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## ENVIRONMENTAL INFLUENCES AND ENTREPRENEURSHIP DEVELOPMENT: THE NIGERIAN ECONOMY PERSPECTIVE

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### ABSTRACT

*The effect of environmental influences in entrepreneurship development has been recognized in literature. Most of these studies have been fragmented focusing attention either on roles of government in entrepreneurship development or identification of environmental factors affecting entrepreneurial growth. Most of the literature has neither paid attention to the explicit link between these variables and opportunities for new start-up enterprises which are a function of the propensity to enterprise and ability to enterprise. This study evaluates the environmental variables using mean value descriptive statistics to assess the extent of impact of these constraints on entrepreneurship development in Nigeria. The paper develops a framework linking opportunity – propensity to enterprise – ability to enterprise to the likelihood to enterprise in new enterprise creation. The core elements of the dimension identified were hub on government pivotal roles in ensuring economic stability. The study outlines some propositions of the integrated framework or model and offers guidelines for formulating and implementing government policies and programmes to develop entrepreneurship.*

### KEYWORDS

Environmental factors, Entrepreneurship Development, Opportunity, Propensity and ability to enterprise; and New set ups.

### INTRODUCTION

Entrepreneurship activities are pervasive to all sectors and have been found to be key factor in economic growth and development of world economies; and capable of making positive impacts on the quality of life of the people (Abimbola and Agboola, 2011; Adejemo, 2001). For any economy to be vibrant, entrepreneurial activities has to be stimulated and enhanced. Every organisation (Small, medium or large) operate in an environment, and been affected by environmental factors. These environmental factors in most cases present challenges and prospects to the operators. The term “entrepreneurial environment here refers to a combination of factors that play a role in the development of entrepreneurship (Fogel, 2001). Empirical studies on the entrepreneurial environment of various countries show that countries that keep rules and regulations at a minimum, offer tax and other incentives, and provide assistance such as training and counseling services to start-up entrepreneurs increase the likelihood of new venture development (Fogel, 2001; Dana, 1987, 1990). Moreso, factors such as the availability of financial resources and the presence of training and research are also found to be very important in increasing the rate of new venture creations (Pennings, 1982; Fogel, 2001). Studies also show that entrepreneurs face several obstacles including lack of financial assistance, lack of information on various aspects of business, excessive or multiple taxation, and high rates of inflations (Etim, 2010; Adewale, 2007; Onuoha, 2012; Young and Welsch, 1993). While a growing body of literature exists on entrepreneurial environments, they are highly fragmental. Some authors have prepared a list of environmental conditions that may play a role in developing entrepreneurship in a country or region (e.g. Atojoko, 2007; Bruno & Tyebjel, 1982; Gartner, 1985; Manning, Birley, & Norburn, 1989; Gnyawali & Fogel, 1994). Others have a more descriptive approach and focused on only a few aspects of the environment (e.g. Davidson, 199; Inyang & Enuoh, 2009, Ogunsiji, and Ladanu, 2010); and yet others on theories of entrepreneurship. Thus, while the effect of environmental influences in developing entrepreneurship has been recognised, gaps exist as to establishing explicit links between the needs of entrepreneurs and how environments can fulfil them, induce or reinforce their desire to go into business, and thus facilitate the process of new venture creation. This study is an attempt to bridge these gaps through integrated model or framework explicitly linking the environmental dimensions to the process of new venture creation or entrepreneurship development.

### LITERATURE ON ENTREPRENEURIAL ENVIRONMENT

In this study, we refer to the definition of “Entrepreneurial” as the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction, and independence “Entrepreneurial Environment” is a combination of factors that play a role in the development of entrepreneurship. First, as used by Gnyawali and Fogel (1994), it refers to the overall economic, socio-cultural, and political factors that influence people’s willingness and ability to undertake entrepreneurial activities. Second, it refers to the availability of assistance and support services that facilitate the start up process.

The literature in entrepreneurial environment can be group into three broad streams: (a) general environmental conditions for entrepreneurship; (b) descriptive studies of the environmental conditions of a particular country or region and (b) the role of government in shaping the entrepreneurial environments (See Gnyawali & Fogel, 1994).

Studies on general environment condition discussed in most literature include legal and institutional frameworks for efficient functioning of private enterprises, presence of experienced entrepreneurs, presence of skilled labour force, accessibility of suppliers, accessibility of customers or new markets, high degree of competition among firms, favorable government policies, provision of training and support services, and supportive infrastructure (Onuoha, 2008; Ogunsiji & Lahanu, 2010; El-Namaki, 1988, Manning, Birley, & Norburn, 1989; Gnyawali and Fogel, 1994).

