in their day-to-day functioning, improper work culture, absence of conducive environment, non adherence to the established rules and regulations, absence of prompt decision making etc.
- It is evident from the above discussion that professionalization of management in Urban Cooperative banks has been a neglected aspects which is mainly responsible for poor state of affairs in these banks.

### Findings and Conclusions

In the context of promoting professional management, the study finds that there should be a continuous emphasis on training and retraining of bank staff and their exposure to latest trends in banking will be an essential component in promoting operational efficiency in Urban Cooperative banks of Delhi State. The management of such banks have to be trained in proper appraisal of loan application and follow up utilization of loan application and follow up utilization of such loans for the specified objectives. Professional manages will have to think globally and act locally by focusing their attention on competition with institutions in the banking industry. There is a need for recruiting trained and professional staff in the Board of Directors and CEOs.

While interviewing the staff of the banks it has been found that whenever they find a better career prospect in some other organisation with high rank, they leave the former organisation and join the later. This attitude does not develop the interest for training amongst the staff. It has also been observed during the survey of these banks that most of the supervisory and subordinate level staff of the urban co-operative banks of Delhi state have not been provided the training as per the training module developed by Delhi State Co-operative training Centre, New Delhi.

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A thorough analysis of the working of urban co-operative banks of Delhi state shows that there are a number of obstacles in the way of the professionalization of management of banks owned by financially weaker sections and therefore, the elected management is expected to render the service of managing and controlling the affairs of the bank without any remuneration. In the absence of proper education and training and clear demarcation of functions between the Board of Directors and the Chief Executive Officer, the Chairman and Directors sometimes conduct operational parts of management also leading to their involvement in the day-to-day execution of the policies. It leads to confrontation with salaried management and also the involvement of vested interests. In spite of all efforts made by Delhi State Co-operative Training Centre, New Delhi, at state level and National Council for Co-operative Training at national level, the education and training programmes to various levels of management of these banks could not be fully utilised. These banks do not spare their staff for training as they do not have sufficient staff to manage their normal work. It has also been found that adequate numbers of qualified personnel i.e. lecturers and instructors are not available at the training centres. Lack of proper training facilities and infrastructure and the co-ordination between the training institute at state level i.e., Delhi State Co-operative Training Centre, New Delhi, and national level i.e., National Council for Co-operative Training also cause a problem in professionalization of their management. The management information system is not effective in urban co-operative banks of Delhi state and problems arise in respect of proper and timely reporting and there is no efficient monitoring cell in these banks to look after the reports and data.

In order to overcome or minimise the above stated problems and obstacles it is necessary to provide better, result oriented and improved training facilities. Training institutes should also have adequate physical facilities, training equipments, teaching aids, proper material, relevant literature and above all congruent atmosphere. Trainers must possess adequate knowledge of the subject they teach, ability to deliver, aptitude for teaching and

use of techniques appropriate to the subjects and to the trainees.

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## Challenges in Human Resource Management in Banks

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### **Abstract**

*The banking industry in India has a huge canvas of history, which covers the traditional banking practices from the time of Britishers to the reforms period, nationalization to privatization of banks and now increasing numbers of foreign banks in India. Therefore, Banking in India has been through a long journey. Banking industry in India has also achieved a new height with the changing times. The use of technology has brought a revolution in the working style of the banks. Nevertheless, the fundamental aspects of banking i.e. trust and the confidence of the people on the institution remain the same. The majority of the banks are still successful in keeping with the confidence of the shareholders as well as other stakeholders. However, with the changing dynamics of banking business brings new kind of risk exposure.*

*This paper analyses the challenges faced by the Indian banks and the solutions to the problems.*

**Keywords:** Banking, Retention, Economic Reforms, Financial Inclusion, Challenges

### **Introduction**

In recent time, we have witnessed that the World Economy is passing through some intricate circumstances as bankruptcy of banking & financial institutions, debt crisis in major economies of the world and euro zone crisis. The scenario has become very uncertain causing recession in major economies like US and Europe. This poses some serious questions about the survival, growth and maintaining the sustainable development.

However, amidst all this turmoil India's Banking Industry

has been amongst the few to maintain resilience. The tempo of development for the Indian banking industry has been remarkable over the past decade. It is evident from the higher pace of credit expansion, expanding profitability and productivity similar to banks in developed markets, lower incidence of non-performing assets and focus on financial inclusion have contributed to making Indian banking vibrant and strong. Indian banks have begun to revise their growth approach and re-evaluate the prospects on hand to keep the economy rolling.

The main challenges faced by Banks in our country are the role played by financial instrumentation in different phases of business cycle, the emerging compulsions of the new prudential norms and bench marking the Indian financial system against international standards and best practices. There is a need for introduction of new technology, skill building and intellectual capital formation.

### Objectives of the Study

1. Challenges Faced by Indian Banking Industry
2. To find the solution to the challenges faced.

### Challenges faced by Indian Banking Industry

Developing countries like India, still has a huge number of people who do not have access to banking services due to scattered and fragmented locations. Since, foreign banks are playing in Indian market, the number of services offered has increased and banks have laid emphasis on meeting the customer expectations. Now, the existing situation has created various challenges and opportunity for Indian Commercial Banks. In order to encounter the general scenario of banking industry we need to understand the challenges of banking industry of India.

#### 1. Rural Market

Banking in India is generally fairly mature in terms of supply, product range and reach, even though reach in rural India still remains a challenge for the private sector and foreign banks. In terms of quality of assets and capital adequacy, Indian banks are considered to have clean, strong and transparent balance sheets relative to other banks in comparable economies in its region. Consequently, we have seen some examples of inorganic growth strategy adopted by some nationalized and private sector banks to face upcoming challenges in banking industry of India.

#### 2. Management of Risks

The growing competition increases the competitiveness among banks. But, existing global banking scenario is

seriously posing threats for Indian banking industry. We have already witnessed the bankruptcy of some foreign banks.

According to Shrieves (1992), there is a positive association between changes in risk and capital. Research studied the large sample of banks and results reveal that regulation was partially effective during the period covered. Moreover, it was concluded that changes in bank capital over the period studied was risk-based.

#### 3. Growth of Banking

It was found in the study of Goyal and Joshi (2011) that small and local banks face difficulty in bearing the impact of global economy therefore, they need support and it is one of the reasons for merger. Some private banks used mergers as a strategic tool for expanding their horizons. There is huge potential in rural markets of India, which is not yet explored by the major banks. Therefore ICICI Bank Ltd. has used mergers as their expansion strategy in rural market. They are successful in making their presence in rural India. It strengthens their network across geographical boundary, improves customer base and market share.

#### 4. Market Discipline and Transparency

According to Fernando (2011) transparency and disclosure norms as part of internationally accepted corporate governance practices are assuming greater importance in the emerging environment. Banks are expected to be more responsive and accountable to the investors. Banks have to disclose in their balance sheets a plethora of information on the maturity profiles of assets and liabilities, lending to sensitive sectors, movements in NPAs, capital, provisions, shareholdings of the government, value of investment in India and abroad, operating and profitability indicators the total investments made in the equity share, units of mutual funds, bonds, debentures, aggregate advances against shares and so on.

#### 5. Human Resource Management

Gelade and Ivery (2003) examined relationships between human resource management (HRM), work climate, and



organizational performance in the branch network of a retail bank. Significant correlations were found between work climate, human resource practices, and business performance. The results showed that the correlations between climate and performance cannot be explained by their common dependence on HRM factors, and that the data are consistent with a mediation model in which the effects of HRM practices on business performance are partially mediated by work climate.

### 6. Global Banking

It is practically and fundamentally impossible for any nation to exclude itself from world economy. Therefore, for sustainable development, one has to adopt integration process in the form of liberalization and globalization as India has spread the red carpet for foreign firms in 1991. The impact of globalization becomes challenges for the domestic enterprises as they are bound to compete with global players. If we look at the Indian Banking Industry, then we find that there are 36 foreign banks operating in India, which becomes a major challenge for Nationalized and private sector banks.

### 7. Financial Inclusion

Financial inclusion has become a necessity in today's business environment. Whatever is produced by business houses, that has to be under the check from various perspectives like environmental concerns, corporate governance, social and ethical issues. Apart from it to bridge the gap between rich and poor, the poor people of the country should be given proper attention to improve their economic condition. The study suggested that this requires new regulatory procedures and de-politicization of the financial system.

### 8. Employees' Retention

The banking industry has transformed rapidly in the last ten years, shifting from transactional and customer service-oriented to an increasingly aggressive environment, where competition for revenue is on top priority. Long-time banking employees are becoming disenchanted with the industry and are often resistant to perform up to new expectations. The diminishing employee morale results in decreased revenue. Due to

the intrinsically close ties between staff and clients, losing those employees completely can mean the loss of valuable customer relationships. The retail banking industry is concerned about employee retention from all levels: from tellers to executives to customer service representatives because competition is always moving in to hire them away. The competition to retain key employees is intense. Top-level executives and HR departments spend large amounts of time, effort, and money trying to figure out how to keep their people from leaving.

### 9. Customer Retention

Levesque and McDougall (1996) investigated the major determinants of customer satisfaction and future intentions in the retail bank sector. They identified the determinants which include service quality dimensions (e.g. getting it right the first time), service features (e.g. competitive interest rates), service problems, service recovery and products used. It was found, in particular, that service problems and the bank's service recovery ability have a major impact on customer satisfaction and intentions to switch.

### 10. Environmental Concerns

It is quite clear from the recently formed Copenhagen Climate Council (CCC) that there is a severe need for environmental awareness among all the countries of the world. CCC published Thought Leadership Series on Climate Change which is a collection of inspirational, concise and clearly argued pieces from some of the world's most renowned thinkers and business leaders on climate change. The objective of the pieces is to assist in enhancing the public and political awareness of the actions that could have a significant impact on global emissions growth and to disseminate the message that it is time to act. The Thought Leadership Series was aimed at explaining and spreading awareness of the key elements in the business and policy response to the climate problem. The rationale for the Thought Leadership Series was to change the focus of people.

### Meeting HR Challenges

The banking sector has been growing at a very fast pace in India not only in the terms of its size but also in terms of the services being provided. With banks reaching the remote areas in the country one can anticipate positive things like financial aid to farmers and increased financial awareness. However, with the increase in size and activities of banks, the number of banks in private sectors has also increased thereby posing challenges like cost-efficiency, technological advancement, and credibility related issues. The task before the HR is to develop strategies that help banks in gaining competitive advantage and encourage innovation in its products and services.

### Managing Human Resource

Considering the above HR challenges which our Indian banking industry is facing, we can manage the human resources by proper planning like

- ❖ Hiring the right person for the right job
- ❖ Retaining and Developing
- ❖ Managing people/conducting exit interviews

### Hiring the Right Person for the Right Job

In assessing whether the “right person” has been selected for the “right job”, the most prominent theoretical concept that emerges is the concept of “fit”. Different writers emphasize different types of fit. Sekiguchi (2004: 179) in a review of literature on person-environment fit discusses two types of fit that emerge as the most prominent types of fit: person job fit and person-organization fit. In pursuing person-job fit, companies seek to match the job holder’s knowledge, skills and abilities to the requirements of the job. Companies can ascertain person-organization fit by focusing on how well the individual fits with the culture or values of the company and the individual’s capacity to work well with other company employees. Banks will have to plan for the following:

- A steady, carefully calibrated recruitment programme,
- As rapid technological changes transform business – continuous skill up-gradation.

- A new generation of the workforce will be working alongside an older generation as a team. Banking, in my opinion is a team work and this new situation will require cultural adjustments and therefore, change management.

### Retaining and developing Employees

We may be able to get the most suited people for our work but then the challenge is to retain these people and to develop them. There are several dimensions to this issue such as training/ re-skilling of employees, performance measurement, promotion policy, transfer policy, talent management, communication, etc. few are mentioned below:

### Training and Development

With drastic growth of banks it calls for efficient and well trained staff members to handle/deal with the consumer needs. Banks are shaping up as financial hub for their clients to grow in size and well recognized in the world market. To pull consumers banks are offering traditional with advance services like SMS banking, ATM, internet banking, priority banking, demat. So we can say that it caters to the need of the bottom to the highest class of society providing something to everyone. Universal banks have become modern day’s supermarket extending almost every facility of banking under one roof.

### Performance Management

Banking service is one sector where a great degree of attention is being paid to performance appraisal system. Several of the nationalised banks have changed their performance appraisal system or are in the process of changing them. In most of the banks that follows the traditional system, their officers are being assessed on the following characteristics:

- General Intelligence
- Job Knowledge
- Initiative and resourcefulness
- Supervision
- Business Capacity
- Ability to assess sound



Several of the banks also have self-appraisal as a part of performance appraisal, although mostly such self-appraisal is more of a communication of achievements. A fair, transparent and objective mechanism for performance management is a must for all banks because an effective Performance Management System is the key to talent management and succession planning.

### Conclusion

To conclude, Organizations all over are rushing to implement the latest ideas on management, sometimes to the point of overuse. The major challenge now for banks as well as any other organization is therefore how to develop their social architecture that generates intellectual capital as the quintessential driver of change. Developing the individual or human capacity is an integral element of building capacity and, in fact, capacity building initiatives are now increasingly becoming almost an index of institutional quality. Taking the banking industry to the heights of excellence, especially in the face of the a forehead-detailed emerging realities, will require a combination of new technologies, better processes of credit and risk appraisal, treasury management, product diversification, internal control and external regulations and, not the least, human resources. Over the years, it has been observed that clouds of trepidation and drops of growth are two important phenomena of market, which frequently changes in different sets of conditions. The pre and post liberalization era has witnessed various environmental changes which directly affects the aforesaid phenomena. It is evident that post liberalization era has spread new colors of growth in India, but simultaneously it has also posed some challenges.

### Suggestions

As per the above discussion, we can say that the biggest challenge for banking industry is to serve the mass market of India. Companies have shifted their focus from product to customer. The better we understand our customers, the more successful we will be in meeting

their needs. In order to mitigate above mentioned challenges Indian banks must cut their cost of their services. Another aspect to encounter the challenges is product differentiation. Apart from traditional banking services, Indian banks must adopt some product innovation so that they can compete in gamut of competition. Technology up gradation is an inevitable aspect to face challenges.

The level of consumer awareness is significantly higher as compared to previous years. Now-a days they need internet banking, mobile banking and ATM services. Expansion of branch size in order to increase market share is another tool to combat competitors. Therefore, Indian nationalized and private sector banks must spread their wings towards global markets as some of them have already done it. Indian banks are trustworthy brands in Indian market; therefore, these banks must utilize their brand equity as it is a valuable asset for them. With liberalisation of activities within the banking sector, for example, more emphasis on consumer and house finance and personal loans, etc. Banking has turned itself into a more market based business where banks have expanded their reach more to customer's door step in a big way making banking more practical. This has further highlighted the need for proper development of man power to run banks efficiently.

Smart banks have realized this need and have taken steps to keep their workforce motivated through proper encouragement like man of the month award, repeat get-together, conferences, sports events, dinners, company sponsored travel, reunions etc.

In spite of all these facilitations there still exist several lacunas in the HRM practices in banking industry. Some of the suggestions are given as follows:

- There should be a balanced compromise between organizational need and individual need.
- While there must be rewards for performance, non-performance must be punished/ reprimanded. Promotions must be only on merit.

## Challenges in Human Resource Management in Banks

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- There must be uniform, impartial and balanced “employee performance review system.” This system in fact needs a total review.
  - Enthusiastic and pleasant behaviour of staff to the customer is necessary.
  - There must be a clearly defined system of succession planning and career growth planning in banks.
  - In order to become HRD conscious, the Public Sector Banks should allow independent functioning of HRD section, where the top person should be himself a good successful banker, a real HRD person free from any biases.
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## Evolution of “Corporate Social Responsibility” Reporting Requirements under Law - A Case Study of Cipla Limited

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### Abstract

*Capital market depends on CSR reports disseminated by companies from time to time. It is important to note as to how CSR reporting requirements for companies have been evolving over the years. For the first time an attempt towards legislation was made by the Ministry of Corporate Affairs (MCA) in the year 2009, when the CSR voluntary guidelines-2009 were released in the areas of society, environment and economics.*

*2<sup>nd</sup> attempt towards legislation was made when “National Voluntary Guidelines On Social Environmental and Economic Responsibilities of Business – 2011” were released. National Voluntary Guidelines 2011 contained NINE Principles the adoption of which will improve the ability of businesses to enhance their competitive strength, improve their reputation, improve their ability to attract and retain talent and manage their relations with investors and society at large.*

*The Companies Act, 2013 introduced path breaking provision on CSR which came into effect from 1<sup>st</sup> April 2014. The aspect to be covered in the CSR report of the firms as per the companies act 2013 guidelines include the CSR philosophy and the policy of the firm, CSR activities undertaken by the firm, composition of the CSR committee, prescribed CSR expenditure, details of CSR spent and the responsibility statement.*

*The Evolution of the above CSR reporting requirements under law has been studied with special reference to CSR report 2012-13 and CSR report 2015-16 of “Cipla Limited – Caring for Life”. Using the techniques of content analysis this study looks in the CSR reports of Cipla Limited (2012-13 and 2015-16) to identify the extent and nature of social reporting.*

**Keywords:** *Corporate social responsibility, stake holder, society, reporting*

### Introduction

Capital Markets depend on CSR Reports disseminated by companies from time to time. It is important to note as to how CSR reporting requirements for companies have been evolving over the years. A few key

evolutionary changes are discussed below:

#### **CSR Voluntary Guidelines-2009**

For the first time, an attempt towards legislation was made by the Ministry of Corporate Affairs (MCA) in

## **Evolution of “Corporate Social Responsibility” Reporting Requirements under Law - A Case Study of Cipla Limited**

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the year 2009, when the ‘CSR Voluntary Guidelines – 2009’ were released by the Ministry in the Government of India.

The Ministry decided to bring out a set of Voluntary Guidelines for responsible business, which would add value to the operations and contribute towards the long-term sustainability of the business and the interests of the stake holders and the society.

### **Objectives**

1. To study the evolution of CSR reporting requirements from 2009 to 2015.
2. To study the provisions on CSR through Companies Act, 2013.
3. To study the CSR report 2012-13 and 2015-16 of Cipla Limited.

### **Need:**

To understand the evolution of CSR reporting practices under law in the light of the case study of Cipla Limited. It also aims to study whether Cipla Limited practices the CSR reporting rules laid down in the Company’s Act, 2013.

### **Research Methodology:**

Literature review related to the topic has been collected from various secondary sources which include books, research papers, newspapers, magazines and websites for the purpose of the study. The report of Cipla Limited 2012-13 and 2015-16 is the main source of information to study the case.

### **Salient aspects of the Voluntary Guidelines – 2009**

Briefly, the salient aspects if these Voluntary Guidelines were as under:

- Care for all stakeholders (including shareholders, employees, customers, suppliers etc.) and creating value for all of them.
- Ethical functioning with focus on ethics, transparency and accountability.

- Respect for Workers Rights and Welfare by providing a workplace environment that is safe, hygienic and humane, while upholding the dignity of employees.
- Respect for human rights for all.
- Respect for environment including checking and preventing pollution and responding proactively to the challenges of climate change.
- Activities for social and inclusive development, targeting especially at disadvantaged sections.

### **National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business – 2011**

With feedback from stakeholders, the 2009 Voluntary Guidelines on CSR got evolved into a more comprehensive set of Guidelines that encompasses social, environmental and economic responsibilities of business in July, 2011. The objective of the new Guidelines was to make the Indian corporate sector evolve into global leader in business. The corporate sector was urged to focus its attention on achieving the ‘triple bottom line’ – people, planet and profit.

### **Principles and Core Elements in National Voluntary Guidelines**

Nine Principles & Core Elements contained in the National Voluntary Guidelines were as under:

1. Business should conduct and govern themselves with ethics, transparency and accountability.
2. Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle.
3. Businesses should promote the well-being of all employees.
4. Businesses should respect the interests of and be responsible towards not only shareholders, but also all stakeholders especially those who are disadvantaged, vulnerable and marginalized.
5. Businesses should respect and promote human rights.



6. Business should respect, protect and make efforts to restore the environment.
7. Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner.
8. Businesses should inclusive growth and equitable developments.
9. Businesses should engage with and provide value to their customers and consumers in a responsible manner.