Empirical studies linking entrepreneurial development with environmental factors abound in literature. Studies have established its positive relationship with stimulation of economic growth, employment generation; and empowerment of the disadvantaged segment of the population (poverty alleviation), which include women and the poor (Thomes and Mueller, 2010; Reynolds, 1987; Shapero, 1981, Onuoha, 2012; Eke, 2007). Thus, empirical studies of entrepreneurial environments of various countries show that giving positive relationship between entrepreneurship and economic stabilization variables, most countries tend to keep rules and regulations at a minimum, offer tax and other incentives, and provide training and counseling services to start-up entrepreneurs to increase likelihood of new venture start-ups as well encourage existing ones (Dana, 1987; 1990; Onuoha, 2011). Also, factors identified in studies as obstacles to entrepreneurial development include lack of financial assistance, lack of information on various aspects of business, excessive and / multiple taxation, and high rate of inflation (Onuoha, 2012; Young & Welsh, 1993; Abimbola & Agboola, 2011). Other studies that identified impediments to entrepreneurial development having direct or indirect link with environmental conditions include: planning problems (Etim, 2010), high production cost; poor infrastructure; finance;

competition from imported goods; limited scope of operation (Onuoha, 2008). Obitayo (2001) listed restricted access to finance (including working capital) difficulties in input procurement weak infrastructural facilities; poor demand of finished goods; inadequate collateral securities; delay in the disbursement of approved funds; distress in the banking sector, couple with inconsistent government policies as major environmental factors hindering entrepreneurial development in developing economies.

The observations of manufacturing Association of Nigeria (MAN) in its Annual Report and Accounts indicates that the entrepreneurial sub-sector which dominates the make-up of small and medium scale sectors performed poorly in the year 2006 and up to 2013. The reasons adduced for the poor performance of the sector are as follows:

- i. Poor and deteriorating infrastructural services, particularly in the area of power supply.
- ii. Inadequate/inaccessibility to long term funds, high cost of funds;
- iii. Influx of cheap/substandard / prohibited products across borders, with the attendant weak demand of locally made products;
- iv. Lack of patronage of locally manufactured products by governments at all levels
- v. Inconsistent government policies;
- vi. Scarcity/incessant increase in the prices of petroleum products;
- vii. Poor administration/management of seaports;
- viii. Multiple taxes/levies from the three tiers of government;
- ix. Corruptions and all forms of trade malpractices including smuggling, dumping, fake and counterfeit products, among others.

Scholars that focused on the role of government, that is public policy, suggests several policy options for developing entrepreneurship. These policy options include provision of venture capital funds, tax-based incentives, and government procurement programs; protection of proprietary ideas and innovations, investment in education and research; explicit recognition of, and support for, entrepreneurship by government agencies; fostering of entrepreneurship by educational institutions; and minimization of entry barriers (see, Goodman, Many, & Pate, 1992; Mockry, 1988; Et-Namaki, 1988; Onuoha, 2012; Abimbola & Agboola, 2011).

The Nigerian government at various tiers have initiated some entrepreneurship support programmes aim at enhancing entrepreneurial activities following the recognition of the importance of entrepreneurship to society's socio-economic development. The programmes are categorized into two:

1. Entrepreneurship development programmes and institutions; and
2. Finance and micro-credit programmes and institutions (Abimbola & Agboola, 2011).

The first category comprises policies and programmes aimed at stimulating, developing and enhancing the capacities of entrepreneurs, while the second category consists of measures aimed at providing stress-free credit facilities. This policies and programme are shown on table 1.

**TABLE 1: SELECTED POLICY PROGRAMMES AIMED AT ENTREPRENEURSHIP DEVELOPMENT IN NIGERIA**

	Programme	Objective	Remarks
1	Industrial Development Centres (IDCs)	Provision of extension services to SMEs in project appraisal and training	Lack of adequate equipment and finding
2	Small Scale Industries Credit Scheme (SSICS)	SSICS was set up to provide technical and financial support for the SMEs	Inadequate manpower to monitor advances leading to repayment default
3	The Nigerian Industrial Development Bank (NIDB)	NIDB was designed to provide medium to long term loans for financing of industrial activities	Financial and administrative constraints and currently embroiled in merger controversy.
4	The Nigerian bank for Commerce and Industry	The bank was set up to provide financial services to indigenous business community and to administer the SME 1 World bank Loan scheme.	The bank suffered operational problems, which resulted into a state of insolvency (Sanusi, 2003).
5	National Directorates of Employment (NDE)	Responsible for vocational skills development and small sale enterprises programmes designed to combat unemployment	Lack of commitment by the different tiers of government to its operations.
6	National Economic Reconstruction Fund (NERFUND)	Fill the gap in any observed inadequacies in the provision of medium to long term financing to small and medium scale industrial enterprises.	Currently embroiled in merger controversy.
7	Family Economic Advancement Programme (FEAP)	Established to provide micro facilities for entrepreneurs.	Discontinued due to change in government
8	People's Bank	Designed to make banking services more accessible and extent credit to the poor.	Discontinued due to change in government
9	Community Bank	Designed to make banking credit accessible to the active poor.	Discontinued and substituted with Microfinance Banks
10	Better Life Programmes /Family Support Programme (BLF/FSP)	Aimed at sensitizing and providing micro-credit facilities for women entrepreneurs.	Discontinued due to change in government
11	Small and Medium Enterprises Development Agency of Nigeria (SMEDAN)	The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) was established to promote the development of the MSME sector of the Nigerian Economy.	The impact is not felt at all levels of societal strata
12	Small & Medium Enterprises Equity Investment Scheme (SMEEIS)	To provide credit facilities for small and medium entrepreneurs	Lack of national spread in implementation
13	Micro Finance Banks	Established to provide finance for the active poor in the population	Lack of national spread and high interest rate

Source: Central Bank of Nigeria, 2012.

On the whole, the aggregate goals of these policies and programmes include, amongst others, stimulation of economic growth and development, empowerment of the disadvantaged portion of the population, employment generation and invariably, poverty reduction. The question is then asked: how have the operations of these programmes of governments fared to impact on meeting the objectives for which they were designed? The answers to this question are reflected in the remarks on Table 1 above.

Though the above table showcase an array of government programmes, and policies geared towards entrepreneurial development in Nigeria, most of the programmes are moribund, or discontinued, and in most cases outrightly replaced with new ones as a consequence of change in government (Family Economic Advancement Programme (FEAP); People's Bank and Better Life Programme/Family Support Programme; Merger of related programmes as in the case of National Economic Reconstruction Fund (NERFUND), the Nigerian Industrial Development Bank (NIDB), and the Nigerian Bank for Commerce and Industry (NBCI) into Bank of Industry (BOI); or outright replacement with new programme. A clear example of this is found in the replacement of community banks with Microfinance Banks).

The social-cultural dimensions and its link with security issues are rightly captured by Adagba, et al (2012). They asserted that the activities of armed robbers, kidnappers and the insurgency particularly in the northeastern part of Nigeria has rendered business activities sterile thereby hampering entrepreneurial initiatives and growth. Summary of some of the selected studies on the relevance of environmental variables for entrepreneurship development are shown below on table 2.



TABLE 2: SELECTED RESEARCH ON THE IMPORTANCE OF ENVIRONMENTAL CONDITIONS FOR ENTREPRENEURSHIP DEVELOPMENT

Environmental conditions	Findings	Citation
Government Policies and Procedures	In Cayman Islands, entrepreneurship was facilitated by keeping paperwork and procedural requirements at minimum	Dana, 1987
	In Malaysia, concentration of power in the business development agency established by the government and too many procedural requirements encouraged entrepreneurship	Dana, 1990
	In Saint Martin, excessive regulations on businesses suppressed the growth of entrepreneurship, conversely, in Saint Martin, minimum regulation and procedural requirements encouraged entrepreneurship	Dana, 1990
	In Mexico, key barriers for start-up included excessive government regulation, high rates of taxes, and increasing inflation	Young & Welsch, 1993
Socioeconomic Conditions	In Sweden, tax and other incentives had greater impact on persons who were strongly motivated to start a business than on persons who were less motivated	
	The greater the percentage of small firms in a growing sector, the greater the share of jobs created by small firms in that sector.	Davidsson, 1991
Entrepreneurial and business skills	In Sweden, both business-related experience and business education were highly correlated with entrepreneurs' ability to start and manage a business	Davidsson, 1991
Financial Support	In Cayman Islands, creation of investment companies facilitated entrepreneurship	Dana, 1987
	In Singapore, provision of low-interest loans and government grants facilitated entrepreneurship development	Dana, 1987
	In the US, availability of financial resources was an important contributor of organizational birth rate	Pennings, 1982
	Credit guarantee scheme exist to guarantee loans to SMEs, local governments have special funds that serve as a reserve for loans to SMEs. Consequently, most entrepreneurs get loans for start-up business.	Etim, 2010
	In the United Kingdom and Nigeria, private investors are attracted to invest in new companies because the government provides tax relief for new equity investment by individuals in unquoted companies.	Harrison & Mason 1988, Etim 2010
	In Mexico, key barriers for start-up included lack of working capital, difficulty in obtaining loans, and seasonal fluctuations in cash.	Young & Welsh, 1993
Non-financial support	In Australia, the provision of nation-wide management training programs and the supply of textbooks and information materials on business start-up issues encouraged new business start-ups.	Dana, 1987
	In Cayman Islands, government guarantee not to tax businesses for 20 years attracts entrepreneurs	Dana, 1987
	In Japan, regional information centres gather, analyse, and disseminate technical and market information and offer free access to computers, local business development centres provide free consulting and training services, government purchases certain quantity of the products of small enterprises every year. All these facilitated entrepreneurship development	Hawkins, 1993
	In the US, large size urban areas and presence of universities for training and research assistance were important factors contributing to the birth of new firms.	Pennings, 1982
	Presence of business development assistance was significantly correlated with the share of jobs created by small firms	Philips, 2012