### Companies Act, 2013

Companies Act, 2013 introduced path-breaking provisions on Corporate Social Responsibility (CSR) through Companies Act, 2013, which came into effect from 1 April 2014. Section 135 of the Companies Act, 2013 read with Rules as under:-

#### Companies covered

Every company having net worth of Rs.500 crore or more or turnover of Rs.1000 crore or more or a net profit of Rs.5 crore or more during any financial year.

#### Obligations for the companies covered

The companies covered shall constitute a CSR Committee consisting of 3 or more directors, of which at least one director shall be an independent director.

#### Requirements in the Board Report

The Board Report shall disclose the composition of the CSR Committee. The Board shall specify the reasons for not spending the amount, which a company is required to spend mandatorily towards CSR, if not so spent.

#### Role of CSR Committee

It shall (a) formulate and recommend to the Board a CSR Policy which shall indicate the activities to be undertaken. (b) recommend the amount of expenditure to be incurred on the activities referred to above (c) monitor the CSR Policy of the company from time to time. It shall also institute a transparent monitoring mechanism for implementation of the CSR projects.

#### Role of the Board

The Board of the company shall have the following roles:-

- (a) After taking into account the recommendations made by the CSR Committee, it shall approve the CSR Policy for the company and disclose the contents of such Policy in its report and also place it on the company's website.
- (b) It shall ensure that the activities as are included in the CSR Policy of the company are undertaken by the company;
- (c) It shall ensure that the company spends in every financial year, at least 2% of the average net profits of the company made during the three immediately preceding financial years in pursuance of its CSR Policy;
- (d) It shall give preference to the local area and areas around it where it operates for spending the amount earmarked for CSR activities;

#### CSR Expenditure

CSR expenditure shall include contribution to corpus for projects or programs relating to CSR activities approved by the Board on the recommendation of the CSR Committee.

#### CSR Reporting

An Annual Report on CSR as per the prescribed format is required to be incorporated in the Board's Report every year.

The Rules provide for a format for such a Report covering the following items:-

1. A brief outline of the company's CSR Policy along with an overview of projects proposed to be undertaken and a reference to the web-link for more details.
2. Composition of CSR Committee.
3. Average Net Profit for the previous three financial years.
4. Mandatory 2% CSR expenditure (2% of amount in S.No.3)
5. Details of amount spent activity-wise on CSR during the financial year

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- a. Total to be spent for the year
- b. Amount unspent
- c. Details of amount spent in the prescribed manner i.e.
  - Project or activity identified
  - Sector in which the project is covered
  - Whether in local area or elsewhere
  - State and District where CSR undertaken
  - Budget for project
  - Amount spent on the project with break-up of Direct and Indirect
  - Cumulative expenditure on the project or program
  - Amount spent directly and through implementing agency with particulars of implementing agency
6. Reasons for spending less than 2%, if applicable.
7. Responsibility Statement of the CSR Committee that the implementation and monitoring of CSR Policy is in compliance with CSR objectives and policy of the company.

The Report is required to be signed by the CEO / MD and Chairman of CSR Committee.

### **Annual CSR Report Cipla Limited year 2012-13**

CORPORATE SOCIAL RESPONSIBILITY ‘Caring for Life’ is the chief purpose of doing business at Cipla. Corporate Social Responsibility (CSR) in the Company is, therefore, seamlessly integrated into its products, processes and people - the three key essentials for doing responsible business. The Company, in November 2012, announced a breakthrough price reduction on its three generic anti-cancer drugs – Erlotinib (Erlocip), Docetaxel (Docetax) and Capecitabine (Capegard) – by upto 64%. The drugs are used for treating lung and pancreatic cancer, breast cancer, head & neck cancer, gastric cancer, bladder, colorectal and colon cancers. Earlier in May 2012, Cipla had slashed prices by upto 76% on Sorafenib (Soranib), Gefitinib (Gefticip) and Temozolomide (Temoside), used in treating cancers of the kidney, lung and brain.

Further, ‘Cipla Palliative Care and Training Centre’ in Pune is a specialised endeavour to contribute to the cause of cancer treatment, especially to those terminally ill cancer patients who suffer from unbearable pain and need palliative care. The Centre has been offering free palliative care to such patients for the last 16 years. It has so far provided comfort and solace to more than 8500 patients.

Under the social development plan, the Company continues to support several community welfare health and educational activities. The manufacturing plants located in the states of Maharashtra, Goa, Karnataka, Himachal Pradesh, Madhya Pradesh and Sikkim have initiated a wide spectrum of human development activities. CSR initiatives in the Company are underpinned by five pillars – Education, Public Health, Occupational Health & Safety, Environmental Compliance and Employee Welfare. The Company supports Manavaya, a Pune based NGO engaged in the caring and rehabilitation of abandoned children living with HIV/AIDS. Manavaya is supported for running a mobile health care unit which reaches out to the poor and disadvantaged communities of 10 villages in the outskirts of Pune. Snehalaya, an NGO working with destitute women including sex workers and their children living with HIV/AIDS in Ahmednagar, Maharashtra is being financially supported for the construction of an English medium school which will provide education to more than 400 children of marginalised and vulnerable communities including children living with HIV/AIDS.

### **Annual CSR Report Cipla Limited year 2015-16**

#### **a) Philosophy and Policy**

‘Caring for life’ and ‘None shall be denied’ have been important elements of the business philosophy of Cipla Limited (‘Cipla’ or ‘the Company’) and remain the guiding principles for doing business at Cipla. This philosophy is seamlessly integrated into Cipla’s people, products and processes. The initiatives taken by the Company as a part of its various CSR programmes, effectively contribute to developing a sustainable and resilient community. The Company and its employees



are committed to improving the quality of life of the disadvantaged not only in communities where Cipla maintains a strong business presence, but also across the country.

#### b) Activities Undertaken

The Company's CSR projects are initiated and undertaken through:

- Cipla Foundation
- Cipla Cancer & Aids Foundation (CCAF) and
- NGO partners,

Cipla has collaborated with various institutions, government agencies, individuals, visionaries and domain experts on multiple projects to ensure social well-being. The Company's CSR spend has increased by 52% in FY 2015-16 over the previous year.

The Company undertakes CSR activities under the following themes:

- **Health:** Cipla aspires to support facilities to marginalised sections of the society by aiding diagnosis and treatments, promoting preventive healthcare, building awareness about sanitation, setting up and managing low cost rehabilitation centres, supporting medical camps, running mobile health vans, improving the health and nutrition status of children and providing pregnancy care by working with both the public health system and the communities
- **Education:** Cipla contributes to improving educational outcomes, by providing support at every stage of the child's learning cycle including, but not limited to, developing infrastructure for schools and educational centres, engaging with students and parents leading to development of a better community, promoting e-learning, reading initiatives, mobile science vans, sponsorships and merit awards.
- **Skill Advancement:** Cipla has supported skill building programmes, provided sponsorship to students for employability skill courses and proposes to structure skill development courses in the healthcare industry.

- **Disaster Response:** Cipla has been active in responding to natural disasters. It has reached out to the affected communities and supported medical services through health camps, aided child friendly spaces to provide a secure environment for the socio-emotional development and recovery of vulnerable children.

#### c) Governance and Monitoring Process

The implementation of CSR activities is undertaken under the guidance and direction of the Board of Directors.

#### Composition of CSR Committee,

Name	Category
Mr. M.K. Hamied (Chairman of the Committee)	Non-Executive Vice Chairman
Mr. Adil Zainulbhai	Independent Director
Ms. Punita Lal	Independent Director
Mr. S. Radhakrishnan	Whole-time Director
Mr. Subhanu Saxena	Managing Director and Global Chief Executive Officer

Average Net Profit of the Company for last three financial years (Average Net Profit calculated in accordance with the provisions of Section 198 of the Companies Act): 1,789.89 crore

Prescribed CSR Expenditure (two percent of the amount) Rs. 35.80 crore

Details of CSR spent during the financial year 2015-16

- Total amount to be spent for the financial year: Rs. 35.80 crore,
- Amount unspent, if any: 15.32 crore
- Manner in which the amount spent during the financial year is detailed below:

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Sr. No.	CSR project or activity identified	Sector in which the Project is covered (As per Schedule VII of the Companies Act, 2013, as amended)	Projects or Programmes (1) Local area or other (2) State and district	Total amount outlay	Amount spent in 2015-16 on the projects or programmes sub heads: (1) Direct expenditure on projects or Programmes (2) Overheads	Cumulative expenditure upto the reporting period 2015-16	Amount spent Direct or through implementing agency
1	Cipla Palliative Care and Training Centre	Health	(1) Warje, Pune (2) Maharashtra	9.33	(1) 3.43 (2) 0.17	9.33	Cipla Cancer & Aids Foundation
2	<b>Promoting Healthcare including Preventive Healthcare &amp; Sanitation</b> (Construction of Sanitation blocks, Detection and treatment of Developmental Disabilities, Eye Care camps, Healthcare services to the community, Medical support to Individuals, Mobile Health care services, Promoting Healthcare including Preventive Healthcare & Residential care and rehabilitation services)	Health & Sanitation	(1) Baddi, South Goa, Indore, Kurkumbh, Mumbai, Patalganga, Vikhroli & East Sikkim (2) Himachal Pradesh, Goa, Madhya Pradesh, Maharashtra & Sikkim	11.69	(1) 8.06 (2) 0.40	11.53	Cipla Limited & Cipla Foundation
3	Research studies and education on public health	Health	(1) Pune (2) Maharashtra	1.89	(1) 1.80 (2) 0.09	1.89	Chest Research Foundation
<b>Sub Total of Health &amp; Sanitation (A)</b>				<b>22.91</b>	<b>13.95</b>	<b>22.75</b>	
4	<b>Promoting education, including special education</b> (Education of underprivileged children from troubled background, Infrastructural support to School, Meritorious Awards, Promoting Education, Promoting Education in govt. schools, Sponsorship to Economically weaker Students, Sponsorship to Students, e-Learning & pre-school education)	Education	(1) Baddi, Bengaluru, South Goa, Indore, Kurkumbh, Mumbai, Patalganga, Vikhroli & East Sikkim (2) Himachal Pradesh, Karnataka, Goa, Madhya Pradesh, Maharashtra & Sikkim	5.60	(1) 2.80 (2) 0.14	5.43	Cipla Foundation
<b>Sub Total of Education (B)</b>				<b>5.60</b>	<b>2.94</b>	<b>5.43</b>	
5	Skill advancement	Skilling	(1) South Goa, Indore & Mumbai (2) Goa, Madhya Pradesh & Maharashtra	0.61	(1) 0.58 (2) 0.03	0.61	Cipla Foundation
<b>Sub Total of Skilling (C)</b>				<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	
6	<b>Rural development projects</b> (Rural development projects & Setting up old age and community hall for socially and economically backward groups)	Community Development	(1) Bengaluru, Kurkumbh, Patalganga & East Sikkim (2) Karnataka, Maharashtra & Sikkim	0.29	(1) 0.28 (2) 0.01	0.29	Cipla Foundation
<b>Sub Total of Community Development (D)</b>				<b>0.29</b>	<b>0.29</b>	<b>0.29</b>	



Sr. No.	CSR project or activity identified	Sector in which the Project is covered (As per Schedule VII of the Companies Act, 2013, as amended)	Projects or Programmes (1) Local area or other (2) State and district	Total amount outlay	Amount spent in 2015-16 on the projects or programmes sub heads: (1) Direct expenditure on projects or Programmes (2) Overheads	Cumulative expenditure upto the reporting period 2015-16	Amount spent Direct or through implementing agency
7	<b>Disaster response</b> (Medical relief, basic assistance material, medical camps, child friendly spaces)	Disaster response	(1) Kanchipuram, Cuddalore & Chennai (2) Tamil Nadu	1.79	(1) 1.61 (2) 0.09	1.70	Cipla Foundation
<b>Sub Total of Disaster response (E)</b>				<b>1.79</b>	<b>1.70</b>	<b>1.70</b>	
8	Environmental sustainability, ecological balance and conservation of natural resources	Environment	(1) South Goa, Indore & Patalganga (2) Goa, Madhya Pradesh & Maharashtra	0.26	(1) 0.14 (2) 0.01	0.26	Cipla Foundation
<b>Sub Total of Environment (F)</b>				<b>0.26</b>	<b>0.15</b>	<b>0.26</b>	
9	Others	Others	(1) Kanchipuram, Cuddalore, Chennai, Baddi, South Goa, Indore, Kurkumbh, Mumbai, Patalganga, Vikhroli, East Sikkim & Bengaluru (2) Tamil Nadu, Himachal Pradesh, Goa, Madhya Pradesh, Maharashtra, Sikkim & Karnataka	0.84	(1) 0.80 (2) 0.04	0.84	Cipla Foundation
<b>Sub Total of Others (G)</b>				<b>0.84</b>	<b>0.84</b>	<b>0.84</b>	
<b>Grand Total (A+B+C+D+E+F+G)</b>				<b>32.30</b>	<b>20.48</b>	<b>31.88</b>	

Although the Company has not met the prescribed CSR spend, the CSR expenditure has increased significantly from Rs.13.43 crore during FY 2014-15 to Rs.20.48 crore during FY 2015-16. Further, the Company has committed to increase expenditure for CSR initiatives in the coming years through structured programmes that are on-going and have a life cycle of three to five years.

For the next year, the Company has a clear road map for achieving the desired results enunciated in its CSR policy and endorsed by the CSR committee.

#### Responsibility Statement

Pursuant to the Companies (Corporate Social

Responsibility Policy) Rules 2014, as amended from time to time, it is confirmed that the CSR

Committee has implemented and monitored the CSR initiatives of Cipla in line with the CSR Objectives and Policy of the Company.

#### Findings

1. The CSR report 2012-13 is not a systematic mention of the CSR activities of Cipla. It merely gives an outline of the sporadic activities conducted.
2. The CSR report 2012-13 does not mention the expenditure on CSR activities and the names of the

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committee members.

3. 2015-16 report is a great improvement in the CSR reporting techniques made mandatory by the Company's Act, 2013.
4. The CSR activities undertaken by Cipla have expanded from merely health, environment and education in 2012-13 to include even sanitation, skilling, community development and disasters response in 2015-16.
5. The CSR report 2015-16 is more methodical, systematic and professional as compared to CSR report 2012-13.
6. Also there is greater transparency shown in the CSR report 2015-16 in terms of the amount spent of the specific projects and the cumulative expenditure.
7. Cipla limited has become more accountable and socially responsible as revealed by the CSR report 2015-16.

### **Suggestions**

1. Merely mentioning the names of the committee members is not sufficient. Reporting rules should also make it mandatory for companies to specifically describe the role of each committee member.
2. The activities not covered should also be mentioned. A mention of this in the report will pave away for the committee members to consider new activities in the future. Cipla Limited should try to enter into new CSR activities like provision of clean drinking water, rural development, adoption of villages and rain water harvesting.
3. India faces the problem of regional imbalance. The CSR reporting rules should make it mandatory for the companies to report about their contribution to the development of economically backward areas. Cipla CSR report 2015-16 mainly concentrates on areas of already developed states like Maharashtra, Karnataka, Goa and Pune. This can be a step towards achievement of inclusive growth.

4. Apart from CSR activities mentioned in annual reports, the CSR activities should also be highlighted by other mediums like TV, radio, magazines and newspapers. A mention of the use of these mediums should be made in the report. This will create awareness about the activities amongst non-shareholders.
5. The CSR reports should also report about the reasons of not spending the prescribed amount. The CSR report 2015-16 Cipla Limited only mentions that the prescribed amount has been spent but does not cite the reasons for not spending the prescribed amount.

### **Conclusion**

The CSR reporting puts a moral pressure on organisations to work towards social activities. It also helps spend the amount which they are expected to spend in a financial year, as company may not want to be shown as lacking in effort to reach the mandated amount of expenditure towards the CSR. In case of Cipla limited a company which was earlier satisfied with occasional charity work is now expanding the depth and width of the activities of CSR.

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## Transformation of Traditional Retailing to E-Retail: An Indian Outlook

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### Abstract

*E-retail sector is in a big boom and has shown high exponential growth in the concluded years. Online shopping has incline to a great extent in the tier I cities and very soon the tier II and tier III cities are catching up very fast with the piercing of internet and mobile telephony in the remote rural areas. The vulnerability of the changing demographics, varying lifestyles, increasing income and internet exposure act as a great attraction to the e-retailing sector. This paper deals with exploration of challenges in the e-retailing industry of India, and how innovators are constantly coming up with novel ideas to keep the customer interested. The study reveals the high growth drivers to boost the Indian e-retail industry as a whole and study the critical success factors which are essential for the potential growth of e-retailing in India.*

**Keywords:** e-tailing, web portals, online shopping.

### Introduction

Indian retail industry is the fifth largest in the world. It is one of the most encouraging sectors in Indian economy that comprises about 14-15% of the nation's GDP. With the ever changing technological aspects, retail industry has strides into larger footsteps to shape itself to the needs of the hour. Online shopping is the latest concept in retailing that is meant for accessing complete knowledge and availability of the product with a single click by sitting at home. Now, people have the facility to avail the delivery of their ordered consignment right to their doorstep. E-retailing or online retailing is shopping through the internet. It supports the non-store shopping by providing convenience to the customer but threat to take away the potential of the on store shopping. The on-job and net savvy customers are important segment of such online stores due to unavailability of time and increased traffic on actual stores.



It is an online retailing site that sells several particulars including mobile add-ons, books, cameras, games, electronics items, home and household appliances and many others products at discounted prices on a digital market place. It provides multiple payment options for customers: debit card, debit card, and cash on delivery and net banking.

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	<p>It is a virtual retailer selling fashion and lifestyle products. It deals in selling original branded products in apparels for men and women including kids and much more.</p>
	<p>It is an online fashion destination running in a multimedia workspace that lets in the latest catalogue of web and television to sell directly to its customers. Its products ranges from mobiles, books, gifts, electronics, computers, games and many more.</p>
	<p>The online retailer is boasted to be one stop shop for availing 40-90% discounts to its customers in major cities of India that includes special coupons/vouchers for gyms, travelling packages, restaurants and much more.</p>
	<p>It is one of India's leading virtual retailers operating in online environment where the customers can trade anything. It provides a trading platform in more than 50,000 categories including computer accessories, books, magazines, electronics, sports, jewellery and much more. It is an online marketplace where anyone can trade practically anything?</p>
	<p>It is an online lifestyle and fashion shopping portal selling a diverse range of products including apparels, mobiles, watches, sunglasses, laptops, shoes, bags and much more.</p>
 <small>India's First &amp; Largest Managed Marketplace</small>	<p>It is an online retail site founded in the Silicon valley, USA in 2011 by Sandeep Aggarwal, a renowned Wall Street journal analyst, and Sanjay Sethi, an ebay's former Global Product Head.</p>
	<p>It is an Indian fashion and lifestyle web portal, headquartered in Gurgaon, selling beauty products, apparels, home accessories, footwear, glasses and others.</p>
 Your Beauty, Our Passion.	<p>Nykaa has emerged as the Number One Beauty destination in India with half a million happy customers depending on it not just for their favourite brands but also for advice, updates and expert tips on how to look and feel gorgeous always! With 300 curated, well priced and 100% genuine brands and 15,000 products, Nykaa prides itself for offering a comprehensive selection of makeup, skincare, hair care, fragrances, bath and body, luxury and wellness products for women and men.</p> <p>As the last word in all things beauty Nykaa goes beyond just being the biggest online beauty store. Derived from the Sanskrit word "Nayaka" that means actress or one in the spotlight. Nykaa.com is all about celebrating women, celebrating the star in you. As your beauty buddy, Nykaa make your life a whole lot simpler by not only providing you with expert advice and guidance, but also by shipping products right to your doorstep.</p> <p>Nykaa has a must-read Beauty and Makeup Blog – Beauty Book, an ever growing Expert Portal section with 25 leading makeup stylists, skin, hair, personal care and wellness experts to answer any questions or concerns you may have related to beauty, health, nutrition and personal care, a Virtual Makeover tool to 'try' and share different makeup looks and a beauty helpline.</p>



 <p>shop right · shop more</p>	<p><u>Naaptol.com</u> is one of the fastest growing <b>top ecommerce sites in India</b>. The company was founded on 2008 under Manu Agarwal. Initially the company served as a search engine to provide comparison of product prices and offer services for product research. A year later, they emerged to be an online marketing platform and were able to create a furor in the market. With plenty of items in store, like cameras, tablets, home appliances, mobiles and others <u>Naaptol</u> saw a whopping turnover of more than Rs.10 crore in 2009-10.</p> <p>One of the top ecommerce websites in India, Naaptol initiates faster delivery of all ordered products. However, they charge a small amount of shipping charges, based on the distance the parcel is addressed. Naaptol also offers alluring points to online customers on ordering different products, which can also be utilized to get attractive discounts at a later stage. All products are genuine. Naaptol reserves the right to declare products eligible for return and refund in case a dissatisfied consumer takes up the case with customer representatives of the company over telephone within 2 days of receiving their orders.</p>
 <p>TOGETHER. FOREVER.</p>	<p><u>Ezoneonline.in</u> is the exclusive electronics ecommerce portal from Future Group and is the online extension of its brick n mortar stores present across India in Malls, High Streets and within other group format stores like Home Town, Central and Pantaloons. Ezone helps you live smarter with the latest Technology, helps you entertain your family with latest &amp; the best in Audio, Video &amp; Gaming, makes your home cool &amp; clean with a wide range of Home Appliances and makes your life easier with smart &amp; stylish Kitchen &amp; Cooking Appliances. Ovens, OTG, Hand Blenders, Coffee Tea Makers, Fryers, etc. <u>Ezoneonline.in</u> offers multiple convenient payment options including Cash on Delivery and free home delivery/shipping.</p>
 <p>Asia's Largest Online Baby &amp; Kids Store</p>	<p>One can choose from a wide range of brands both National &amp; International across a whole lot of categories like Mobile Phones, Computers &amp; Laptops, Tablets, Digital Cameras, LCD LED Televisions, Refrigerators, Air Conditioners, Washing Machines, Air Coolers, Fans and a whole lot of Kitchen Appliances comprising of Electric Cookers, Induction Cookers, Food Processors, Juicer Mixer Grinders and Microwave.</p> <p>Firstcry.com is one of the top ecommerce websites in India that especially deal with kids and baby care products. The site is mostly operating in Asia and deals with reputed Indian and international brands. Kids and baby care products manufactured by reputed companies like Hot wheels, Funs kool, Ben10, Pigeon are available here. Other brands that have already tied up with Firstcry.com are Barbie, MeeMee, Disney, Pampers etc. At present, the sourcing team of the site is working with more than 150 national and international vendors to provide customers with exclusive range of products.</p> <p>Owners of firstcry.com have recently launched another online shopping site, goodlife.com to retail life care products manufactured by both national and international brands. Founders of this online trading site- Supam Maheswari and Amitave Saha have lately raised a fund of \$4 million from an equity company named SAIF partners. At present, Firstcry is retailing more than 4000 items.</p>

## Transformation of Traditional Retailing to E-Retail: An Indian Outlook

### Research Objectives

1. To examine the factors that aggregate to the successful growth and boom in the e-retailing sector in India.
2. To investigate the challenges and bottlenecks associated with the e-retailing business in India.