Source: Extracted from Relevant literature reviewed.

## RESEARCH METHODOLOGY

The objective of this study and the nature of the data gathered determined the appropriateness of the descriptive method that was adopted for this research. This study used set of questionnaire designed for collecting data from entrepreneurs with Akwa Ibom State urban centres, Nigeria. Assistances in obtaining data from small and medium business owners (entrepreneurs) were accorded by undergraduate students of the University of Uyo studying entrepreneurial studies. Based on the known fact that entrepreneurship is inextricably linked to all sectors of the economy, sample of 300 entrepreneurs was drawn from an estimated population of 5430 of small and medium business enterprises registered with the State Ministry of Commerce and Industry. 290 were correctly filled and used for analysis, representing a response rate of 97%, deemed impressive and adequate. The data were presented in tabular form and analysed using percentages and means scores. The questionnaire elicited information about the severity of environmental factors or influences on entrepreneurial set-up and development and perceptions of entrepreneurs on these environmental influences on meeting their needs or reinforcing them.

## RESULTS AND DISCUSSION

The study was prompted by the fact the entrepreneurship has been found to be a key factor in economy growth and development of world economies, and the need to nurture a new breed of entrepreneurs in the country. The scaling parameters for the variables are shown as follows:

Parameter	Scale
No problem or constraint	0 - 2.49
Problem or constraints	2.50 – 3.49
Serious Problem /Constraint	3.50 – 4.49
Very serious problem or Constraint	4.50 – 5.50 or above.

The findings of the result are analysed under two headings:

- Presence or absence of environment variables affecting entrepreneurship development; and
- The effect of environmental variables /factors on entrepreneurship development.

## PRESENCE OR ABSENCE OF ENVIRONMENTAL VARIABLES AFFECTING ENTREPRENEURSHIP DEVELOPMENT

The study shows that there are many problems and challenges that have negatively affected entrepreneurial activities in the economy. From Table 3, 89% of the respondents as against 11% have been discouraged by one environmental variable or problem or the other.

TABLE 3: WHETHER THEY HAVE ENCOUNTERED ENVIRONMENTAL PROBLEMS/CHALLENGES/CONSTRAINTS OR NOT IN THEIR ENTREPRENEURIAL ACTIVITIES

OPTION	FREQUENCY	PERCENTAGE
YES	259	89.2
NO	31	10.8
<b>TOTAL</b>	<b>290</b>	<b>100</b>

Source: Field Survey.

A further ranking of these challenges /environmental factors is shown on table 4. Note, the values of the ranking starts from 1 through 4 and the minimum value is one (1) and maximum value is four (4).

TABLE 4: ENVIRONMENTAL CHALLENGES /CONSTRAINTS THAT AFFECT ENTREPRENEURSHIP DEVELOPMENT

	Environmental Constraint	Mean Value	Rank Value
(a)	Government Policies and Programme	5.21	Very serious Problem/Constraint
	Legal and Institutional	4.98	Very Serious Problem Constraint
	Socio-Cultural & Political	4.43	Serious Problem/ Constraint
	Economic	3.98	Serious Problem/ Constraint
	Task – Competition	4.47	Serious Problem Constraint
	Financial	4.94	Very Serious Problem Constant
	Physical-Infrastructural	3.74	Serious Problem Constraint
	Globalization/International	4.34	Serious Problem Constraint
	Technological	3.36	Problem/constraint
	Task – Customers	3.77	Not serious problem constraint

Source: Computed from Field Survey Data, 2014.