### Research Methodology

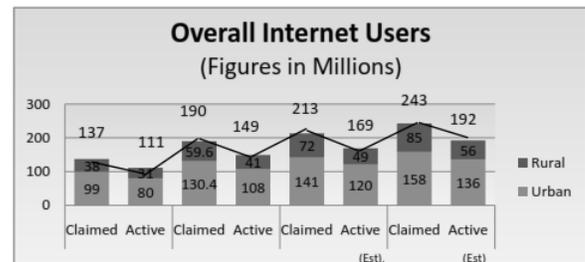
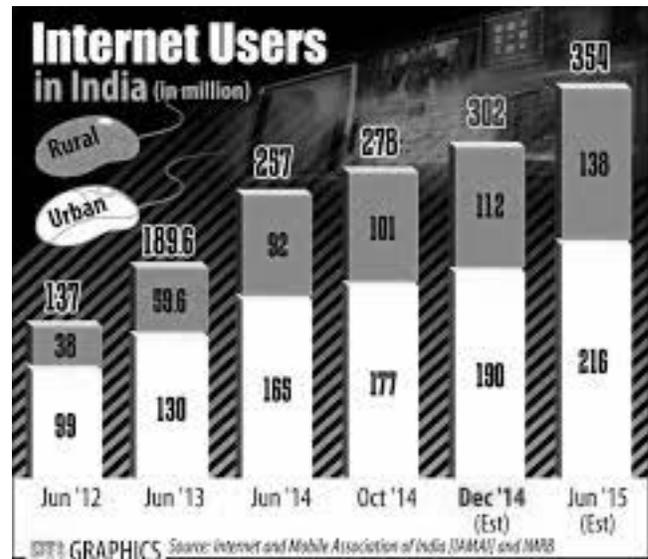
- a) **Sources of Data:** The secondary data is used for the analysis purposes and the information is retrieved from the data sources like magazines, various business reports, reputed journals, newspapers and various web portals.
- b) **Analysis of data:** The deduction and inferential analysis is done from the data collected while exerting the integrity of the objectives in mind.
- c) **Study Coverage:** The research design is explorative in nature. The study will try to explore and address the motivational forces behind the boom and future of e-retail sector in India.

### Drivers of E-Retail growth in India

E-com companies and experts believe that several factors will drive e-retailing growth in India. Briefly the motivational drivers for Indian e-retail sector growth are discussed:

- **Increasing aspirations of youth towards adopting e-commerce:** India has the highest youth population in the world and is marked by the early adopters of advanced technology, thereby, giving a boost to the e-commerce by e-shopping.

**Heavy internet penetration among rural and urban areas:** The internet has tremendously impacted the consumer's attitudes and lifestyles. It has dissolved the boundaries between the rural and urban areas and provided equal opportunity in the rural areas to access the quality brands and branded products.



Source: IAMAI, January, 2014

Figure 1: Break-up of overall internet users in India

Fig. 1: Break-up of overall internet users in India

In a report by Internet and Mobile Association of India (IAMAI), the Internet user base stood at 213 million at the end of December, 2013 of which the rural contribution was amounted to be around 33%. Further the statistics are estimated to be reaching to 243 million on June, 2014.

- **Increment in customer's disposable Income:** As the booming economy enabled the customers to high disposable income, the aspirations for buying different products (groceries, electronics, books, apparels etc.) has reached heights. Now, the contemporary Products like books, music etc. are not purchased more by e-shopping but it has been replaced by electronics goods, apparels etc.

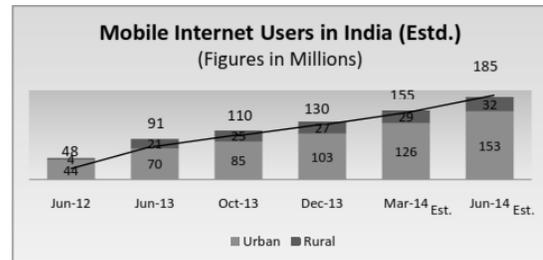


- Emergence of nuclear families:** The modern era is marked by the shift from the joint families set up to the nuclear families in which mostly both the parents are working and lack time to purchase products by visiting a physical store. This has resulted into the indulgence of nuclear families into e-shopping.

- Reforms in government initiatives relating to e-commerce:** The government is also a continuous user in e-commerce field may be the public sector banks, various government web portals etc. and works same under the e-commerce. Therefore, the security is well administered by the various steps taken by the government to enable secure transactions so that online trust remains within the customers.

- Enhanced Transactions Security mechanisms:** The online security mechanisms are highly tightens up by the regulatory bodies and the banks itself. New guidelines are issued properly so that the transactions are done smoothly. Various security check ups like OTP, payment gateways etc. are maintained by the banks to ensure secure transactions.

**Emergence of Mobile telephony:** With the emergence of mobile telephony, the online shopping has been a big hit due to the 24\*7 accessibility of internet on the mobile phones.



Source: IMAI, January, 2014

Figure 1: Break-up of Mobile internet users in India

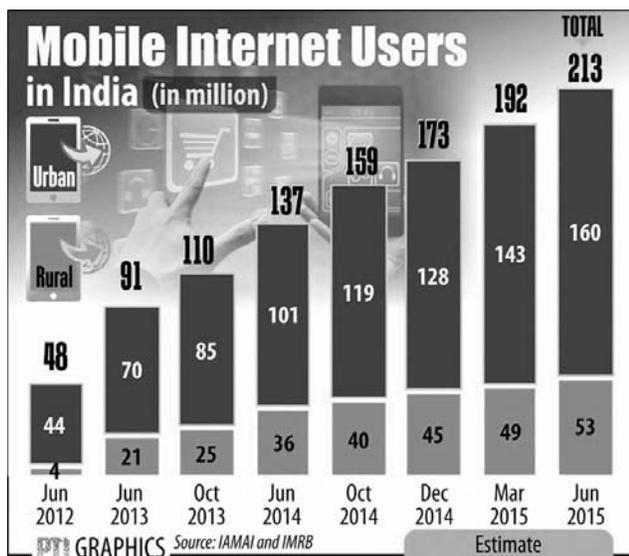
IAMAI anticipated the number of users using internet on mobile phones to reach the figure to 185 million by the end of June, 2014 that would amount about 76% of total internet user base in India. Moreover, the of the total internet users, mobile Internet users amounts to 130 million in 2013, an increase of about 92% from 68 million in 2012.

**Great deals and best offers:** Online shopping allows the marketers to focus heavily on satisfying the needs of targeted customers by providing discounts, deals and customized products in spite of putting a huge investment on the physical stores.

### The Present Scenario-Indian E-Retail Industry

Due to emerging media convergence and spread of IT enabled services and facilities through internet in rural areas the range of online payment alternatives have worked as catalyst to the e-retail industry and as a result different range of product categories have seen an influential shift in 2013-14.

Assocham figures the rise of Indian e-commerce market to attain \$56 billion by 2023, repelled by the booming e-retail. The e-commerce market valuation stood at \$2.5 billion in 2009, totalled to \$8.5 billion in 2012 and grew 88% to reach \$16 billion in 2013. The study was conducted by Assocham in four metro cities (Delhi, Mumbai, Chennai and Kolkata), Bangalore and Ahmadabad. The study cited out reasons behind the rise of e-retail industry in 2013 as being the high online discounts, secure payment options and variety available in digital marketplace. Mumbai tops the list as the highest



shoppers followed by Delhi and Kolkata. The study cited certain valuable demographic insights in context of age, as 35% of online customers were aged between 18 and 25 years, 55% falls in 26-35 years category, 8% lies in the 36-45 years while only 2% were in the 45-60 years cohort. Moreover, 35% of online customers were females while a large 65% were males. These days the companies are continuously engaging the customers with attractive deals, discount coupons to make the fullest use of the changing market trends. Most of the products sold are of different categories that include mobile phones, apparels and electronic goods.

### **Bottlenecks/Challenges of E-Retailing in India**

**Lack of efficient logistics:** The infrastructure needed to deliver the shipment efficiently has certain loopholes in Indian context as the supply chain is not up to the mark in the rural areas as desired. Therefore, the e-retailers miss the chance to cater the needs of people living in remote rural areas.

**Gaining customer's Trust:** Biggest problem in India for e-retailors is building trust among the mass public about the use of web portals for their transactions of a product. Customers do not easily accept the promotions done by the companies for e-shopping instead they do more rely on the word of mouth communications by their friends and relatives.

**High shipping costs:** The e-retailers have to bear in mind about the high shipping costs involved in delivery of products. So they have to adjust their capital in such a way that it would sustain them in the longer run unless break-even is reached.

**Ill-timed delivery of products :** Various factors forbids the timely delivery of products in the remote areas as the supply chain is marked by various barriers viz. inefficient infrastructure of the Indian economy, lack of reach in remote areas etc.

**Managing the margin:** Indian retail industry is accompanied with a cut throat competition between various players in the market. In order to gain maximum

sales, the e-retailors have to make special discounts, offers and deals in different categories of products for the survival. In most cases, the marketers have to sale on margins or on the market operating price to the customers. Therefore, it is a challenging task for e-tailors to manage their margins well in such market scenario.

### **Future of E-Retailing in Indian Prespective**

The Indian e-retail sector witnessed a revealing and soaring success in 2013 as the online sales broke all previous records supporting to the premise that the e-commerce sales will outpace total retail sales in the forthcoming years. According to a recent report from Internet and Mobile Association of India (IAMAI), total Indian market for e-com is around Rs 50,000 crore, of which 80% or Rs 40,000 crore is captured by travel e-commerce (online train, bus and airline tickets) while non-travel or retail e-com is only 20% or Rs 10,000 crore. Experts hope that by the year 2025, the total e-com market will reach at least Rs 4,00,000 crore and the share of retail will be half at Rs 2,00,000 crore. Initial bottlenecks and constrictions inhibited the e-commerce growth to a considerable extent but the confidence generated in Indian buyers have paved the way to the even ever astounding achievement slowly and steadily. Experts and analysts believe that the changed behaviour of Indian buyers will continue to generate handsome growth rate and profits for the online web portals.

### **Conclusion and Recommendations**

E-retailing is a different experience for retailers as well as customers supported with heavy internet user base in India. But there are a lot of anxieties about e-shopping to the customers doing online shopping for the first time. The reasons may be due to cultural and perceptual background of the customers. This will come down as the customers engage themselves more and more to the web portals experience the digital environment and remove the hesitation. It is very apparent that if the fundamental principles are set right, the e-shopping becomes more.



This will certainly help in curbing the ill facets associated with the e-retailing and boosting the confidence in customers to emerge e-retailing as an enormous success in the future. The fact that an average online user is spending more time online gives these players the opportunity to draw more users to their websites through innovative marketing strategies such as those revolving around social media. Furthermore, to fully utilize the opportunity, players need to leverage the growing number of mobile devices in the country.

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## Smart Cities Through Industrial Corridors

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### **Abstract**

*People mainly migrate to urban areas for better employment opportunities, healthcare and educational facilities as well as improved liveability and higher standard of living. Inevitably, this rapid expansion and urbanisation is putting a strain on the infrastructure, environment and social fabric of cities. With the burgeoning population, the citizen's demand for basic amenities such as water, energy, infrastructure and clean environment is increasing correspondingly. Urbanisation challenges are propelling several cities across the globe as well as in India to explore smarter ways of management. The time has arrived for India to transform its cities into smart cities and achieve its vision of smart urbanisation. Globally, cities are seen as engines for sustainable economic growth. Growth achieved by cities will be strongly linked to their ability to address the issues related to urbanisation and associated social, environmental and economic issues in a holistic manner, while making the most of future opportunities. All in all, infrastructure is set to play a major role in the future growth of realty sector across the country.*

**Keywords:** *Smart city, urbanisation, holistic, corridor, migrate*

## **Introduction**

### **Urbanisation: A global megatrend**

Globally, a large section of the population today lives in urban areas as compared to rural areas. Presently, over 50% of the global population lives in urban cities, up from nearly 30% in the year 1950. Urban clusters occupy 0.5% of the world's surface, but consume 75% of its resources. Every week, nearly 1.5 million people join the urban population, mostly through migration and childbirth. People mainly migrate to urban areas for better employment opportunities, healthcare and educational facilities as well as improved liveability and higher standard of living. Inevitably, this rapid

expansion and urbanisation is putting a strain on the infrastructure, environment and social fabric of cities. With the burgeoning population, the citizen's demand for basic amenities such as water, energy, infrastructure and clean environment is increasing correspondingly. This trend is projected to continue in the coming years.

### **Urbanisation and the expansion of Indian cities**

Rapid urbanisation is taking place in India and is following the global megatrend, which in turn, has paved the way for social and environmental challenges. The cities in the country are characterised by strained infrastructure which manifests itself in terms of power cuts and water shortages, high cost of living, and



unaffordable real estate, leading to urban sprawl and rise of slum areas, high volume of traffic, resulting in pollution and delays. Urban resources and infrastructure are already stretched beyond capacity. As a result, they are plagued with issues such as air pollution, waste management, poor water and electricity supply, ageing infrastructure, resource scarcity and traffic congestion. Though the overall scenario and challenges vary across various cities, all urban areas have one obstacle in common i.e. critical infrastructure is inadequate, increasingly fragile, technologically outdated and incapable of meeting even the current needs of inhabitants. Moreover, with an increasing inflow of migrants, cities need to alter their way of functioning in order to disseminate public services

### **Transformation to smart cities**

Despite its myriad challenges, rapid urbanisation is vital for a nation's economic development. It brings along with it, opportunities for economic growth and provides additional prospects of entrepreneurship as well as employment to the population. This enables faster inclusion of more people within the growth story of the country. Urbanisation has a direct correlation with the growth of a nation. However, if not efficiently managed, it can lead to a negative proposition. In the recent past, India has seen a natural progression in its development story, with its villages turning into towns, and towns transforming into cities. Urbanisation challenges are propelling several cities across the globe as well as in India to explore smarter ways of management. The time has arrived for India to transform its cities into smart cities and achieve its vision of smart urbanisation. Globally, cities are seen as engines for sustainable economic growth. Growth achieved by cities will be strongly linked to their ability to address the issues related to urbanisation and associated social, environmental and economic issues in a holistic manner, while making the most of future opportunities. Governments across the globe have created strategies for transformation to smart cities in order to improve operational efficiencies, maximise environmental sustainability efforts, and create new citizen services.

The smart cities leverage ICT to mitigate most of the challenges attributable to rapid urbanisation. They offer the promise of a better and more sustainable lifestyle to citizens in the following ways:

#### **1) Optimised usage of resources**

With the paucity of non-renewable resources, governments and citizens are increasingly adopting renewable and alternate modes of energy to minimise the depletion of fossil fuels and non-renewable energy sources. Also, it is becoming imperative to use ICT and advanced technology solutions for optimising the consumption of resources such as power, fuel and water. These technology solutions when adopted in energy, transport and waste domains lead to direct economic and environmental benefits. This can be corroborated by customised energy consumption through instances such as smart metering, micro-grids and dynamic pricing.

#### **2) Connected and transparent public services**

In the past, the efficiency of public and citizen services was driven by e-governance initiatives. The integrated record management will also facilitate the delivery of holistic health services for citizens. Health records of all citizens will be maintained on a central city database, thereby facilitating health practitioners to access medical history records easily. Ready access to services as well as their performance serves the cause of transparency and equity in city governance.

#### **3) Better safety and security**

Smart cities leverage integrated public safety and security solutions such as smart cameras, pattern recognition, remote monitoring as well as red flagging through heuristic platforms in order to ensure a secure and safe environment for citizens.

#### **4) Smart city transformation strategy**

Assessing city demographics, profile, social and physical infrastructure to support current city requirements and its preparedness to transform into a smart city. Prior to the articulation and development of any strategy, it is

important to take stock of the current structure of a city and its expectation, going forward. We are of a firm belief that assessment is the cornerstone of developing a successful smart city strategy. The next step for a city should be to formulate a clear vision which captures its strategic ambition. Chalking out an overall vision enables a city to prioritise, invest in and strategically manage the building blocks or ‘capitals’ needed by any city for long-term prosperity, social, environmental, cultural, intellectual, infrastructural, ICT and political participation. In order to channel all resources towards accomplishing the vision, the city’s management has to develop multiple internal capabilities: an inspirational leadership, a resilient city brand and an ability to learn from other cities through social intelligence. It needs to manage its finances effectively.

### 5) Reassessment of city vision

In addition, it needs to have the capability to manage the city’s key programmes and projects, its performance risks and its assets, including the human capital employed in performing any city’s functions. Of course, all of this must also be executed in a way that is sustainable and through collaboration and partnering with citizens, the private sector, academia and non-governmental organisations (NGOs).

City governments as well as administrators need to develop an implementable strategy on ways to achieve the future development goals of a sustainable and competitive urbanisation that can address social, environmental and economic issues in an integrated manner. However, the most pressing issue for many cities and their respective administrators is the implementation of these goals and transforming city strategies into a reality.

### The Indian government’s 100 Smart City Initiatives

In January 2015, the secretary to the Ministry of Urban Development (MoUD) made a presentation which clearly stated that the Indian government’s mission to roll out 100 smart cities across the country is a national

priority. These smart cities will leverage innovation and technology for e-governance and the Digital India initiative. Also, they will focus on employment generation, involve citizens in decision-making and policy execution, as well as improve the quality of life. Moreover, with renewed efforts for a clean and green India, these upcoming smart cities will be modelled on the Swachh Bharat initiative and zero emission policies.