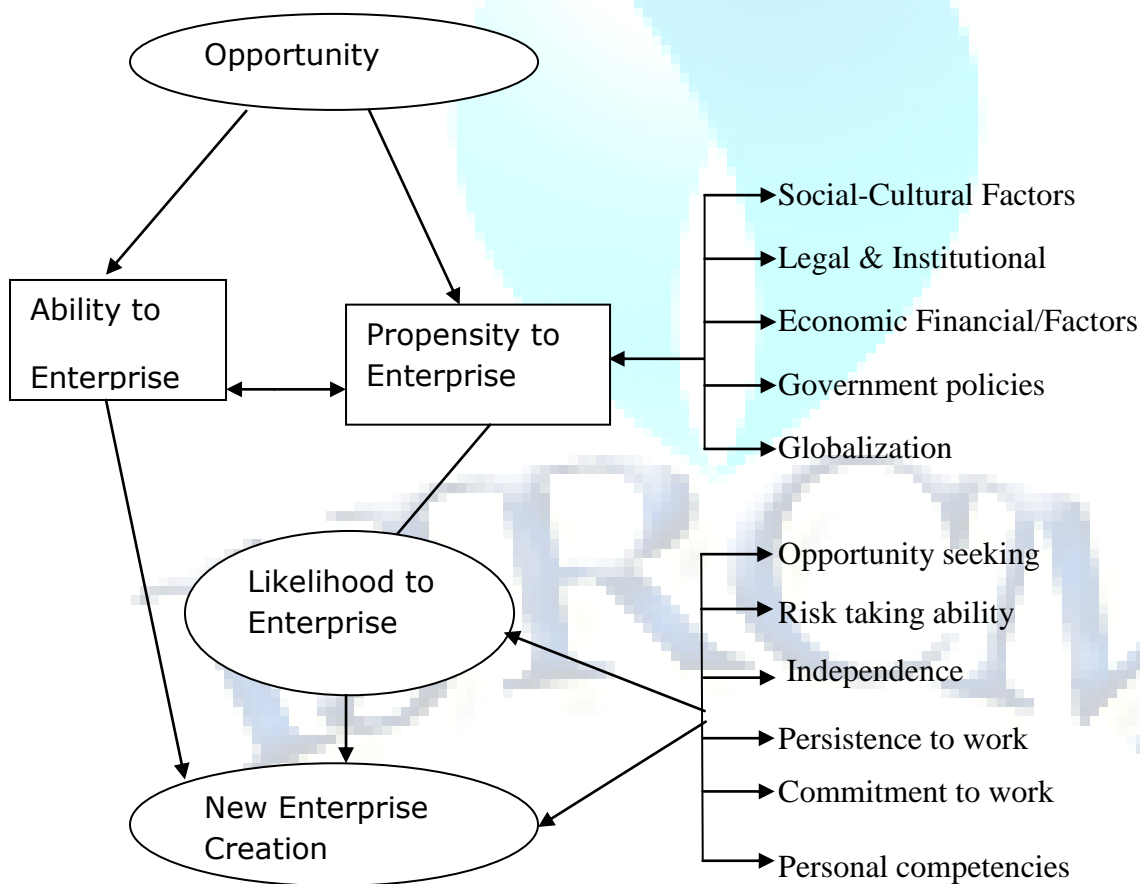
Table 4 shows that government policies and programme, legal and institutional framework, and financial variables are very serious challenges or constraints (environmental variables) that have worked against entrepreneurship development in Nigeria with mean values of 5.21, 4.98 and 4.94 respectively. This is in agreement with earlier studies by Eke (2007) and Obeleagu-Nzelibe (2000).

These three environmental variables have always been regarded as the major constraints as they have brought about the non-starting or an early collapse of entrepreneurial ventures in Nigeria. Other serious environmental constraints are task/competition variables with a mean value of 4.47, socio-cultural constraints 4.43, Globalization 4.34 and economic constraints 3.98. Alowole (2007) has also identified the high inflation, bank lending rates and a decline of fund made available to SME's in Nigeria over the past two decades. Although other studies (See Etim 2010; Onuoha, 2011) identified technological, physical (infrastructures) and changes in customers taste as impediments to entrepreneurial development in Nigeria, this study shows these constraints are not very serious problem or constraints with technological variables, physical-infrastructure and task-customers having mean values of 3.36, 3.74 and 3.77 respectively. A priori one would have thought these last variables constitute serious constraints.

### THE INTEGRATED MODEL AND ITS IMPLICATION FOR RESEARCH

The foregoing analysis suggests the importance of each of the environmental variables though with varying degrees, depending upon the availability of opportunities for business start-up, and the overall level of propensity and ability to start an enterprise. Each of the three core variables: **OPPORTUNITY – PROPENSITY TO ENTERPRISE – ABILITY TO ENTERPRISE** are sharpened by diverse environmental variables which must be identified at each stage.