### Smart and green cities

The master plans are ready for seven brand new futuristic cities inspired by industrial hubs in China and South Korea, and having the potential of revolutionizing the country’s urban landscape with the introduction of the concept of ‘smart city’. There are some innovative plans, for e.g., each city will have underground utility corridors for parking, sewage disposal and communication lines to give it a neat look and leave enough space for facilities that are missing in most existing cities, like pavements, parks and cycle tracks. Recently, the Delhi Mumbai Industrial Corridor Development Corporation Limited (DMICDC) selected Cisco S+CC Advisory Services to develop the ICT master plan for two pilot cities in the project. The government has also announced that it plans to build 24 ‘green cities’ as part of the development. These cities are designed to improve infrastructure in the smaller towns along the corridor, and boost national economic growth and prosperity. The green cities will have optimized power supplies, 24-hour water supply and waste water recycling plants. Japan is expected to offer its energy-efficient technologies to make the cities sustainable. The preparatory work for seven of the 24 green cities has already begun and Gujarat is set to become the first state to undergo an eco-upgrade.

### Industrial corridor

One major area of to be considered for this initiative is the industrial corridor.

To promote economic activity in India, six new industrial corridors are in the offing:



- Delhi-Mumbai Industrial Corridor
- Amritsar-Delhi-Kolkata Industrial Corridor
- Bengaluru-Mumbai Economic Corridor
- East Coast Industrial Corridor/Visakhapatnam-Chennai Industrial Corridor
- Chennai-Bengaluru Industrial Corridor
- Bhopal Indore Corridor each industrial corridor will have several key nodes developed on smart city principles using Public Private Partnership (PPP) model

### 1) Delhi-Mumbai Industrial Corridor

The Delhi Mumbai Industrial Corridor (DMIC) is India's most ambitious infrastructure project aiming to develop new industrial cities as smart cities and integrating next-generation technologies across infrastructure sectors. The DMIC, a state-sponsored industrial development project of the government of India with an outlay of 100 billion USD, aims to develop industrial zones spanning across six states in India to spur economic development in the region and develop industries. The project entails major expansion of infrastructure and industries, including industrial clusters, with rail, road, port and air connectivity and utilities along the corridor route. The project work has commenced and is progressing at a quick pace with 2017 as the year of completing the target. Five states are covered under this corridor.

- Delhi
- Uttar Pradesh
- Haryana
- Rajasthan
- Maharashtra
- Gujarat

### 2) Amritsar-Delhi-Kolkata Industrial Corridor

The Amritsar Delhi Kolkata Industrial Corridor (ADKIC) is a proposed economic corridor in India between the cities of Amritsar, Delhi and Kolkata to be developed by the government of India. It is an ambitious project aimed at developing an industrial zone spanning seven states in India and will benefit 20 cities in these states. The states covered in this corridor are:

- Punjab

- Haryana
- Uttar Pradesh
- Uttarakhand
- Bihar
- Jharkhand
- West Bengal.

### 3) Bengaluru-Mumbai Economic Corridor

The Bengaluru-Mumbai Economic Corridor is a proposed project to run between Mumbai and Bengaluru. The preliminary work on the corridor began in November 2013. Currently, Indian and British governments are working in collaboration to have a joint feasibility test of the project. The Mumbai-Bengaluru corridor will pass through Pune, Satara, Kolhapur, Belgaum, Dharwad, Davangere, Haveri, Chitradurga and Tumkur. The government has envisioned at least four new cities to boost manufacturing activity across the corridor for which the detailed plan is yet to be finalised. A total outlay of 5,749 crore INR has been sanctioned for its development and Japan International Cooperation Agency (JICA) is also helping in the funding of this project.

### 4) East Coast Economic Corridor/ Visakhapatnam-Chennai Industrial Corridor

The Visakhapatnam-Chennai Industrial Corridor (VCIC) is a key part of the East Coast Economic Corridor and India's first coastal economic corridor. Four nodes have been selected for the corridor based on detailed location analysis.

- Visakhapatnam node
- Kakinada node
- Machilipatnam node
- Chittoor Tirupati node

### 5) Chennai-Bengaluru Industrial Corridor

The Chennai-Bangalore Industrial Corridor (CBIC) is the fifth corridor being planned in the country. It will cover a distance of nearly 560 km and pass across three states:

- Andhra Pradesh
- Karnataka
- Tamil Nadu

### 6) Bhopal-Indore Corridor

This is the sixth corridor being planned in the country. The project is being developed in active cooperation between the Delhi Mumbai Industrial Corridor Development Corporation Limited (DMICDC) and the Madhya Pradesh Trade and Investment Facilitation Corporation Limited (TRIFAC). Pithampur-Dhar-Mhow is the first DMIC node being developed in the state of Madhya Pradesh. One of the inherent strengths of this region is the presence of the existing Pithampur industrial area.

### Conclusion

Each corridor passes through various existing industrial clusters, towns and cities that are likely to become investment hubs. Thus, once completed, the real estate growth at India's hinterlands, connected via these corridors, will be exponential.

In the wake of these new developments, Common Floor has identified the key cities and towns along these corridors that are geared to witness realty growth in the short to long term. Moreover, the 'Smart City' tag for many cities and towns along these corridors is a boon in itself.

Thus, in order to identify the impact areas of these 5 industrial corridors, we have analysed the city population as per Census 2011 and the geographical location of these cities by using GIS-based tools. All in all, infrastructure is set to play a major role in the future growth of realty sector across the country.

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## Scope and Relevance of Gray Market

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### Abstract

*With the growing number of working population and comparatively lesser growth in employment opportunities, the eagerness to do lucrative business via different sources has increased vigorously. These sources of doing such circumvent businesses without too many restrictions and hurdles are called as gray marketing. This paper focuses on the growing importance of Gray Market and its relevance to marketers and consumers. It shows how a common man can improve his/her standard of living with spending a relatively lower price than the people of high income. The Gray Market caters to the second tier category of population. The whole paper is revolving around the advantages and disadvantages of Gray Market. It has been analyzed if gray market is beneficial for large number of population i.e. employer, employees, consumers, etc.*

**Keywords:** Consumer, Gray Market, Second Tier, Population

### Introduction

Since 1980's there has been a tremendous growth in the field of Gray Market, also known as parallel market. Gray Market is a market where the product is bought and sold outside the manufacturer's authorized trading channel. For example, if a store owner bought a product from an unauthorized channel then it is said that the product is sold in Gray Market. It is also known as parallel import as the seller who is importing and selling the product through unauthorized channel is not permitted by the producer to sell the product in the designated market and as the product is being imported product therefore is considered parallel to the genuine import. The most common type of Gray Market is the sale, by individuals or small companies not authorized

by the manufacturer, of imported goods which would otherwise be either more expensive or unavailable in the country to which they are being imported. An example of this would be the import and subsequent resale of Apple products by unlicensed intermediaries in countries such as South Korea, where Apple does not currently operate retail outlets and licensed reseller markups are high.

*Gray Market is different from black market, because in the black market those goods are imported which are legally restricted but in case of gray market the goods are not legally restricted but they are sold outside the normal distribution channel. For example, imports of fire arms are legally restricted in some countries and such imports constitute black market. Gray Market*

## Scope and Relevance of Gray Market

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should not be confused with counterfeit market as well. The counterfeit products generally have fake company logos and brands. In the case of goods, it results in patent infringement and trade mark infringement. Thus, Gray Market goods are “legal (different from black) and genuine (different from counterfeit) goods” which are sold outside the normal distribution channels by the sellers, having no relationship with the manufacturer of the good.

Examples of gray market in India are:

Gaffar Market in Delhi, Fancy market at Kolkatta

Heera Panna/ Crawford market (Mumbai), Alfa — Vile Parle (Mumbai), Alfa — Vashi Sector 17 (Mumbai)

Gray markets occur when a product is designed and destined for a particular market, and an intermediary known as a ‘gray marketer’ brings that product to a second market to sell it for less than its list price in that second market. In contrast to black marketing which involves counterfeit or illegal goods, gray marketing is completely legal. In some cases, scarcity drives this behavior. For example, when the iPhone was first launched, there were shortages in the UK, so people were bringing iPhones from other markets. But scarcity-driven gray marketing is really an aberration. The standard Gray-Market situation is driven by price: someone brings products from a market where the price level is lower to a place where the price for the exact same product is higher.

### Objectives

1. To study the importance of Gray Market to consumers with the help of live cases.
2. To analyse the social and economic relevance of the Gray Market.
3. To throw some light on the practices of Gray Market in India

### Methodology

A couple of case studies of price comparison of different product have been taken as example. The study is limited to randomly selected markets i.e. Crawford market and Lamington road in South Mumbai and Alpha in the western suburbs of Mumbai. Even books, journals, published research work & internet has been used for retrieving secondary data.

### Benefits to Gray Marketer:

- No custom duty
- No excise duty
- No VAT
- Rate of commodity less than MRP

### Benefits to consumers

- The Gray Market caters to the tier -2 customer
- It offers a better standard of living.
- It creates employment opportunities

The product which is being manufactured in the market is produced to sell in the market. Consumers are the main root of the market. Generally the consumer market is divided into three parts:-

- 1) Consumers stay with Authorized Version as they place more value to warranty and services that comes from authorized dealer.
- 2) Consumer switches to parallel import as they place little value to warranty, taste and advantages provided with the product.
- 3) New segment that would not have purchased the product before.



Selected cases for references:

### Price comparison of popular products

#### Example #1: Phones (Apple & Samsung)

Phone Model	Price	Price for storage variants (RS)		
iPhone 7	Official Price (MRP)	60000	70000	80000
	Gray Market Price	45000	53000	59000
iPhone 7 Plus	Official Price (MRP)	72000	82000	92000
	Gray Market Price	53000	60000	66000
iPhone SE	Official Price (MRP)	39000	49000	
	Gray Market Price	28000	32000	
iPhone 6s	Official Price (MRP)	52000	62000	72000
	Gray Market Price	45000	50000	55000
iPhone 6s Plus	Official Price (MRP)	59000	65000	70000
	Gray Market Price	49000	55000	60000
iPhone 6	Official Price (MRP)	45000	55000	
	Gray Market Price	39000	45000	
iPhone 6 Plus	Official Price (MRP)	49900	59900	
	Gray Market Price	42000	48000	
iPhone 5s	Official Price (MRP)	19000		
	Gray Market Price	14000		
Samsung S6	Official Price (MRP)	43900		
	Gray Market Price	39000		
Samsung S7 Edge	Official Price (MRP)	50900		
	Gray Market Price	42000		

#### Example # 02: Plastic ware (Tupperware)

Tupperware water bottles	MRP	Gray market price
Aquasafe set of 4 - 500ml	Rs.595	Rs.470
ECO Square set of 4 -500 ml	Rs.496	Rs.390
ECO Square set of 4 -310 ml	Rs. 430	Rs.350
ECO Flipflop set of 4- 750 ml	Rs.798	Rs.635

### Findings and observation of the examples:

Prices of different product vary in different Gray Markets.

Consumers get to buy the product at 20% to 30 % (approximately) lesser than MRP.

## Scope and Relevance of Gray Market

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In some Gray Markets the prices are higher than MRP, but consumers are ready to pay extra as it is not available in any other place.

India is a highly populated country and most of the population fall in the tier – 2 category of population, the best part of Gray Market is it caters to this category of population.

The gray markets are always flooded with both goods and consumers.

High number of people are engaged in the working of Gray Market, it means the employment ratio is very high. Not only skilled but also unskilled labour is employed at a large scale.

### **Social and economic relevance of gray market**

Gray Market is flourishing at an alarming rate and people will continue to buy products from it. After all, there is nothing wrong in selling products at a lower price tag.

The fast growth of Gray Market product has a great impact on the Indian economy.

Almost 50% -60% Indian markets is flooded with gray market product.

#### **1) Price discrimination in different countries:**

Prices of the goods bearing identical trademarks are generally sold at different prices in different countries which give rise to arbitrage. And thus give incentive for the development of gray market. For example- Electronics are cheaper in Singapore as compared to India and therefore being imported to India by unauthorized dealers, giving rise to parallel import.

#### **2) Scarcity driven market:**

Gray market arises when the authorized sellers are unable to synchronize demand and supply in various markets. For example, when iPhone was first launched, there were shortages in the UK,

so people were bought iPhone from other markets. But Scarcity driven gray market is an aberration.

#### **3) Global nature of marketing:**

As the world turns into global village, the marketing is not restricted to the country boundaries only. So, marketers have been able to do marketing on a world wide scale, thereby, taking commercial advantage of global operational differences, similarities and opportunities in order to meet global objective. For example: Before launching iPhone-5 in India, Indian people were aware of it because of the global nature of the marketing.

#### **4) Improved communication among markets:**

With the development in the technology the access of the marketer to consumers has increased. For example:- Various auction sites such as e-bay have provided seller a platform to access different consumers across different countries.

#### **5) Fluctuation in Exchange rate:**

Exchange rates are subject to changes according to economic conditions of the countries. Therefore exchange rate volatility creates profit opportunities for the sellers and thus gives rise to a new form of market known as gray market. For example, the strong dollar had provided an opportunity with gray market to bring caterpillar's equipment into US at lower prices than domestically produced goods.

#### **6) Ease with each product moves across nations:**

With the globalization, there has been substantial reduction in barrier to trades such as import tariff, custom duty which lead to an easy movement of goods across nations.

#### **7) Excess inventory:**

It can be other source of parallel import as when an authorized dealer cannot sell its inventory to consumers; it may move the left over items to unauthorized dealer. For example, in the high- fashion apparel market, an authorized dealer has incentive to maintain excess inventory as it can move the excess inventory to the



unauthorized dealers and still make the profit as the margins are significantly high.

### **Conclusion**

As there are two faces of a coin, the Gray Markets also have some positive and negative effects on different constituents of distribution channel. On one hand, gray market leads to the delusion of exclusivity, reduction in manufacturer's profit, creates free riding problem. On the other hand, gray market creates new customer base in existing market, gives wide choice to the consumer and helps in exploring the new market. Gray Market offers huge difference in the price tag, so anyone would be tempted to buy items at much lower price. By law, the products sold in such markets are legal and genuine so its authenticity cannot be questioned as well.

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## Financial Inclusion for inclusive growth in India

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### **Abstract**

*Indian economy is one of the most vibrant economies of the world. It is growing at a rapid pace but the benefits of its growth are not reaching to the deprived section of the country. Over 25% of Indians continue to live in abject poverty. Despite of various measures to curtail social inequality and regional disparities, the Government has not been successful in achieving disciplined and even growth in our country. Inclusive growth paves way for sustainable development and equitable distribution of wealth and prosperity. Financial inclusion is an instrument to attain inclusive growth. It broadens the resource base of the financial system by enhancing saving habits among rural population and by bringing them into formal banking structure; it protects their financial wealth and facilitates easy access to formal credit. However the pace of financial inclusion in India is very slow as compared to other developing countries. The present paper is an effort to understand the concept of inclusive growth and study financial inclusion as an instrument to attain it with reference to its extent in India.*

**Keywords:** *Inclusive growth, Financial inclusion*

### **Introduction**

The Indian Economy is one of the largest and most vibrant economies of the world. It is growing at a rapid pace and with such a growth momentum India is not far from becoming a powerful nation and standing at par with other super powers of the world. Though the Indian economy has reached a high growth rate, the reality is that the benefits of this growth have not reached the deprived sections of the country. It could not bring down the unemployment and the poverty levels as a result a vast majority of people are still under the vicious circle of poverty and are not able to earn even their basic necessities. Statistics reveal that India is still a home to one-third of the world's poor. Over 25% of Indians continue to live in abject poverty.

In recent decades, economic and social inequalities have increased manifold which have led to increased regional disparities. As a result of this, the concept of 'Inclusive growth' came into existence and became a national policy objective of the Government. For the first time Inclusive growth got attention by the policy makers and was included in the Eleventh five year plan.

As per the Planning Commission of India "The term "inclusive" should be seen as a process of including the excluded as agents whose participation is necessary in the development process and not simply as welfare targets of development programmes." In other words, inclusive growth strategy should not only aim at equitable distribution of growth benefits but also at creating economic opportunities along with equal access to them



for all. Access to finance by the poor and vulnerable groups is a prerequisite for poverty reduction and social cohesion. This is where financial inclusion gains importance.

RBI defines Financial Inclusion as “a process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular, at an affordable cost in a fair and transparent manner by regulated mainstream institutional players”. Therefore the objective of Financial Inclusion is to extend financial services to the large hitherto un-served population of the country to unlock its growth potential. In addition, it strives towards a more inclusive growth by making financing available to the poor in particular.

### Review of Literature

A key objective in development economics is to work out ways to lift people out of poverty. Access to finance has been seen as a critical factor in enabling people to transform their lives through production and employment activities and to exit poverty. (Aghion and Bolton 1997, Banerjee 2001, Banerjee and Newman 1993, Pande and Burgess 2003).

Ravichandran K. & Akhathlan K. (2009) analyzed that there are few people who are enjoying all kinds of services from savings to net banking, but still in India around 40% of people lack access to even basic financial services like savings, credit and insurance facilities. So an inclusive sector should not only serve the bankable clients, but also integrate the unbankable clients by making them bankable. Many actions taken by the government like Nationalizing of Banks, 40% of credit targets to priority sector, opening of RRBs etc. for past three decades are one form of financial inclusion, but still around 80% of rural households do not have access to credit from a formal source

Sadhan Kumar Chattopadhyay in a working paper for RBI on Financial Inclusion in India: A case-study of

West Bengal (2011), has examined the extent of financial inclusion in West Bengal. According to him there has been an improvement in outreach activity in the banking sector, but it is not significant. An index of financial inclusion (IFI) has been developed in the study using data on three dimensions of financial inclusion viz. - banking penetration (BP), availability of the banking services (BS) and usage of the banking system (BU). The paper provides comparable picture between different states on the basis of IFI rankings.

The present paper focuses on financial inclusion as an instrument for attaining inclusive growth- in context of India, for which a fair deal of effort has been taken to understand the extent of financial inclusion in India as a whole and states as its part.

### Objectives of the research paper:

1. To study & understand the concept of inclusive growth.
2. To know the meaning and extent of financial inclusion in India.
3. To highlight the challenges for advancing towards financial inclusion in India
4. Based on the study, give certain suggestions for speeding the process of financial inclusion in India.

### Research Methodology

The data used for the study is secondary in nature and has been collected from reports of RBI, NABARD and other agencies, Working papers, Newspapers, Research Articles, Research Journals, E-Journals, Books and Magazines.

### The concept of Inclusive Growth

In India economic growth has always been uneven and discrete. The benefits of growth have not reached the lower section of the society. In order to attain rapid and disciplined growth, inclusive growth is necessary. Inclusive growth paves way for sustainable development and equitable distribution of wealth and prosperity.

## Financial Inclusion for inclusive growth in India

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However achieving inclusive growth is one of the biggest challenges in India. The challenge is to take the levels of growth to all sections of the society and to all parts of the country.

Inclusive growth includes rapid and sustainable growth in the rural as well as urban economy, infrastructure development, improvement in education, health and other facilities, environment protection etc. In other words all sections of society become equal stakeholders in growth process. It emphasizes more on productive employment rather than on income redistribution. This is why inclusive growth is termed as a long run approach. Inclusive growth if targeted systematically may lead to financial stability, asset building and economic mobility and empowerment of the low income group people.

Financial inclusion is a part of inclusive growth as it focuses on delivering financial services at much affordable costs to the under-privileged sections of the society. Financial inclusion through appropriate financial services can solve the problem of resource availability, mobilization and allocation particularly for those who do not have any access to such resources. Thus in the current paper an effort is made to study the role of financial inclusion in inclusive growth of the nation. The concept and need of Financial Inclusion

**Rangarajan Committee (2008)** viewed financial inclusion as “The process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost”

In simpler terms financial inclusion is about including the excluded in the financial system of the country, and to ensure that their financial & social security needs are taken care of through appropriate financial service providers.

Financial inclusion enables improved and better sustainable economic and social development of the country. Financial inclusion takes into account the participation of vulnerable groups such as poor and

weaker sections of the society and helps to empower them with the mission of making them self-sufficient and well informed to take better financial decisions. Also the objective of financial inclusion exercise is easy availability of financial services which allows maximum investment in business opportunities, education, save for retirement, insurance against risks etc.

Poor people are typically more vulnerable to financial exclusion this is simply because their major problems arise from the need for finances. Providing access to financial services has significant potential to help lift the poor out of the cycle of poverty. Financial inclusion promotes thrift and develops culture of saving and also enables efficient payment mechanism strengthening the resource base of the financial institution which benefits the economy. The formal banking services by exploiting economies of scale and making judicious use of targeted subsidies may reduce or remove market imperfections and facilitate financial inclusion of the poor ultimately leading to higher incomes.