FIGURE 1: INTEGRATED MODEL FOR ENTERPRISE START-UP US ENVIRONMENTAL VARIABLES



The model shows that opportunities are latent in any environment and must be sought. The ease to discovery of the latent opportunities is directly linked to propensity to enterprise and ability to enterprise. These two core elements are dependent on government policies & programmes, legal & Institutional framework, socio-cultural factors, economic and financial factors as well as globalization dimensions of the environment. Thus, the more favourable these factors, the more likely that the propensity to enterprise and ability to enterprise are prop and the likelihood to enterprise into new enterprise creation. The Dimension of the environment that relates to the likelihood to enterprise is the level of entrepreneurial and business skills. These include opportunity seeking ability, risk taking ability, independence, persistence ∝ commitment and personal competencies. Thus, if people have a high propensity to enterprise but

a low ability to enterprise, environmental interventions will need to develop the entrepreneurial and business skills of the people. Conversely, if people have high ability to enterprise but a low propensity to enterprise, environmental interventions need to be oriented towards making the socio-economic variables conducive for entrepreneurship. This suggests the following propositions:

- i. The higher the opportunity, propensity and ability to enterprise, the higher the likelihood to enterprise
- ii. The more favourable the environmental variables, the greater the propensity and ability to enterprise.
- iii. The greater the entrepreneurial and business skills, greater the ability and likelihood to enterprise.

Ideally, the likelihood to enterprise and start-up new venture is a function of an understanding of the intervening variables. Since governments play pivotal role in enhancing overall economic stability, the implications for public policy as identified in the study is anchored on the roles of government in stimulating entrepreneurial development and growth.

## RECOMMENDATIONS AND CONCLUSION

Every organization operates within the framework set up its environment. Environmental variables offer business organizations opportunities, threats and constraints. The arguments developed in this paper suggest that relationships may exist between environmental factors and performance of an entrepreneur, and that a match between these environmental variables and specific requirements of the enterprise gives the likelihood to venture into new business. Since government is the main hub that drives any business environment, the model suggests the role of government in formulatory and implementary policies that motivate people into business and to remain in business are the cardinal issues of focus. Hence, the following points summarize the guidelines for policy formulation:

- a. Government should contribute to entrepreneurship development by adopting policies and programmes that provide a broader scope of opportunity to entrepreneurs.
- b. Government should design policies and programmes geared towards improving ability and propensity to enterprise such as inclusion of entrepreneurial values and thinking in the educational system.
- c. With the explicit link between environmental factors, and opportunity, propensity and ability to enterprise, and dimensions of likelihood to enterprise, governments should propel and facilitate regulatory and institutional frameworks to lubricate the linkage. These may include development financing, diversification and reforms of the economy to ensure stability and growth rates of entrepreneurial ventures.

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# EMPLOYEES' SOCIAL FULFILMENT UPLIFTING ORGANIZATIONAL URGENCIES IN VERSATILE BUSINESS SCENARIOS

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## ABSTRACT

Employees with higher Social Fulfilment Index put additional effort towards improved productivity, resulting into increased acceleration towards achieving organizational objectives. Changing social behaviour of an employee has a bearing on the evolving nature of organizational priorities and urgencies. Indian economy witnessed incredible fluctuations and manufacturing organizations have witnessed the wrath. With Indian economy as a backdrop, this paper explores the relationship among economic indices of an organization, employee's social behaviour at work place within an organization, employee engagement and the alignment between social cohesion and organisational urgencies. The paper covers the broad thematic of employee engagement, social behaviour and considers the fact that there is substantial research and literature already available in this domain. It explores the literature which is imperative for understanding of phenomenon and selects primary data collection needed for this purpose. The primary data point is organisation and secondary information is sought from reports published by Reserve bank of India and financial results of comparative organizations. Using basic statistics and multilevel approach, this paper explores the correlative variables of establishing influence of people practices, social behaviour at workplace, employee engagement and organizational performance. This paper attempts to develop a hypothetical correlative model among the parameters of organizational performance, employee's social alignment and the fostering relationship with organizational urgencies. The empirical results provide a strong support for the hypothesis that the involvement of employee social factors in an organisation and its channelization towards business and corporate strategy reduces the risk of financial under-performance and also establishes the aspect that, social cohesiveness enhances the alignment of employee work climate and employee engagement. The study and its results imply that the organization's performance and employee engagement can be enhanced by adopting social instruments at work place and right people practices in the overall strategic direction of the company. While literature review is conducted on this topic and given the limited exposure, this paper considers it to be one among the few of its kind in the country. This paper is an attempt to contribute to the field of human resource through its approach by measuring and testing the relationship between employee social behavioural needs, employee engagement dimensions and organizational urgencies and tries to link to the financial performance of the company.