### Extent of Financial Inclusion in India

Financial inclusion has always been accorded high importance by the Reserve Bank and Government of India to aid the inclusive growth process for the economy. Since 2005, the Reserve Bank of India (RBI) and the Government of India (GOI) have been making efforts to increase financial inclusion. Some of the measures initiated by the RBI and Government of India include SHG-bank linkage program, use of business facilitators and correspondents, easing of Know Your Customer (KYC) norms, electronic benefit transfer, separate plan for urban financial inclusion, use of mobile technology, bank branches and ATMs, opening and encouraging ‘no-frill-accounts’ and emphasis on financial literacy, opening customer service centers, credit counselling centers, Introduction of Kisan Credit Card, setting up of Financial Inclusion Fund and Financial Inclusion Technology fund, Support to Cooperative Banks and RRBs for setting up of Financial Literacy Centers, Farmers’ Club Program etc. These efforts have played a significant role for increasing the use of formal sources for availing loan/credit.



The following table shows the extent of financial inclusion in India using CRISIL Index. CRISIL Inclusix is a comprehensive index for measuring the progress of financial inclusion in the country, down to the district-level.

**Table 1. Financial Inclusion at Regional Level**

Region	Inclusix 2011	Inclusix 2010	Inclusix 2009
India	40.1	37.6	35.4
Southern Region	62.2	58.8	54.9
Western Region	38.2	35.8	33.9
Northern Region	37.1	34.8	33.3
Eastern Region	28.6	26.3	24.3
North-Eastern Region	28.5	26.5	23.8

Source: CRISIL (2013).

The above table shows the CRISIL Inclusix index for 2009, 2010 and 2011. It gives a comparative picture of financial inclusion in various regions in India. The inclusix index for 2009 & 2010 shows a dismal situation, although, 2011 shows some progress in the development of financial inclusion in India. The southern region has maximum financial inclusion as compared to other regions and the north eastern regions are at the lowest.

But overall it is increasing at a gradual but rapid pace over the years.

Table 2 below shows a comparative picture of the progress of all banks that are associated with financial inclusion including RRBs for March 2010 and March 2014.

**Table 2. Financial Inclusion Progress: Banks and RRBS**

	March 2010	March 2014
Banking Outlets in Villages- Branches	33,378	46,126
Banking Outlets in Villages- Branchless mode	34,316	3,37,678
Banking Outlets in Villages- Branches – total	67,694	3,83,804
Urban Locations covered through BCs	447	60,730
Basic Saving Bank Deposit Account through branches (No. in millions)	60.2	126.0
Basic Savings Bank Deposit A/c through branches (Amt. in billions)	44.3	273.3
Basic Savings Bank Deposit A/c through BCs (No. in millions)	13.3	116.9
Basic Savings Bank Deposit A/c through BCs (Amt. in billions)	10.7	39.0
Basic Savings Bank Deposit Accounts Total (No. in millions)	73.5	243.0
Basic Savings Bank Deposit Accounts Total ( Amt. in billions)	55.0	312.3
Overdraft facility availed in Basic Savings Bank Deposit Accounts (No. in millions)	0.2	5.9
Overdraft facility availed in Basic Savings Bank Deposit Accounts (Amt. in billions)	0.1	16.0
KCCs – (No. in millions)	24.3	39.9
KCCs – (Amt. in billions)	1,240.1	3,684.5
GCC - (No. in millions)	1.4	7.4
GCC - (Amt. in billions)	35.1	1,096.9
Information and Communication Technology A/Cs-BC- Transaction - (No. in millions) (During the year)	26.5	328.6
Information and Communication Technology A/Cs-BC- Transactions - (Amt. in billions) (During the year)	6.9	524.4

Source: RBI Annual Report (2013-14).

## Financial Inclusion for inclusive growth in India

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Progress of financial inclusion since the launch of financial inclusion plans clearly indicates that banks are progressing in areas like opening of banking outlets, deploying BCs, opening of BSBD accounts, grant of credit through KCCs and GCCs. However the status of financial inclusion in the country is still at its nascent stages and needs more support and attention from the policy makers.

Major challenges affecting access to financial services Spreading financial services to a population of 1.2 billion people is quite a challenging task. Challenges are for both people as well as banking and financial institutions. Some of the major challenges affecting access to financial services are:-

**Psychological and cultural barriers** - Many people willingly excluded themselves due to psychological barriers and cultural barriers. A very general psychological barrier can be easily noticed when older people find it difficult to use ATMs which is the most convenient form of banking today.

**Legal identity** - Lack of legal identity like voter Id, driving license, birth certificates, employment identity card etc. is also a major factor affecting access to financial services.

**Level of income** - Low income people generally have the attitude of thinking that banks are only for the rich people.

**Higher levels of regulations** - Since banks are profit making organizations they discourage the non-profitable customers (poor) by the minimum balance requirements. While getting loans or at the time of opening accounts, banks place many conditions, so the uneducated and poor people find it very difficult to access financial services.

**Structural procedural formalities** - It is very difficult for people to read terms and conditions and account-filling forms due to lack of basic education.

**Lack of financial literacy** and basic education prevent people to have access to financial services. Financial literacy involves encouraging people to use various financial products through various economic agents like NGOs, MFIs and Business Correspondents etc.

**Place of living** - Commercial banks operate only in profitable areas. Banks set their branches and offices only in the commercial areas. Therefore, people living in under-developed areas find it very difficult to go for any bank transaction in other areas again and again. Hence, they do not go for any banking services.

### **Suggestions for the success of Financial Inclusion**

Based on the above study, the following suggestions for the success of Financial Inclusion are stated:

- Appropriate and efficient delivery models need to be introduced to provide timely and cost effective credit facilities.
- Financial Literacy is essential for financial inclusion as many people are still not aware of various financial avenues available to them and the mode of availing them.
- Strong collaboration among Banks, Technical service providers and Business facilitators is needed for wider coverage and expansion of banking facilities to the masses.
- Promotion of agency banking, micro finance institutions & business correspondents as they are popular among rural areas and can reach the excluded people much faster than formal institutions.
- Involvement of state administration at grass-root level is important to design policies which are helpful to overcome the friction that hinder the functioning of the market mechanism to operate in favour of the poor and underprivileged.
- Appropriate technology is the key to providing low cost financial services in rural areas. It can reduce transaction cost sharply and time taken by the banks



in processing applications, maintaining accounts and disbursing loans.

- Involvement of grass root level organizations like Farmers' club and NGOs would lead to inclusion of the disadvantaged as they ensure local participation and help farmers in gaining access to credit and technology.
- Infrastructure development in terms of availability of electricity, improved connectivity through provision of roads and telecommunications, construction of warehouses and market infrastructure is an essential prerequisite for attaining greater inclusive growth and greater demand for banking activities in rural areas.
- Mobile banking needs to be promoted in order to reduce the transaction cost of operating accounts.
- Strong efforts are required to increase equity and insurance penetration in the country.
- Relaxations being provided on the requirements of individual identity proofs for opening bank accounts should be strictly adhered to by the financial institutes.
- Any government or social security payments or payments under all the government schemes should be strictly routed through the service area bank account. This will make people in rural areas to compulsorily have an account in their service area branch to avail the government benefit.

In short we can conclude that Financial Inclusion is very important for inclusive growth of India, with more than 25% of its population living in abject poverty government's onus towards their growth and development is huge, and Financial Inclusion is one such measure which if targeted and attained in right manner will reduce severe problems of poverty and unemployment to some extent.

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## Mudra Loan: An Initiative of Government for development and refinancing of Micro enterprises

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### Abstract

*Micro Units Development and Refinance Agency Bank (MUDRA), is an institution developed by Government of India under Pradhan Mantri Mudra Yojna, for development and refinancing of small enterprises. The main aim of setting up of Mudra is to provide developmental support to micro enterprises. Mudra is an initiative which aims to connect financial institutions with micro enterprises. The benefit of Mudra will be provided to small businesses like food vendors, vendors, artisans in rural as well as in urban areas. Mudra bank is refinancing through NBFCs, MFIs, Rural Banks, District Banks, Nationalised Banks, Private Banks and other intermediaries. It has launched three tier schemes: Shishu Loan - for financial support to start-up units, upto Rs. 50,000. Kishor Loan for financial support to businesses which are already started but need funds for establishing themselves the amount ranges between Rs. 50,000 to Rs. 5 Lakh and Tarun Loan - offering financial support to existing businesses needing financial support for expansion of business, the amount ranges between Rs. 5 lakh to Rs. 10 lakh.,*

*The paper focuses on evaluating the role of Mudra in development of Micro enterprises. It also aims to find out state wise performance of scheme since its launch.*

**Keywords:** MSME, MUDRA, Self-Employment

### Introduction

MUDRA, which is an abbreviation of, Micro Units Development & Refinance Agency Ltd. Mudra, is formed by Government of India with the aim to develop and refinance Micro units. This scheme was launched in Union Budget for financial year 2016. The rationale of launching Mudra is to provide funding to small sector enterprises which are non-corporate. This scheme focuses both urban and rural enterprises. Mudra is wholly owned subsidiary of SIDBI.

### Objectives of the Paper

- 1 The paper focuses on understanding the Mudra Loan Scheme.
2. The objective is to find out the performance of this scheme.
3. The paper aims to find out the state-wise performance of this scheme.

### Methodology

The paper is written with the help of secondary data.



The data is collected from different web sites of government, MSME sector reports, reports of other government agencies, news paper articles etc.

### Scope of the study

This study focused on finding out the implications of Mudra loan scheme. As there are so many different schemes launched by government to support and develop MSME sector, the researcher aims to understand the rationale behind launching this scheme. The outcome of this paper can be applied to other schemes which are launched for SMEs. The study will be useful to government agencies, MSME sector, etc.

### Overview of Mudra Loan

MUDRA is formed by Government of India with the aim to develop and refinance Micro units. This scheme was launched in Union Budget for financial year 2016. The rationale of launching Mudra is to provide funding to small sector enterprises which are non-corporate. Small Business Segment (NCSBS) consist of proprietorship or partnership firms running as small manufacturing units, service sector units, shopkeepers, fruits/vegetable vendors, truck operators, food-service units, repair shops, machine operators, small industries, food processors and others in rural and urban areas. Mudra was formed as wholly owned subsidiary of SIDBI (Small Industries Development Bank of India). Total capital of Mudra is being contributed by SIDBI, currently the authorised capital of Mudra is Rs. 1,000 crore and paid up capital is Rs. 750 crore.

Mudra was setup with an aim to refinance micro / small enterprises, hence it will be responsible for refinancing all the agencies which are engaged in lending to micro and small business. All the intermediaries such as Non-Banking Finance Companies, Societies, Trusts, Section 8 Companies, Co-operative Societies, Small Banks, Scheduled Commercial Banks and Regional Rural Banks which are in the business of lending to micro/small business entities engaged in manufacturing, trading and services activities.

Under the auspices of Pradhan Mantri MUDRA Yojana, MUDRA has created three products i.e. 'Shishu', 'Kishor' and 'Tarun' as per the stage of growth and funding needs of the beneficiary micro unit. These schemes cover loan amounts as below:

**Shishu:** covering loans up to ₹ 50,000

**Kishor:** covering loans above ₹ 50,000 and up to ₹ 5,00,000

**Tarun:** covering loans above ₹ 5,00,000 and up to ₹ 10,00,000

**Shishu (Child) category** – Under this category finance will be provided to all those businesses that have been just started and looking for Loan. A loan cover of ₹ 50,000 will be given to all micro units falling in this category. Interest rate for Shishu Category is in the range of 10 to 12%.

**Kishor Category** – This is for those who have started their business but it has not been established yet. A loan cover from ₹ 50,000 to 5 Lakhs will be given to units falling into this category. Interest rate in Kishor category is in the range 14 to 17% percent.

**Tarun Category** – All small business which have been set up and established will fall into this category. There may be some financial requirements for the betterment of business. That's why all small business or units falling into this category will be eligible for a Loan Cover of upto ₹ 10 Lakh. Interest rate in the Tarun category starts from 16 %.

**North:** Chandigarh, Haryana, HP, J&K, Delhi, Uttarakhand, Punjab and Rajasthan

**West:** Dadra & Nagar Haveli & Diu, Gujarat, Lakshadweep, MP, Maharashtra,

**East:** NE states, Odisha, W.B. Sikkim, Bihar and Jharkhand

**South:** Karnataka, Kerala, Pudicherry, TN, Telangana, AP and Andaman & Nicobar.

## Mudra Loan: An Initiative of Government for development and refinancing of Micro enterprises

### Region wise performance of MUDRA Yojna by Banks (No of Accounts)

Category	North	West	East	South	Total
Shishu	2382453	1864905	1893789	2563432	8704579
Kishor	414020	331002	375376	852190	1971507
Tarun	120636	95641	60320	132814	409411
Total	2917109	2291548	2339485	3548355	11086497
% share	26%	21%	21%	32%	100%

Region wise performance of MUDRA Yojna, under three innovative schemes launched by government shows the performance of scheme in different regions. The above table shows number of accounts opened and benefitted under this scheme. It shows that maximum number of accounts are opened under Mudra in south region accounting to 32 percent. Followed by South, North accounts for 26 percent and both East and West account for 21 percent.

The banks and financial institutes participating in Mudra loan as lenders or providers of finance needs certain measures to fulfil. All the private and public sector schedule commercial banks should have 3 years continuous profit, NPA of such participating institutes should not exceed percent, it should have net worth of ₹ 100 cr., and CRAR should not be less than 9 percent.

Regional Rural Banks are eligible as participant in this scheme provided. They fulfil criterion such as NPA with 3 percent it is even relaxed for deserving cases, RRB should have profitable operations without any accrued losses and having CRAR less than 9 percent.

There is no fix interest rate in MUDRA loan; generally banks charge around 1 percent to 7 percent minimum interest. Sometimes higher interest is charged depending on risk involved and customer profile.

The success of Mudra scheme can be seen not only in number of accounts opened since it's launched but it can also be measured in terms of amount disbursed. It has disbursed over ₹ 42,000 crores in five month till September 2016 (this financial year). The annual target of Mudra is to disburse ₹ 180,000 crores, this shows

that the agency has already disbursed one fourth of its annual target in just 5 months.

Micro enterprises were facing problems such as access to finance, skill development, knowledge gap, infrastructure gap, lack of growth orientation, lack of market development, policy support and lack of information.

The biggest stumbling block in the growth of MSME sector is the lack of financial support. The financial support which the banks are offering are just not enough as less than 15% bank credit goes to MSMEs.

The Mudra loan scheme is beneficial to development of MSME sector. It has adopted all-round development and refinancing facility to eligible small enterprises that fulfil the criterion. Mudra is also responsible for skills development of candidates.

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## Islamic Banking: A Tool of Sustainable Development

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### Abstract

*Islamic markets (markets with Muslim majority populations) produce nearly \$7 trillion in GDP and are home to more than 1.6 billion people. Shari'ah compliant assets were \$1.8 trillion at the end of 2014 and expected to exceed \$3 trillion by 2020.*

*Across the globe policy makers, financial regulators and supervisors have been creating policies, regulations and standards that are helping to shift the financial system to better align with sustainable development. These include disclosure requirements, credit ratings, listing requirements and indices created by central banks, finance ministries, stock exchanges and others.*

*The sustainable development of Islamic finance offers benefits for economic growth, reducing poverty and fostering shared prosperity. Islamic finance can significantly contribute to economic development, given its direct link to physical assets and the real economy. This article talks about recent trend and strategies for sustainable development through Islamic finance.*

**Keywords:** *Islamic banking, Islamic markets, Ijara, mudarba, musharka, sukuk, strategies*

### Introduction

The 2015 Sustainable Development Goals and Paris Climate Agreement have made it clear that the finance sector must become a catalyst for sustainable, climate resilient development. This new development agenda will require new ways of thinking and of working. Bringing public, private, civil society and United Nations perspectives, this opening plenary will help to clarify the pathway towards this new financing approach and will engage participants in addressing the most challenging sustainable finance questions of our day.

Islamic markets (markets with Muslim majority populations) produce nearly \$7 trillion in GDP and are

home to more than 1.6 billion people. Shari'ah compliant assets were \$1.8 trillion at the end of 2014 and expected to exceed \$3 trillion by 2020. During the 40 years since modern Islamic finance began, much effort has focused on providing ways for financial institutions to serve their customers in compliance with Islamic precepts regarding interest, excessive uncertainty and avoidance of prohibited business areas. Although most Islamic financial institutions have not integrated environmental impact into their financial decision-making process, they face a growing push by many stakeholders, particularly younger consumers, to broaden the focus beyond exclusionary screening. Adding a focus on environmental sustainability, these stakeholders say, is not just compliant with Islamic principles but is an important extension to

## Islamic Banking: A Tool of Sustainable Development

fully meet the wider social goals of Shari'ah. This session will highlight areas where Islamic Finance principles most closely align with wider concepts of environmental sustainability and introduce several examples of green Islamic Finance practices that align with and can become an added tool for all sustainability-focused institutions.

Across the globe policy makers, financial regulators and supervisors have been creating policies, regulations and standards that are helping to shift the financial system to better align with sustainable development. These include disclosure requirements, credit ratings, listing requirements and indices created by central banks, finance ministries, stock exchanges, and others.

### Islamic Finance

Islamic finance is a model that balances rewards and risks in a fair and transparent manner. It links finance with the real economy and maintains link at each point in time in a fair and transparent manner. As a system, it helps to stimulate economic activity and

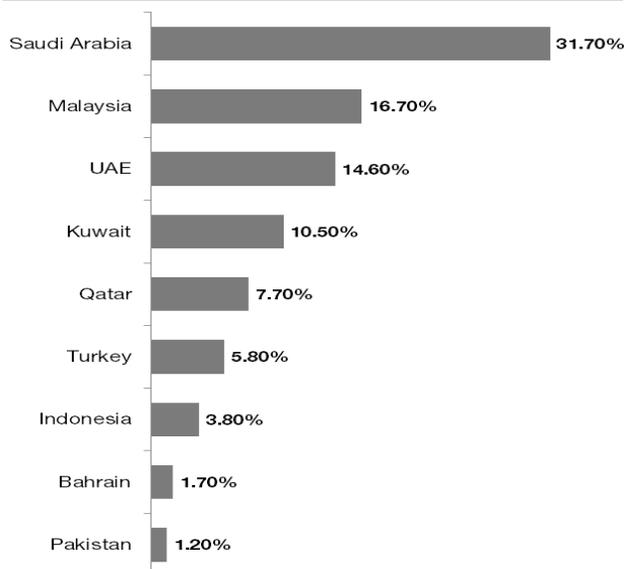
entrepreneurship towards addressing poverty and inequality, ensures financial and social stability, and promotes comprehensive human development and fairness—all are relevant to SDGs. The Islamic financial services industry has gained traction around the world especially in recent years. It has footprint in Asia and Middle east; ripe for growth in South America and Europe; and has future markets in North America, Central Asia and Australia.

Its global assets have grown considerably and estimated to reach US\$3 trillion by 2020 with compounded annual growth rate of about 17 percent. The major areas of contribution of Islamic finance – financial stability, financial inclusion and shared prosperity— can be instrumental in the successful implementation of policies on ending poverty (SDG-1), achieving food security (SDG-2), ensuring healthy lives (SDG-3), achieving gender equality (SDG-5), and promoting peaceful and inclusive society (SDG-16) Additionally, innovative Islamic financial instruments especially for infrastructure development such as Sukuk can be used to mobilize resources to finance water and sanitation projects (SDG-6), sustainable and affordable energy (SDG-7), build resilient infrastructure (SDG-9) and shelter (SDG-11). In today's world, the global financial order needs to adopt a new banking and finance paradigm, one that is built on the principles of justice, risk sharing and direct linkages with real economy and avoidance of excessive speculation. This is necessary so that the world economy, in general, and the financial services sector in particular will achieve greater stability and sustainable growth trajectory.

### Islamic Finance Principles and Instruments

The term Islamic finance is used to refer to financial activities conforming to Islamic Law (Sharia). One of the main principles of the Islamic finance system is the prohibition of the payment and the receipt of riba (interest) in a financial transaction. The term riba covers all forms of interest and is not limited to usury or excessive interest only. The most critical and significant

**Global share of Islamic finance banking assets, 2015**



Source: Ernst & Young



implication of banning interest is the indirect prohibition of a “pure” debt security. The key point to bear in mind is that Islamic law doesn’t recognize money and money instruments as a commodity but merely as a medium of exchange. Hence any return must be tied to an asset, or participation and risk-taking in a joint enterprise (such as partnerships). A pure debt security is replaced with an “asset-linked” security, direct financing of a real asset, and different forms of partnerships of which equity financing is the most desirable.

In addition to prohibition of *riba*, there are several other important provisions which may affect financial transactions. These include the prohibition of ‘gharar’ (uncertainty or asymmetrical information), ‘maysir’ (gambling, speculation), hoarding, as well as trading in prohibited commodities (for example, pork and alcohol).

### Instruments

Basic instruments include: cost-plus financing (*murabaha*), profit-sharing (*mudaraba*), leasing (*ijara*), partnership (*musharaka*) and forward sale (*bay’salam*). These constitute the basic building blocks for developing a wide array of more complex financial instruments.

**Murabaha** – Trade with markup or cost-plus sale. The purchase of an asset is financed for a profit margin, with the asset purchased on behalf of client and resold at a pre-determined price. Payment could be in lump sum or in instalments and ownership of the asset remains with bank till full payments are made

**Ijara** – Operational or financial leasing contracts. Bank purchases asset on behalf of client and allows usage of asset for a fixed rental payment. Ownership of the asset remains with the financier but may gradually transfer to the client who eventually becomes the owner (*ijara wa iqtina*).

**Mudaraba** – Trustee financing contract. One party contributes capital while the other contributes effort or expertise. Profits are shared according to a predetermined ratio and the investor is not guaranteed a return and bears any financial loss.

**Musharaka** – Equity participation contract. Different parties contribute capital and profits are shared according to a pre-determined ratio, not necessarily in relation to contributions, but losses are shared in proportion to capital contributions. The equity partners share and control how the investment is managed and each partner is liable for the actions of the others.

**Sales contracts.** Deferred-payment sale (*bay’ mu’ajjal*) and deferred-delivery sale (*bay’salam*) contracts, in addition to spot sales, are used for conducting credit sales. In a deferred-payment sale, delivery of the product is taken on the spot, but delivery of the payment is delayed for an agreed period. Payment can be made in a lump sum or in installments, provided there is no extra charge for the delay. A deferred-delivery sale is similar to a forward contract where delivery of the product is in the future in exchange for payment on the spot market.

**Sukuk** – Certificates of Ownership. Sukuk are certificates of equal value representing undivided shares in ownership of tangible assets, usufruct and services, or (in the ownership of) the assets of particular projects. The returns on the certificates are directly linked to the returns generated by the underlying assets.

### Strategies for sustainable development through Islamic finance

§ In recent operations in Egypt and Turkey, for example, the Bank Group helped governments to design Sharia-compliant financing frameworks to expand financing for small and medium scale enterprises.

§ The sustainable development of Islamic finance offers benefits for economic growth, reducing poverty and fostering shared prosperity. Islamic finance can significantly contribute to economic development, given its direct link to physical assets and the real economy. The use of profit- and loss-sharing arrangements encourages the provision of financial support to productive enterprises that can increase

- output and generate jobs. The emphasis on tangible assets ensures that the industry supports only transactions that serve a real purpose, thus discouraging financial speculation.
- § Islamic finance helps promote financial sector development and broadens financial inclusion. By expanding the range and reach of financial products, Islamic finance could help improve financial access and foster the inclusion of those deprived of financial services. Islamic finance emphasizes partnership-style financing, which could be useful in improving access to finance for the poor and small businesses. It could also help to improve agricultural finance, contributing to improved food security. In this regard, Islamic finance can help meet the needs of those who don't currently use conventional finance because of religious reasons. Of the 1.6 billion Muslims in the world, only 14% use banks. It can help reduce the overall gap in access to finance, since Non-Muslims aren't prohibited from using Islamic financial services.
  - § It helps to strengthen financial stability. As the 2008 global financial crisis ravaged financial systems around the world, Islamic financial institutions were relatively untouched, protected by their fundamental operating principles of risk-sharing and the avoidance of leverage and speculative financial products.
  - § Islamic finance has strong potential in promoting financial stability, financial inclusion and shared prosperity, and infrastructure development which will set an enabling environment for timely implementation of SDGs-2.
  - § Renewed efforts in the wake of the current global financial crisis in search of a more resilient and robust financial system based on stronger links between credit and the real economy have brought attention to Islamic finance.
  - § The principles of Islamic finance can minimize the severity and frequency of financial crises by introducing greater discipline into the financial system and requiring the financier to bear or share in the risk of the underlying economic activity. Islamic finance also requires the creditor to bear the risk of default by prohibiting the sale of debt, thereby creating a proper and sound due diligence by those who extend credit.
  - § Islamic finance emphasizes the full integration of finance with the real economy. Debt creation must be contractually linked with trade and production. Islamic financial instruments, (e.g. sale with a deferred price) make debt inseparable from real transactions. Accordingly, debt cannot grow beyond real resources. This is vital for sustainable development as uncontrolled debt is not sustainable and can be a heavy burden on natural resources and the environment.
  - § The de-linking of profit-making from the real economy is a major cause of excessive lending. It is important to underline the imperative of risk-bearing that Islamic finance encourages through its emphasis on real economic activities, including equity and partnership, sales-based and lease-based financing instruments. While debt is allowed in Islamic finance, it is not allowed to grow on its own. It can grow only in step with the growth of the real sector. Thus, by integrating debt creation with wealth creation, finance is properly positioned as a means for promoting productive activities and cannot be used for speculation or be an end in itself. This prevents the creation of an inverted debt pyramid and, thereby, largely mitigates financial instability.
  - § Islamic principles require an annual donation (Zakat) to the poor and the needy as an essential obligation of all Muslims who possess a minimum level of wealth. In addition, it strongly encourages establishing endowments (Awqaf) the return on which is dedicated to social objectives. These two institutions have historically played a major role in serving the social needs of Muslim communities. When



fully utilized, they can be of great value in fighting poverty and achieving SDGs.

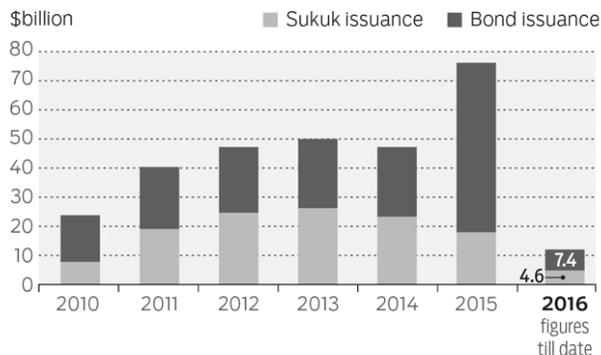
§ The small and medium enterprises (SMEs) are source of job creation and economic growth. The partnership financing, the core element of Islamic finance, provides an important source of funding for SMEs that might not be able to take on debt financing. Despite its relatively small size, the Islamic microfinance industry has shown a significant growth. The elements of just, ethical and pro-real sector development have interested many parties around the world in seeking to promote financial inclusion to support socio-economic development.

§ Infrastructure deficit is a main challenge facing many countries. For developing countries, an infrastructure gap is estimated to be in the range of \$1-1.5 trillion annually. At global level, investments in infrastructure are estimated to be US\$ 100 trillion over the next two decades. Sukuk (Islamic capital market instrument) have successfully been used to finance large scale infrastructure all over the world and could be utilized for SDGs. Sukuk are securities that comply with Islamic law and its investment principles. A Sukuk represents proportionate beneficial ownership in the underlying asset. The emergence of Sukuk has been a significant development in Islamic capital markets in recent years. Funds raised through Sukuk can be allocated in an efficient and transparent way to infrastructure initiatives and other deserving projects related to SDGs. Sukuk issuance has proven its resilience during recent periods of turbulence in global capital markets. Sukuk issuance increased from US\$2 billion in 2001 to US\$80 billion in 2014 with Asia showing particular strength. The Sukuk growth rate is currently 10-15% in global financial markets.

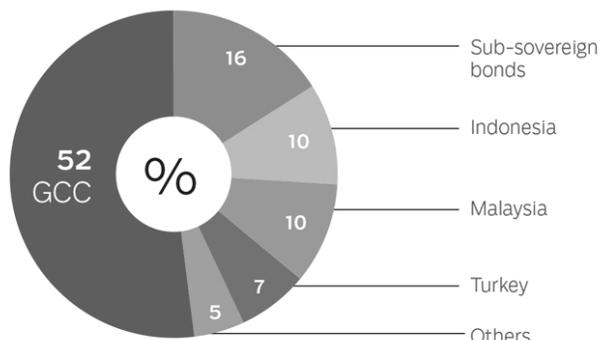
### Trend in global sukuk issuance

#### Bond universe

GCC bond and sukuk issuance



Global scene



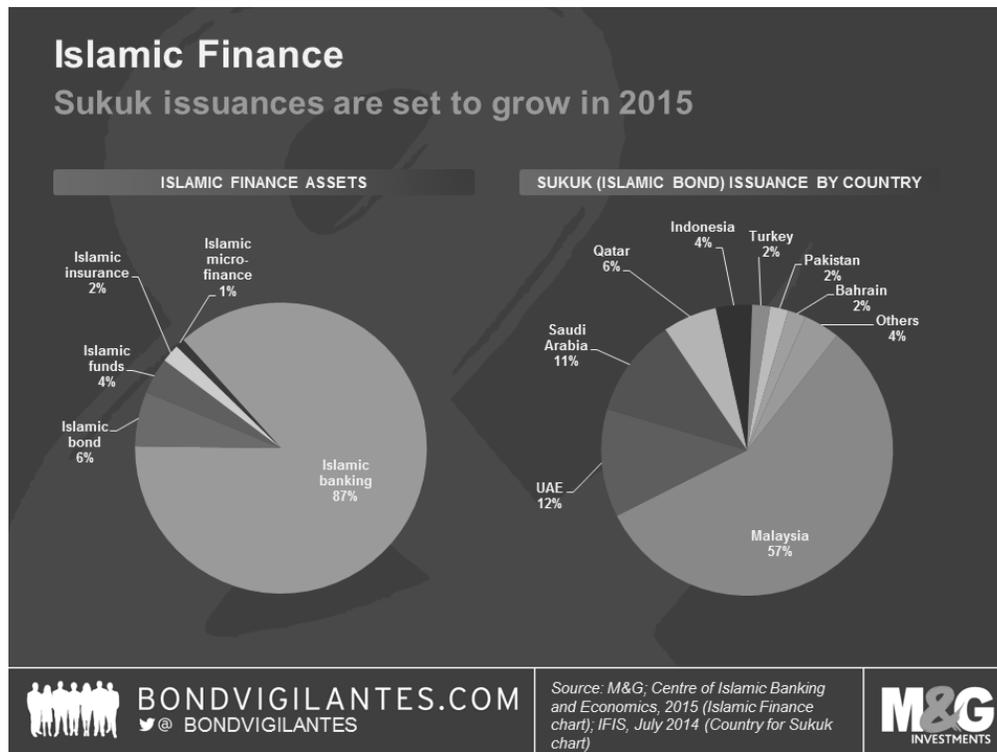
Sources: Emirates NBD, Bloomberg

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### Conclusion

I think Islamic finance can play an important role. The Islamic Development Bank in particular can be majorly relevant in contributing to the global agenda of sustainable growth and development.

Islamic finance is growing on the global financial landscape. Its global assets have incremented considerably and now exceed US\$ 2 trillion. Islamic financial services therefore have great potential to support the financing of climate and sustainable development goals.



To better promote the transition to a low-carbon economy, the financial sector has to get a clear idea of the climate impacts of their lending.

Development Banks could adopt portfolio-wide targets to reduce emissions in their lending. We have already seen progress in this area, with private companies looking to move their investment portfolios away from brown investments. 25 institutional investors have joined the Portfolio Decarbonisation Coalition, a group committed to fighting climate change through green investment, run by the UNEP Finance Initiative. Two of the world's biggest institutional investors Allianz and ABP joined in December 2015. Altogether, Coalition members have pledged to decarbonise US\$ 600 billion worth of assets.

The development banks can also assess or address climate change risks associated with lending, technical assistance, and financial intermediaries.

The UNEP Inquiry into the Design of a Sustainable

Financial System has been working on this very issue for over a year. By working with senior officials and executives in major banks such as the People's Bank of China and the Bank of England, we have discovered a wide range of examples and best practices in green finance around the world, and shown that there is a trend - "a quiet revolution" - toward green finance in the financial sector.

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## Sustainable Development: Challenges, Opportunities and the Politics

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### **Abstract**

*Sustainable development has gained recognition globally. Despite acceptance of the idea more scrutiny and efforts are required to fully institutionalize the green ideology. Sustainable development, now as principal of policy goal of many institution is a major breakthrough. The outcome of World Summit on Sustainable development has pushed the agenda further into global arena.*

**Keywords:** *Sustainable, Environmentalism, Common future, The agenda 21.*

### **Introduction**

The idea of sustainable development has been widely recognized by the public, academics and practitioners of environmentalism in many disciplines and fields, both in the developing and more industrialist countries. Despite this recognition, there continue to be many patterns of human welfare and the status of environmental resources worldwide that suggest that further scrutiny and efforts are required. Development process are often characterized by the loss and or degradation of primary environmental resources in many countries, ‘development reversals’ are being seen, with rising proportions of people below basic poverty lines and falling life expectancies. The concern continues to be that many of the patterns and the process of development will not be able to supply the needs of the world’s population into the future. They are unlikely to deliver the higher standards of living to the rising number of people considered essential to the conservation of environment.

The pursuit of sustainable development is now largely regarded as a principle policy goal of many of the major institutions of the worlds including the United Nations, the World Bank and the World Trade Organization. This confirms how understanding of the global challenge of sustainable development has moved on to encompass the complex interdependencies of environmental, social and economic development. Moreover, the discourse on sustainable development in the twenty first century is quite different from that of the 1990s. In a fast globalizing world, new challenges as well as opportunities have emerged both for the environment and for the development. New actors such as transnational corporation and civil society organization and new technologies particularly in communications now have been shaping the outcome in resource development and management to a great extent. Ensuring the process of globalization operate to reach the needs of the poor rather than to marginalize particular groups and places, further continues to be the central to the challenge of sustainable development in the present context.

It is important to discuss the challenges and opportunities for sustainability in the less economically developed regions of the world especially because it is here that the majority of the world's poor reside. However, this does not at all indicate that sustainability is mostly a problem for the poor. In fact, most pollution is a result of affluence and not of poverty. It is important therefore, to acknowledge that sustainable development is a common challenge for the global community as a whole.

There are different definitions of sustainable development coming from various disciplines and with different assumptions about the basic relationship between society and nature. Ideas of sustainable development have a long history in the literature of both development and environmentalism. There have been a number of international conferences wherein actions towards sustainable development have been debated and contested as well at the highest levels of government. Sustainable development is widely accepted as a desirable policy objective among many institutions concerned with the future development of the resources of the globe. As the sustainable development is currently being pursued in the context of an increasingly globalized world and especially the one which is characterized by poverty, it is desirable to reflect the global process initiated in the past.

The United Nations, in 1984, established an independent group of twenty two people drawn from member states of both the developing and developed world. The group was asked to identify the long term environmental strategies for the international community. In 1987 the world Conference on Environment and Development published their report entitled 'Our Common Future', often known as the 'Brundtland Report', after its chair the then Prime Minister of Norway, Gro Harlem Brundtland. The report used the term 'sustainable development' widely and defined it as 'Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'

In 1992, the United Nations Conference on Environment and Development, the Earth Summit, took place in Rio

de Janeiro, Brazil. It was the largest ever conference with over 170 governments represented and a further 2500 NGOs and 8000 accredited journalists attending. The central aim was to identify the principles of an agenda for action towards sustainable development in future. By this time, the term sustainable development had gained a currency.

The decade of the 1990s witnessed substantial debate and contestation concerning the meaning and practice of sustainable development. While the primary output of the Rio Conference, the 'Agenda 21' document carried much political authority and moral force, there were clear signs of tensions evident through the proceedings at Rio. There were conflicts between environmental concerns of rich and poor countries, between those who wished to exploit resources and those who wished to conserve them, and between the development needs of current generations and those of the future. As a result, the term was defined and redefined so many times that it gradually lost its initial moral thrust.

In 2002, 104 heads of State once again met in Johannesburg, South Africa, for the World Summit on Sustainable Development (WSSD). The global challenge of sustainability is now understood to lie somewhere in the complex interdependencies of environmental, social and economic development.

Literally, sustainable development refers to maintaining development overtime. The challenges of understanding what this idea of sustainable development may mean, and how people can work towards it, are evident in a brief analysis of the definition of sustainable development provided by the WCED. Most definitions of sustainable development encompass the idea that there are three interdependent pillars of sustainable development: environmental, economic and social. The objective of sustainable development is to maximize the goals across all three systems. For Starkey and Walford (2001) sustainable development is a moral concept that seeks to define a 'fair and just development.' Hence, notion of 'environmental justice' is now a prominent part of contemporary discussions of the meaning and practice



of sustainable development.

The official outcomes of World Summit on Sustainable Development were the Declaration on the Sustainable Development and the Plan of Implementation. It is evidenced in the Declaration that social and economic development (poverty and inequality) are now firmly within international thinking on the environment. The eradication of poverty is rightly seen as an underlying theme in all work on sustainable development. It is desirable to underline that sustainable development is also being claimed as a major policy goal by other institutions such as the World Bank and even the World Trade Organization. However, there remains substantial contestation as to how best to secure sustainable development.

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## The forgotten Human Resource Management policies followed by the early Muslims and their relevance for development today

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### **Abstract**

*Among HRM policy documented by the Arabs immediately after the spread of Islam in the Arabian Peninsula, a letter written by Ammerul-Momeneen Ali(a) holds special significance. This letter contains his instructions to his Governor Designate for Egypt Maalik-Al-Ashtar. This letter is present as letter number 53 in the book Nahjul-Balagah(Peak of Eloquence) compiled by Syed-e-Razi. Arab Human Development Reports of 2002 under the aegis of the United Nations Development Programme has quoted extensively from this letter. This letter outlines the HR policies of the early Islamic Caliphate under him. This Paper attempts to study some key points prescribed in this letter with reference to current day HR issues.*

**Keywords:** HRM, UNDP, Arabs, Ali, Nahjul-Balagah

### **Introduction**

Arab Human Development Reports of 2002 under the aegis of the United Nations Development Programme has quoted extensively from Ameerul-Momeneen Ali(a) instructions to his governor to Egypt Maalik-al-Ashtar. This letter outlines the HR policies of the Islamic Caliphate under him. The Arab development reports have highlighted these at a very turbulent stage in Arab history.

Kofi Annan, former Secretary-General of the UN, says that Ali ibn Abi Talib(a) is the fairest governor who appeared in human history. In his capacity as the secretary-general of the UN he advised the Arabs to

take him as a role model in establishing justice and encouraging knowledge.

This emphasises the need to study this document more in detail especially for key HRM points so as to appreciate the policies which were outlined then, but remain very much relevant even today.

The letter presently being considered is documented as letter number 53 in the book “Nahjul-Balagah” (Peak of Eloquence) compiled by Syed-e-Razi.

Thus this complete document deserves a detailed analysis. Presently a brief analysis of few key points of



this priceless document are presented as follows:

### **The Cornerstones of Kindness, Compassion and Love**

These are emphasised at the very beginning by Ameerul-Momeneen Ali(a) when he starts his discussion on human resource management. He says: *“You must create in your mind kindness, compassion and love for your subjects.”* The point to be highlighted over here is that he does not just talk of displaying these qualities but orders to mould the very mind-set according to these principles. Ali(a) has removed the possibility that leaders and managers may display these qualities just to gain the confidence of their subordinates. He has emphasised for real kindness, compassion and love. When the human mind itself is the foundation of these qualities all decisions which follow will naturally be based on them thus eliminating all conflicts between managers and their team members.

Equality of men, justice and removal of discrimination: He states: *“Be fair, impartial and just in your dealings with all, individually and collectively.”*

It is only now that organisations come out with a policy of non-discrimination. While acknowledging religious and cultural differences among the people Ali(a) gives clear instructions not to discriminate any one on these basis. At the same time he also highlights the principle of equality. Ali(a) after emphasising love and compassion, highlights the commonly present weakness in the people. He logically lays down a policy of forgiveness to be followed in general for people belonging to all groups and not any particular group.