## KEYWORDS

Organisational Urgencies, Performance metrics, employee social matrices, employee social fulfilment index, employee engagement.

## 1.0 INTRODUCTION

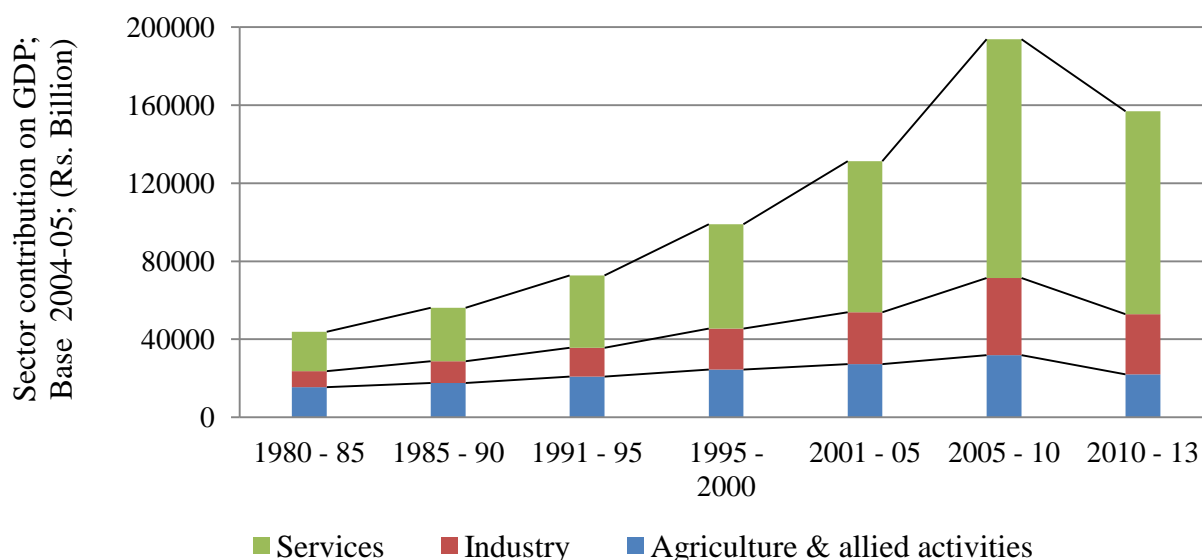
 Social engagement of employees is not just obtained by investing financially in employees through perks or pay hikes. It includes intellectual, emotional, respect, care, inclusion along with engagement drivers of advocacy, loyalty and strive. As a return, such cohesiveness makes the employees deliver the extra mile effort in superior performance, which enables organizations grow faster than their comparators. The dependence of industry performance on the economic environment of the country in particular and global environment in general is total, as the industry and its business performance is one unit of the total economy. Economic uncertainty keeps the business establishments on vigil. It is not just Indian economy that is inconsistent but the entire global economic system is challenging. While there are many factors with which a country's economy can be calibrated, this paper measures the critical factor of India's gross domestic product (GDP) and the influence of country's economy and GDP on industry, by considering few of the macro-economic factors. Businesses and its' leaders need to predict economic fluctuations and thereby proactively resource the business so that the organizational urgencies are cascaded across the organization and the employees align their competence and strategy. Organizations are a subset of society and employees demonstrate their social behaviours within and outside the organization. The urge to demonstrate the social behaviours is tacit. Organizations to have competitive advantage and to ensure accelerated responses on business urgencies, the corporate strategy should be inclusive of corresponding social behaviour of employees and ensure that the strategy encompasses the prominent aspect of channelizing the velocity of organizational change towards achieving business objectives by establishing an execution strategy which harnesses employees' social behaviour maximization.

## 2.0 INDIAN ECONOMY AND INFLUENCE ON MANUFACTURING SECTOR

Our country's [India's] economy plays a strategic role in determining global economy. Its economy is considered as a growing economy from an agrarian past to have advanced towards industrialised economy. Focus of India's development is more and more oriented towards a well-diversified industrialisation. According to the Economic Survey 2012-13, tabled in Parliament in 2013, the economy grew at 5.0 per cent in 2012-13 and is expected to grow at 6.1-6.7 per cent in the next fiscal year. Manufacturing and Services sector have registered impressive gains. The Survey reports that the services sector registered a growth rate of 6.6 per cent while the manufacturing sector growth rate was 1.9 per cent in 2012-13. India's gross domestic product (GDP) is expected to cross the US\$ 5 trillion mark by 2020. Manufacturing / industrial sector is now under greater attention of the policy makers. To ensure that the manufacturing sector propels India's growth; the roots of increasing productivity, efficiency and competitiveness needs no emphasis and all of these factors need to necessarily synchronise with each other.