He says: *“Amongst your subjects there are two kinds of people: those who have the same religion as you; they are your brothers, and those who have religions other than you, they are humans like you. Men of either category suffer from the same weaknesses and disabilities that humans are inclined to, they commit sins, indulge in vices either intentionally or foolishly and unintentionally without realizing the enormity of*

*their deeds. Let your mercy and compassion come to their rescue and help in the same way and to the same extent that you expect Allah to show mercy and forgiveness to you.”*

He also gives instructions not to allow personal benefits and matters related to relatives and friends to override the administration of justice. Once his brother Aqeel approached him while he was in the public treasury requesting for some preferable treatment in the distribution of public-wealth. Before Aqeel could even make a request he asked him whether he had come for personal or official work. He then put off the candle in the room saying that it would be improper to burn the candle purchased from public-money for discussing personal matters. This peak of non-discrimination in his character made him give the following instructions:

*“So far as your own affairs or those of your relatives and friends are concerned take care that you do not violate the duties laid down upon you by Allah and do not usurp the rights of mankind, be impartial and do justice to them because if you give up equity and justice then you will certainly be a tyrant and oppressor.”*

He drew a distinctive line by asserting that if a person does not administer justice to his subordinates he is a tyrant and oppressor.

Later on he even highlights the psychological truth that if justice is not administered, evil will be emboldened and good performance will be discouraged.

*“You should not treat good and bad people alike because in this way you will be discouraging good persons and at the same time emboldening the wicked to carry on their wickedness. Everyone should receive the treatment which his deeds make him deserve.”*

### **Anger Management**

As a prelude to control anger he talks about forgiving mistakes and even forgetting about them. How can something which is forgiven as well as forgotten make any one angry? He underlines patience as the key to

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anger management. He also highlights the psychological connection between the desire for vengeance and anger. He had practically demonstrated this when he left an adversary in battle when he spit upon him, thus displaying a perfect presence of mind and a disconnect from anger due to vengeance. He concludes this point by showing the uselessness of anger and vengeance in managing people.

These are his words: *“Do not feel ashamed to forgive and forget. Do not hurry over punishments and do not be pleased & proud of your power to punish. Do not get angry and lose your temper quickly over the mistakes and failures of those over whom you rule. On the contrary, be patient and sympathetic with them. Anger and desire of vengeance are not going to be of much help to you in your administration.”*

His instructions for selecting the chief of the army or police for which qualities of harshness are commonly deemed as desirable are such which give priority to the qualities of mercy and compassion over harshness and rife. He gives clear guidelines as to where both these opposing qualities need to be used. Harshness in front the strong and powerful and sympathy with others. In this case even when he considers absence of vindictiveness as a desirable quality he does not endorse weakness for them. His approach is balanced one.

“So far as the army is concerned its chief and commander should be a person ....who is most pious, is famous for his forbearance, clemency and gentleness, is neither short-tempered nor does he get angry quickly, who sympathetically treats sincere excuses and accepts apologies, who’s kind and compassionate with the weak, but severe against the strong and the powerful, who has no vindictiveness which might lead to violence or any inferiority complex or weak-mindedness which makes them helpless and dejected”

### Care for those at the base of the pyramid

Unlike present practices, he gives priority to those at the lower strata over the higher-ups. Normally there is

conflict between the stakeholders at a higher level with those down the rung. He lays a clear policy of risking the dissatisfaction of the higher-ups to satisfy those working at the ground level. In addition to showing his care for the commoners it shows his long term foresight in preferring the base level people as no upper authority can survive if those below are not there or they refuse to co-operate. Short-sighted managers would prefer to satisfy the upper-rung and risk discontent in the lower-rung putting the entire organisations’ existence at risk. His exact expressions are: *“Remember that the displeasure of common men, the have-nots and the depressed persons more overbalances than the approval of VIPs, while the displeasure of a few big people will be excused by the Lord if the general public and the masses of your subjects are happy with you.”*

### Public as well as private appreciation but not open criticism

At different places he instructs Maalik to be lavish in praising openly when one deserves so. But warns about public broadcasting of weakness. He lists out the reasons for such a policy. For his advocacy of open appreciation he mentions two reasons. First being an approval of good performance so as to be repeated with zeal and second being a motivation and encouragement to others. He prohibits open censure acknowledging the fact that people are fallible. He lays down forgiveness as a duty. Categorically prohibits digging for shortcomings. When the shortcomings are known in a normal course then he cast a duty for gracefully taking up the matter and teaching and facilitating in its reformation. Once a shortcoming is known and yet if no corrective action is undertaken it becomes a silent approval.

He categorically mentions: *“Speak well of those who deserve your praise. Appreciate the good deeds done by them and let these good actions be known publicly...The correct and timely publicity of noble and golden deeds creates more zeal in the minds of the brave and emboldens the cowards and weaklings.”*

He also instructs: *“Keep such people away from you.....*



*who are scandal-mongers and who try to find fault with others and carry on propaganda against them because everywhere people have weaknesses and failings and it is the duty of the government to overlook (minor) shortcomings. You must not try to go in search of those weaknesses which are hidden, leave them to Allah. About those weaknesses which come to your notice, you must try to teach them how to overcome them. Try not to expose the weaknesses of the people and Allah will conceal your own weaknesses which you do not want anybody to know.”*

### Overall development

He recognises the need of overall development and the interdependency of each class of the stakeholders. He expresses this as follows: *“People over whom you rule are divided into classes and grades and the prosperity and welfare of each class of the society individually and collectively are so interdependent upon the well-being of the other classes that the whole set-up represents a closely woven net and reciprocal aspect. One class cannot exist peacefully, cannot live happily and cannot work without the support and good wishes of the other.”* Encouraging Friendly Co-operation:

He says: *“Try to alleviate and root out mutual distrust and enmity from amongst your subjects.”*

He is not satisfied by mere alleviation but wants to totally eradicate suspicion and hostility from the hearts. Hearts devoid of hatred will then become fertile for the development of love and justice which he has already emphasised.

### Instructions for selecting a core team

Ameerul-Momeneen Ali(a) emphasises the formation of a core team to assist the top-boss. He lists out the following desirable qualities in candidates who will be inducted in the core think tank of an organisation and who will have unfettered access to the top person:

**1. Those who are Knowledgeable.** Knowledge is

among the important cornerstones of any structure. Knowledge of the relevant fields is therefore a must for any administrative order.

**2. Wisdom.** Knowledge to be useful must be accompanied by wisdom. He at the same time qualifies such knowledgeable and wise people to have a mind-set which is not manipulative.

**3. Honesty and truthfulness.** His dedication, belief and support for honesty can be gauged from his another quote: *“Honesty saves you even if you fear it.”*

**4. Humaneness.** This quality characterises a feeling of sympathy, love and caring towards other beings.

**5. Boldness.** He wants a person to be bold enough to be able to constructively criticise his immediate boss. By listing out this quality Ameerul-Momeneen Ali(a) instructs Maalik not to surround himself with “Yes Men” as most managers do. It also reinforces Ali’s dedication to truth.

**6. Piety.** By highlighting piety as a necessary quality in the close advisors he underlines the importance of the personal character of the individual. Today when just professional qualifications are considered for recruitment, Ali(a) gives food for thought by focusing on the fact that when a person is recruited not only his qualifications are recruited but his entire personality is recruited. This will then represent the organisation.

He also lists out the following qualities if present in a person would disqualify him from this core group irrespective of his seniority:

**1. Backbiting others.** In Muslim culture backbiting is distinguished from slandering. Backbiting is based on true facts while slandering is fabricated. By not tolerating the backbiter he has also excluded the slanderer.

**2. Scandal mongering.** This is backbiting and slandering on a large scale such that all become aware.

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3. **Miserliness** as misers would discourage philanthropic works and CSR activities.
4. **Cowardice** as cowards would discourage bold decisions and dissuade from taking even calculated risks.
5. **Greedy and covetous people.** This group's advice will mostly be in favour of exploitation.
6. **Counsellors of the previous oppressive regime.** Since Ali wants his administration to be based on truth and justice he categorically excludes those who have been supporters of oppression in the past.
7. **Sinful and Criminal mentalities.** Ali (a) wants to exclude those possessing criminal and scheming abilities even if they possess expertise and knowledge.

### Discouraging Flattery

After laying down the principles for selecting a core team he instructs Maalik to discourage them from flattery and false-praising. It's normal among humans to seek nearness to the one above them and to this end they may resort to undesirable practices. The leader when surrounded by such an atmosphere may possibly fall prey to the baser human instincts. In the larger interest he prohibits the same:

“Train them not to flatter you and not to seek your favour by false praises because flattery and false praises create vanity and conceit and they make a man lose sight of his real self and ignore his duties.”

### Other Key points

1. Emphasis on reduction of difficulties for human resources.
2. Expecting only what is within capacity.
3. Winning and retaining the trust of the commoners as this would reduce majority of the administrative difficulties.

4. Trusting only after testing.
5. Not trusting the undeserving, inefficient, unfaithful and those who have been previously wronged as they may carry a hidden grudge.
6. Continuing good and beneficial practices of the past. Thus recognising and giving due credit to past administrators and not taking responsibility for stopping a good practice.
7. Recognise and give credit to each individual for his performance taking care that someone else does not claim credit for the same.
8. Taking care of major necessities of the staff.
9. Due consideration to minor and smaller requirements of the staff also.
10. The most gladdening thing for a manager should be that there is perfect justice within the scope of his influence and that his team loves him.
11. Authority of top managers should not become a burden to those below.
12. People not only openly but even secretly in their hearts should wish for continuance of the same governance.
13. Providing Job and Family security thus ensuring no excuse remains for non-performance or corruption.
14. Leading by example for developing an overall atmosphere of spiritual and ethical behaviour. This characteristics the hall mark and uniqueness in his instructions which becomes the centre point for all other exhortations.

The need of Human resource audit and its approach: Ali(a) does not stop at the instructions for selecting the key personnel but deems it necessary to keep a watch on them. The approach to this ultra-sensitive function is qualified by him as follows: “*Keep an eye over them*”



*and watch them as parents watch their children”*

In this way any misgivings about power struggle and threats from well performing senior level managers are put at rest and the need of keeping an eye and auditing the works of the management team is also underlined. The issues brought up by this audit have to be dealt considerately.

### **Instructions for Remuneration**

Ali(a) strictly orders for merit being the sole criteria in fixing pay packages. Discourages underpayment for good work and also prohibits overpayment based on the personality of the doer instead of the worth of the work. These work as anti-corruption and anti-discontent measures.

He says: *“Do not underestimate and underpay the good work. Similarly do not overpay a work simply because it has been done by a very important person and do not let his position and prestige be the cause of overvaluation of the merit of his work and at the same time do not undervalue a great deed if it is done by a very ordinary person.”*

### **Conclusion**

This document and the comprehensive principles enshrined in it are practically relevant to the issues related to management and governance even today. On scrutinizing this from the aspect of human resource management we derive many points relevant to modern day managers in one of their prime functions which is to manage people. The most unique aspect of the principles enshrined herein is the importance attached to a persons' inner self being clean and honest. The focus on the individual is presented in perfect coherence with the entire society. This transparency in managing human resources is something which is rarely seen elsewhere.

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## Analysis of Solid Waste Generation in Mumbai

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### Abstract

*Solid waste has become a colossal issue for megacities around the globe and Mumbai is no exception. Though government and local bodies are taking several steps to manage solid waste, due to continuous flow of solid waste generated by the industries and residences, managing it has become a task. The study is based on the secondary data collected from the official website of Municipal Corporation of Greater Mumbai. The study brings out the most populated wards of the city and has connected them well with the most solid waste generating wards. It is found that Andheri and southern wards contribute most to it. It is recommended to increase the capacity of the dumping grounds by including the fringe areas of the dump and stopping its trade further. Also, eco-friendly consumerism is highly recommended.*

**Keywords:** Manage solid waste, population, increase capacity of dumping ground, eco friendly

### Introduction

Solid waste has become a colossal issue for megacities around the globe and Mumbai is no exception. Though government and local bodies are taking several steps to manage solid waste, due to continuous flow of solid waste generated by the industries and residences, managing it has become a task. It is evident from literature that to solve the problems, it is necessary to understand the sources and the areas affected by it so that an appropriate combat plan can be charted out. The following study thus, tries to understand the wards generating maximum solid waste. It tries to highlight the reasons for the same and recommend relevant solutions.

### Review of Literature

(**The Indian Express, 2014**) Of the 1,27,486 tonnes of waste generated daily in India in 2011-12, Mumbai alone accounted for 6.11 per cent. It is estimated that every resident in the metropolis now generates about 630 grams of waste daily, a figure that is expected to touch 1 kg in the coming years. Land-starved that the city is, this leaves its planners with an extremely difficult choice — where to dump? (**TOI, 2011**). Solid waste generation in the Mumbai Metropolitan Region is expected to rise at an alarming rate over the next decade. This calls for an urgent, effective and eco-friendly solution to the problem of waste disposal. Even as the city faces a space crunch for more landfills, haphazard planning by the authorities



and the reluctance of citizens to have a dumping yard in their backyard have only added to the problem. Such differences need to be set aside before it is too late and the entire city turns into a garbage bin.

### Research Objectives

- To analyse the capacity of solid waste generated in different wards of Mumbai
- To understand the reasons behind the generating capacity
- To recommend solutions for the same

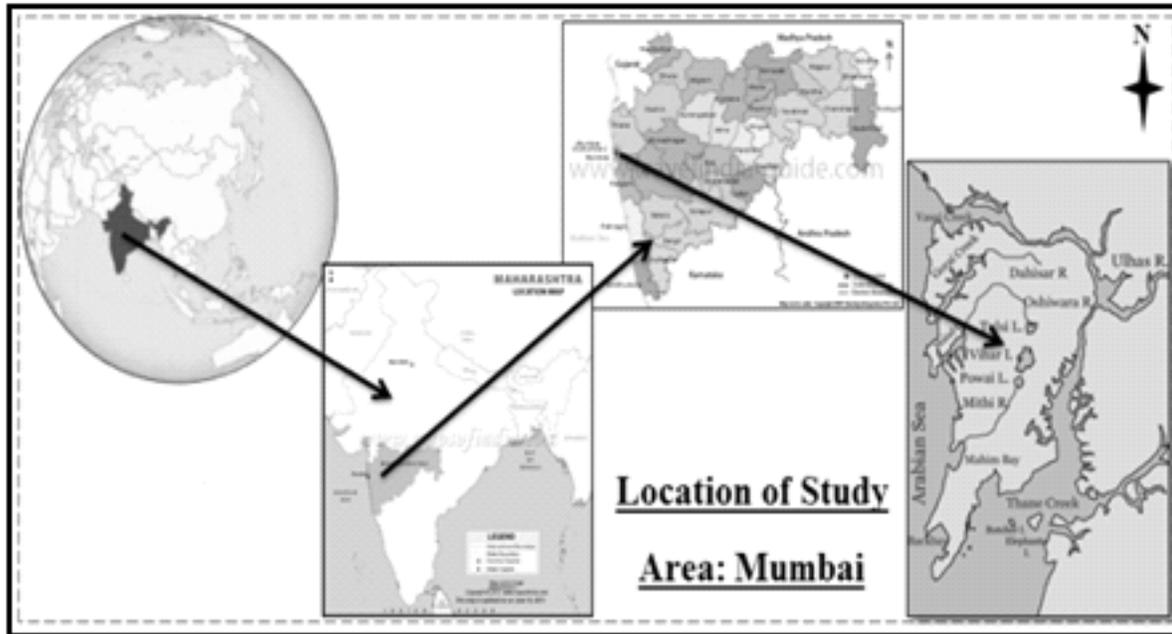
### Research Methodology

The data on solid waste generation is published by the Municipal Corporation of Greater Mumbai on their

official website. The data is thus retrieved from the official website and is stored, processed and analysed using MS-Excel. The data is represented using Q-GIS v. 2.6.1. An extensive literature survey has been undertaken using several online and offline sources.

### Area of Study

The area of study selected is the city of Mumbai. It's co-ordinates are 18°58' 30.3" N 72°49' 33.3" E. It lies on the Western Coast of the state of Maharashtra and is a part of the Konkan Division of the state. It thus has a coastal location. The city constitutes seven islands and is collectively called as the Salsette Island. It is bound by water bodies on all sides, namely, the Arabian Sea in the West, Thane Creek in the South and East and Ulhas River in the North. The unit of study is 'ward'. Mumbai consists of 25 administrative wards.



**Results and Discussion**

Figure 2 represents the total population of wards of Mumbai for the year 2015. It can be observed that the population of Mumbai increases as we move northwards. This is due to the northwards expansion of the city, development of a strong and most reliable railway network and availability of cheaper land in the newly developed or developing areas as compared to the main city of Mumbai in the South.

This would help in comparing population and solid waste generation in the wards of the city to understand whether population is the only factor contributing to solid waste generation or not.

Figure 3 represents the annual solid waste generation capacity of Mumbai’s wards for the year 2015. It can be observed that maximum waste is generated from wards K/W, K/E and G/N. It must be noted that the highlighted areas are Andheri West, Andheri East and Dadar respectively. Both these areas are densely populated with industries, markets and residential areas along with transport networks to serve better. Andheri in fact, serves as an entertainment zone as it belongs to the Bollywood industry where a lot of waste from the shooting sets and other related places is generated. Dadar on the other hand, serves as a huge market for perishable goods like eatables, flowers and other stuff. Hence we find that maximum solid waste is generated from these wards.

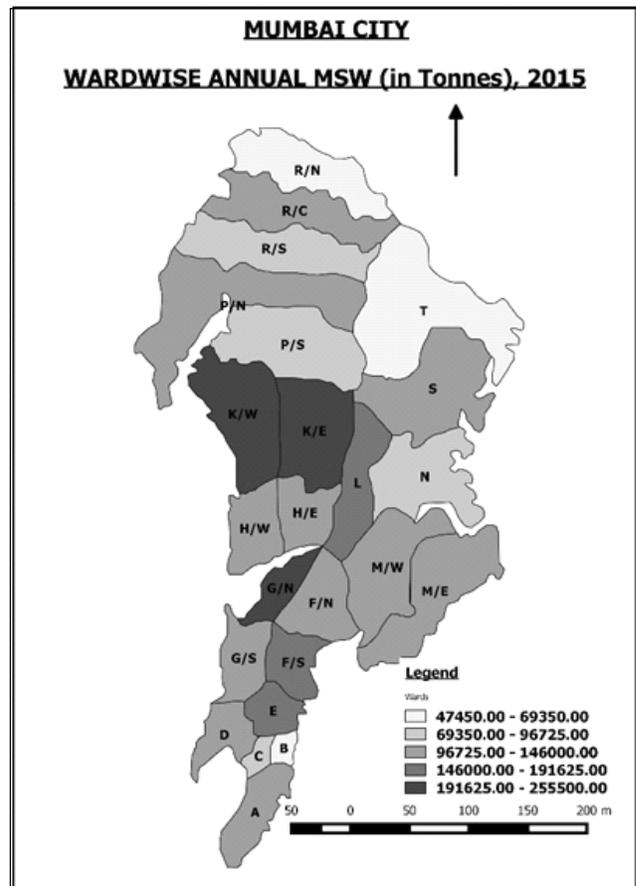
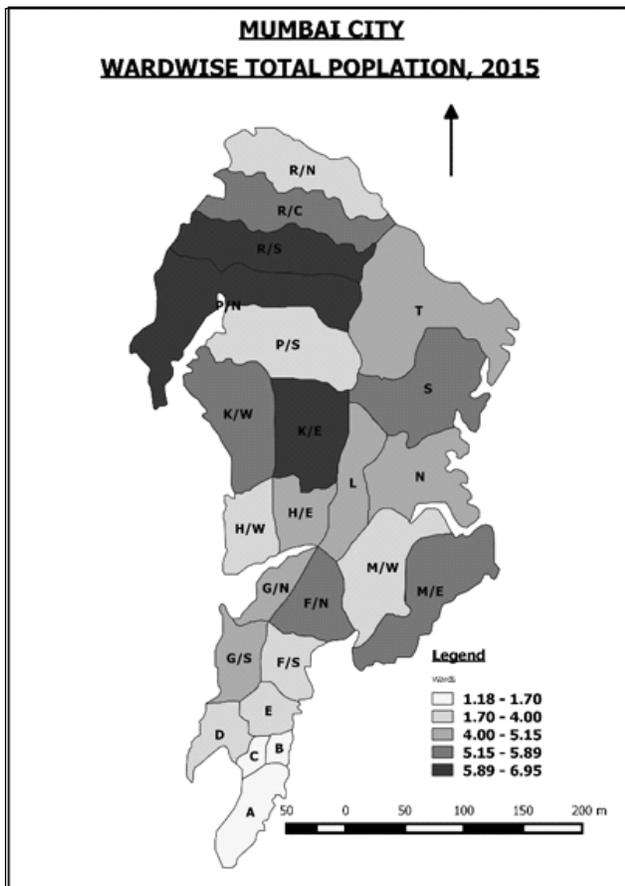
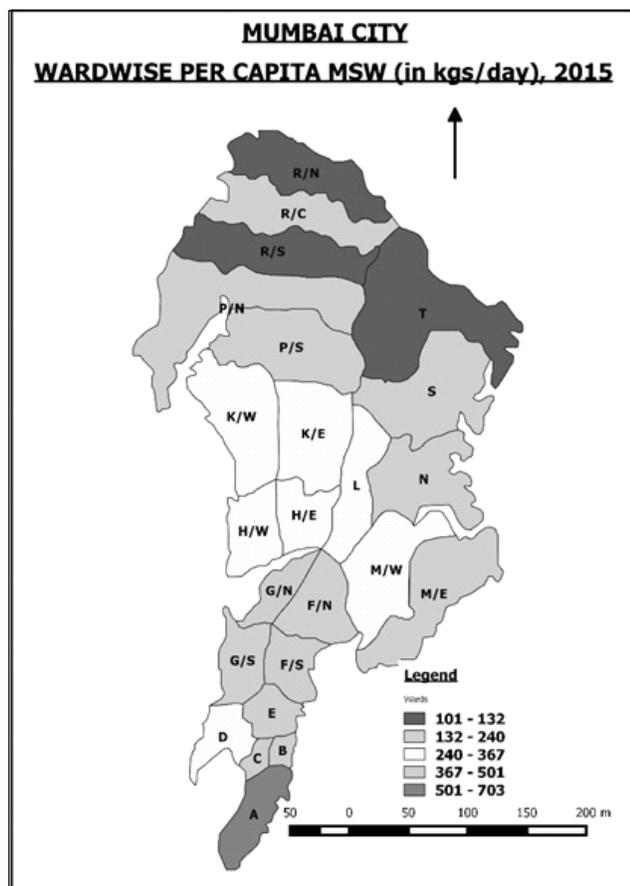




Figure 4 represents ward wise per capita municipal solid waste generation in kilograms per day for the year 2015. It can be observed that southern wards generate maximum solid waste particularly ward A followed by wards B, C, E, F/S and G/N. Wards R/N and R/S generate least quantities of the same. Wards generating higher quantities have in them industries of all categories along with clustered dwellings of all types. This contributes majorly to solid waste generation. The wards in the central area generate medium levels of solid waste.



Mumbai, thus has a huge solid waste generating capacity. It has four dumping grounds at the following places:

1. **Deonar**
2. **Mulund**
3. **Gorai**
4. **Kanjurmarg**

Though the capacity of each of the dumping ground is huge, they are insufficient to dump all the waste generated by the city daily. Hence several steps are taken by the MCGM officials in the same direction. Steps taken include closure of certain sites to increase the capacity by shifting it to other place, landfill management plans, adoption of latest technology and generation of new ideas to manage solid waste efficiently.

### Conclusion

From the above analysis it can be concluded that the city of Mumbai is generating huge quantities of solid waste every day and every year which is posing an acute problem and is acting as a hindrance in the city's further development. Southern wards and K/W and K/E generate maximum solid waste and have the least area.

### Recommendation

- Citizens must be made aware of the hazards caused by non-biodegradable waste
- Use of eco-friendly products should be promoted
- Dumping grounds' capacities should be increased by taking in the land area surrounding it. For this there must be a control on the trade of land around the dumping ground.
- Educational institutes must give practical experience of the problems faced during dumping garbage so that the future generations become conscious about what type of waste they generate.
- Promoting the use of dustbins and segregation of wet and dry waste so that it becomes convenient for the waste collecting and dumping unit to carry on the procedure smoothly.

### Acknowledgement

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## The Rising trends in Tourism Sector - An Analysis

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### **Abstract**

*Tourism is an act of travel for the purpose of recreation and business, and the provision of services for this act. Tourists are people who are “traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited” (official UNWTO definition).*

*Tourism is an important and flourishing industry in the country. It is termed as a useful measure for employment generation, poverty alleviation and sustainable human development in India. It accounts for one-third of the foreign exchange earnings of India and also gainfully employs the highest number of people compared to other sectors. Many countries in the world depend upon tourism as a main source of foreign exchange earnings. There is vast scope for tourism in India. The tourism sector is making a significant march towards the economic development. The growth in travel and tourism directly or indirectly helps in the improvement of the socio-economic conditions of other factors such as hotels, resorts, guides, travel and tour operators etc.*

*Therefore, in the development of the tourism sector, the role of states in the democratic set-up of India needs to be recognized.*

**Keywords:** *Tourism, Employment, Development.*

### **Introduction**

Tourism emerged as the largest global industry of the 21<sup>st</sup> century. In the new millennium global economy will be governed by Technology, Telecommunication and Tourism. Tourism has a potential to create the maximum number of jobs. According to an assessment, in India alone, 100 million additional jobs will be created by the Tourism industry in the next 25 years. It helps to earn valuable foreign exchange.

Tourism sector can also be considered the backbone for allied sectors, like hospitality, civil aviation, and transport. Sensing the importance and worth of the sector, Indian Government has invested abundantly for the development in this sector. It has been partially successful with increase in foreign tourist arrivals over the last decade, courtesy “Incredible India Campaign”.

### Literature Review

Tourism gains immense popularity worldwide in recent trend. For the accelerating trend of this sector government has adopted various steps. Many more literatures are also built in this area to spread the importance of the sector globally.

*Sandeep Das (2011)*, in his article explains that tourism provides opportunities of job creation directly and indirectly. So this sector should be provided with incentives for sustainable and overall economic growth along with creation of jobs.

*Barna maulick (2012)*, in his article highlights about the tourism as strategy for rural development. He has given more priority of tourism sector and its contribution to earn foreign exchange and the accelerating trend of this sector towards attracting the foreign tourist arrival in India from 2001 to 2010.

*Parmar Jaysingh (2012)*, in his article explains tourism as an engine for economic growth. In his study he basically focuses on the rural economy of Himachal Pradesh with the findings that this state is emerging as a favorite destinations for the tourists i.e., both domestic and foreigners which helps for the growth of the state.

### India as a Potential Tourist Destination

India's bounteous heritage includes not just breathtaking beautiful architecture, rich traditions and diverse cultures but also mesmerizing and scenic landscapes. From the challenging snow-clad peaks of the Himalayas and the cool hill stations of the north, to the alluring beaches on the western and eastern coasts and the ornate temples of the south, India has the variety to satisfy the interests of all those travelling through the country.

India has always been known for its hospitality, uniqueness, and charm – attributes that have been attracting foreign travelers to India in multitude. Indian history can be roughly divided into the 6 periods of Ancient India; Heritage Tourism, Ecotourism, Adventure Tourism, Wildlife Tourism, Pilgrimage Tourism &

Medical tourism.

Tourism in India is the largest service industry, with a contribution of 6.23% to the national GDP and 8.78% of the total employment in India. In 2010, total Foreign Tourist Arrivals (FTA) in India were 5.78 million and India generated about 200 billion US dollars in 2008 and that is expected to increase to US\$375.5 billion by 2018 at a 9.4% annual growth rate. According to World Travel and Tourism Council, India will be a tourism hot-spot from 2009 to 2018, having the highest 10-year growth potential. Despite short- and medium-term setbacks, such as shortage of hotel rooms, tourism revenues are expected to surge by 42% from 2007 to 2017. India's rich history and its cultural and geographical diversity make its international tourism appeal large and diverse. It presents heritage and cultural tourism along with medical, business and sports tourism. India has one of the largest and fastest growing medical tourism sectors.

### United Nations has classified three forms of Tourism in its Recommendations on Tourism Statistics

- (i) Domestic tourism, which involves Residents of the given country travelling only within the country;
- (ii) Inbound Tourism, involving non-residents travelling in the given country; and
- (iii) Outbound Tourism, involving residents travelling in another country. The UN also derived different categories of Tourism by combining the three Basic forms of tourism:
  - (a) Internal tourism, which comprises domestic tourism and inbound tourism;
  - (b) National tourism, which comprises domestic tourism and outbound tourism; and
  - (c) International tourism, which consists of inbound tourism and outbound tourism



## Swot Analysis of India

### Strengths

- ❖ **India's geographical location, a culmination of deserts, forests, mountains and beaches:** India is not only a vast country but also a beautiful country with world famous natural locations, which attracts lots of foreign tourist every day. India has all types of seasons at the same time because of its tropical nature, as you will find the climate hot, humid, cold and warm all at the same time in different locations.
- ❖ **Diversity of culture, a blend of various civilizations and their traditions:** India's diversity is its greatest strength. There is so much to explore in India. One cannot be tired of exploring its diverse culture, heritage and locations. The different languages, dialects and other religious and cultural customs and traditions are all the sources of attraction in India.

### Weaknesses

- ❖ **Lack of adequate infrastructure:** It is a major drawback. It is not the case of less money but the money is not being utilized in the right places and in the right manner. The airlines in India, for example, are inefficient and do not provide basic facilities at airports. The road condition in India is very bad.
- ❖ **An intolerant attitude among certain sections of people:** This is among the people who do not like the foreigners and their entry into the Indian Cultures as they feel that they will change the Indian Culture and attitude and replace it with foreign culture.
- ❖ **No proper marketing of India's tourism abroad:** Foreigners still think of India as a land of snake, villages, beggars and elephants. Indians have not made any efforts to change this image and this has proved very costly as foreigners still think of Indians as illiterates and narrow-minded.

### Opportunities

- ❖ **More proactive role from the government of India in terms of framing policies:** The government is supporting India tourism industry. The Indian tourism industry should take the opportunity and push forward the plans of developing tourism sector.
- ❖ **Allowing entry of more multinational companies into the country giving us a global perspective:** This is going to develop and build the confidence in the minds of the foreigners who would like to explore India.
- ❖ **Growth of domestic tourism:** Indian tourism will only develop if the roots are strong. So if the Indians themselves travel around India the foreigners will feel confident to come to India. For e.g.: Thomas Cook says "Travel Now Pay Later." Affordable traveling at leisure and plenty of job opportunities.

### Threats

- ❖ **Economic conditions and political turmoil in the other countries affects tourism:** As a result of this people are afraid to venture outside their own homes for fear of terrorist attacks and threats to their lives.
- ❖ **Aggressive strategies adopted by other countries like Australia, Singapore in promoting tourism:** There are hardly any tourists who confidently come to India and if the other countries offer better packages and places then there is no reason why the tourists should visit India.

## Career Options In Travel & Tourism

Owing to its wide scope travel and tourism offers various career opportunities both in the public and private sector. In the public sector, there are opportunities in the Directorates and Departments of Tourism of the center and the state as Officers, Information Assistants, Tourist guides etc. In the private sector qualified tourism personnel can work as travel agencies, tour operators, airlines, hotels, transport and cargo companies etc. The

## The Rising trends in Tourism Sector - An Analysis

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emerging tie-ups of private airlines with foreign airlines have removed barriers in the transport and communication network. This has led to increase in number of domestic and foreign tourists in the country.

### Future Trends

- ❖ The real GDP growth for travel and tourism economy is expected to be 0.2 per cent in 2009 and is expected to grow at an average of 7.7 per cent per annum in the coming decade.
- ❖ Earning through exports from international visitors and tourism goods are expected to generate 6.0 per cent of total exports (nearly \$16.9 billion) in 2009 and expected to increase to US\$ 51.4 billion in 2019.
- ❖ According to the Ministry of Tourism, Foreign Tourist Arrivals (FTAs) for the period from January to March in 2009 was 1.461 million. For the month of March 2009 the FTAs was 472000. The reason for the decline is attributed to the ongoing economic crisis.
- ❖ In spite of the short term and medium term impediment due to the global meltdown the revenues from tourism is expected to increase by 42 per cent from 2007 to 2017.

### Measures taken by Indian Government

These are some of the instructions given by the government to the tourists. It is mandatory to follow:

- 1) Acquisition of a Currency Declaration Form and filling up of the Disembarkation Card on your arrival in India. You also require making a verbal declaration of luggage you are traveling with.
- 2) Tourists with a visa permit for over 180 days have to obtain a Registration Certificate and a Residential Permit. Submission of four recent passport size photographs is compulsory for registration.
- 3) Submit the certificate of registration while leaving

the country.

- 4) While embarking on an India tour, obtain a yellow fever vaccination certificate. Also consult your doctor before visiting this country.
- 5) Carry attested copies of your visa, passport, and other important travel documents.
- 6) Avoid purchasing any travel ticket from strangers. Go for travel agents for arrangement for transport tickets.
- 7) Credit cards, foreign currency or traveler's cheque are accepted from foreign nationals although Indian currency is needed to give proof of having legal foreign exchange.
- 8) Accommodate at any of the several top hotel groups operated chain hotels in various cities of the country. You can also go for budget hotels or guesthouses.
- 9) Foreign nationals are allowed to ask for the arrangement of language interpreters.
- 10) Carry packaged mineral water on your tour to India.
- 11) First time visitors should avoid spicy food.
- 12) Traveling to regions like Sikkim and Nagaland will require special tour permits from authorized tourist offices.

### Research Methodology

The secondary data have been collected from official & non official records, leading books on the subject, published thesis, booklets, boucher's on divergent aspects of tourism, tourism sector profile, journals & magazines. Moreover, the information from the internet have been extensively used as a source of secondary data collection.

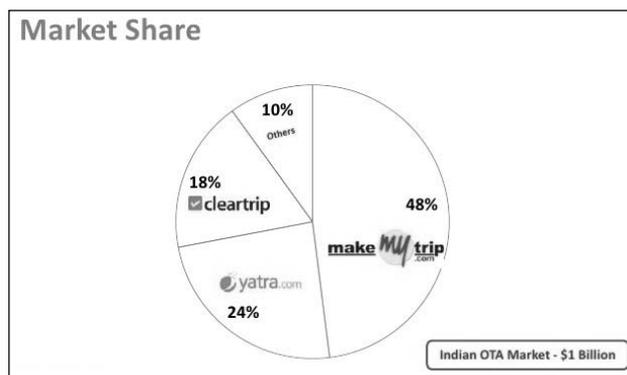
### Objectives of the study

The objectives of current study are:



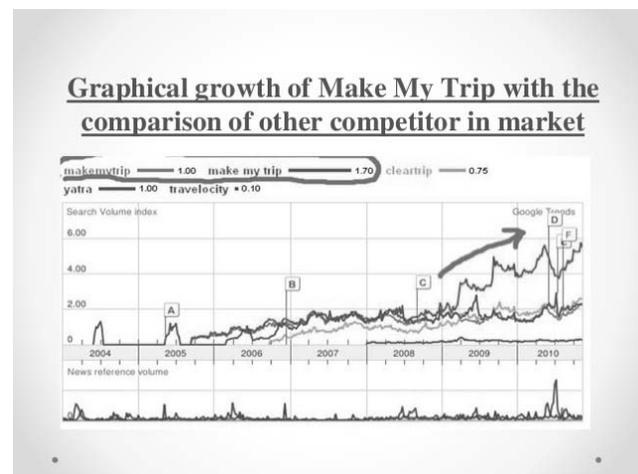
- To examine the major ecological and environmental situation in India.
- To analyze the basis for tourism development and advantages of the tourism resources, analyze the market characteristic of tourism and put forward the overall concept, concrete measures and actions taken by the Indian Government.
- To analyze the rising trends in tourism.

### Case study: Makemytrip (MMT)



After completing MBA, the founder of MakeMyTrip Deep Karla worked at ABN Amro Bank and GE Money and lived a luxurious life. But he was not in a mood to listen to his boss's voice. His life dramatically changed after a meeting with his friend at a Mumbai mall where they developed the business plan over a napkin and a top most company came on the floor from napkin. Karla was in a mood to open the online travel portal in such a situation when there were only 50 million internet users and out of which only 2 million had broadband connection. He didn't stop here and told their employees for 40% salary cutoffs. Twenty five of them moved out themselves and 17 took their own path. Karla known for his business strategy knew the market scenario and focused mainly on the inbound customers returning to India but he didn't forget the vision to open an online travel portal. Founded by Deep Karla in the year 2000 in US and then extended in India in 2005, MakeMyTrip is the largest online travel company in India and is second largest most visited travel website after IRCTC.

The site, Mygola.com covers more than 20,000 destinations worldwide, with half a million organic visitors a month. Mygola said that its app is present in 16 cities across the world which has more than 5000 installs from Google Play store on android. The app enables the user to create custom trips in just 15 minutes. The services and products provided by MakeMyTrip includes air tickets, railway tickets, bus tickets, holiday packages, hotel bookings, car hires and many more. The acquisition comes at the time when the digital marketing industry is booming and the travel sector is heating up in the industry. Mobile contribution to traffic grew to 33% in 2014 from 20% in 2013. Mobile users contributed more than 34% of total online domestic hotel transactions in the last quarter.



### Social media Strategy of MMT

On Facebook, the company official page has more than 2,559,116 likes and content are posted on regular basis to keep the customers engaged on the page and let them know of the offering and campaigns.

They have a healthy number of followers on twitter also. The company joined Twitter in 2009 and in the small span of time they have above 27, 517 active followers. The company keeps on updating their page with various offers and contests and the users keep on participating in the contest.

In 2011, the company strengthened focus on the mobile route by creating several travel-related Apps for all types of mobile devices (smart phones and basic cell phones). In the same year, MakeMyTrip also made three acquisitions namely, Luxury Tours and Travel Private Limited (Singapore), Le Travenues Technology Private Limited (Gurgaon, India) and My Guest House Accommodation (New Delhi, India). MakeMyTrip's other acquisitions include travel operators like ITC Group and Hotel Travel Group to enter new markets in the South-East Asian region in the year 2012. In June 2015, MakeMyTrip invested \$3 million in Inspirock, a vacation itinerary planning website to improve trip planner. In November 2015, MakeMyTrip launched a new offering called Value+, in the quality budget hotels category. In 2016, a Chinese travel booking giant Ctrip agreed to invest \$180 million to MakeMyTrip.

MakeMyTrip official channel on Youtube has more than 15775 subscribers with 25 lacs+ views registered till date for the videos posted by the brand. The YouTube channel consists of all the TV Commercials released by the brands, along with videos covering travel destinations, hotels and accommodations.

The company has utilized the video sharing site Youtube efficiently and has taken it as the second screen after the TV commercials ads.

### Conclusion and Summary

Wars, tsunami and bird flu etc. are serious problems that have a significant effect on tourism. But, these are not the elementary problems. Infrastructure is one primary problem to many industries in India. Infrastructure in India has improved but still it is far from what is required to become a world tourist destination. Another one is the infamous corruption of India, which is a major obstacle to the tourism industry. Resolving these issues will itself help in overcoming other smaller problems mentioned above.

Government of India has a target of more than 40% GDP growth rate, with the present growth rate at around 25%. To maintain such a high growth rate and increase

the employment opportunities also at the same rate, it has to exploit the highly potential and growing sectors like Tourism and to fully exploit these sectors, problems related to these sectors should be addressed along with the fundamental issues like infrastructure and corruption.

Some suggestions include the formation of a steering committee on tourism, inclusion of the Ministry of Tourism in the council on skill development and industry in the National Skill Development Coordination Board, and facilitating the development of integrated tourism destinations. Tourism, in my opinion, is a perfect vehicle for inclusive growth of society as it showcases the heritage of the nation and positively contributes to the development of local communities and poverty alleviation. Incredible India's promise of enchanting and appealing tourists will continue to capture the hearts of millions as the tourism industry of the country puts its best foot forward. The future of tourism in India is certainly bright but we do have a long road ahead. Development of quality infrastructure will be the key to India's connecting her full tourism potential. The Ministry of Tourism has been very supportive to the fraternity efforts, and now visa on arrival is slowly becoming a reality.

The tourist infrastructure in India should be strengthened. Government owned hotels should be properly managed. The Government should also take steps for the maintenance for the tourist destination. Steps should be taken to restore the ancient splendor of the monuments. Sincere efforts could help to further develop the Indian tourism industry.

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