FIGURE 1.0: SECTOR CONTRIBUTION TO GDP



Services sector has primarily fuelled the growth in the last decade, which contributed to 65 per cent of overall growth, while that of the industry and agriculture sectors has been 27 per cent and 8 per cent respectively.

TABLE 1.0: SECTOR CONTRIBUTION ON GDP

Financial year	Sector contribution on GDP; Base : 2004-05; (Rs. Billion)				
	Agriculture & allied activities	Industry	Services	GDP at Factor Cost at Constant Prices	Industry contribution as a % of GDP
1980 - 85	15404	8323	20060	44196	18.8%
1985 - 90	17536	11240	27415	56529	19.9%
1991 - 95	20846	14821	37114	72976	20.3%
1995 - 2000	24495	21039	53414	99052	21.2%
2001 - 05	27243	26688	77417	131348	20.3%
2005 - 10	31854	39531	122503	193888	20.4%
2010 - 13	22066	30755	104040	156860	19.6%

Source: Central Statistics Office (CSO).

Notes: Data for 2010-11 are based on Second Revised Estimates, 2011-12 are based on First Revised Estimates and 2012-13 are based on Provisional Estimates. During the same period, manufacturing sector, a sub set of Industry sector has contributed to 15.2 percent towards GDP and 75.2 percent towards the Industrial sector.

### 3.0 PERFORMANCE OF MANUFACTURING SECTOR SINCE FY 2004

Table below shows the contributions of these sectors to the overall growth of the economy from 2004-05 to 2012-13.

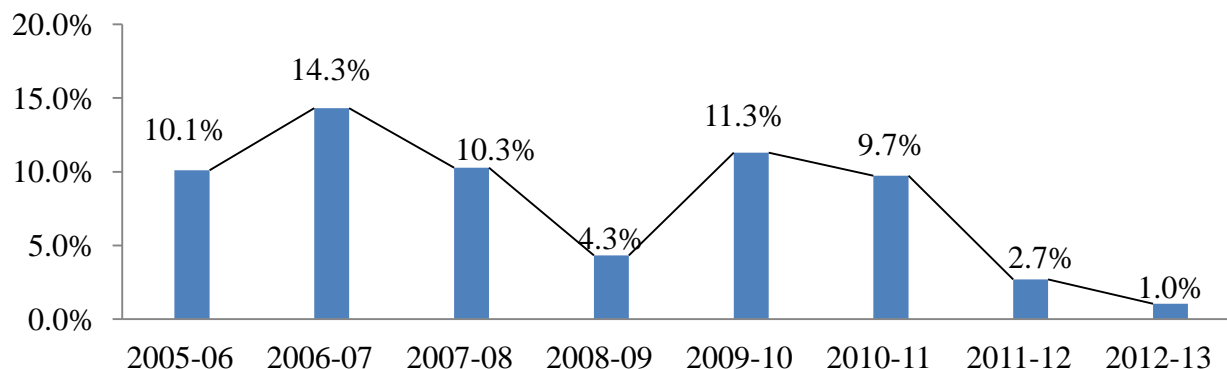
TABLE 2.0: SECTOR CONTRIBUTION ON GDP

Financial year	Sector contribution on GDP; Base : 2004-05; (Rs. Billion)				
	Agriculture & allied activities	Industry	Services	GDP at Factor Cost at Constant Prices	Industry contribution as a % of GDP
2004-05	5654	6009	18051	29715	20.2%
2005-06	5945	6523	20063	32531	20.1%
2006-07	6192	7364	22088	35644	20.7%
2007-08	6551	8045	24371	38966	20.6%
2008-09	6557	8374	26656	41587	20.1%
2009-10	6610	9225	29326	45161	20.4%
2010-11	7135	10032	32203	49370	20.3%
2011-12	7395	10301	34740	52436	19.6%
2012-13	7536	10422	37096	55054	18.9%

Since 2004-05, Industry sector has been contributing to 20 percent on an average towards the GDP and Manufacturing sector, a sub segment of Industry sector has been contributing at an average of 15.7%. The deviation of contribution of Industry sector is between 18.9% to 20.7%, i.e. |1.8%| and whereas the fluctuation is manufacturing sector as a contribution towards Industry sector 79.9% to 75.4%, resulting in a deviation on |4.5%|. This necessitates us to dig deeper into the focus segment of this research paper that is manufacturing sector. The below graph demonstrates the fluctuations through which the manufacturing sector has been prone to.

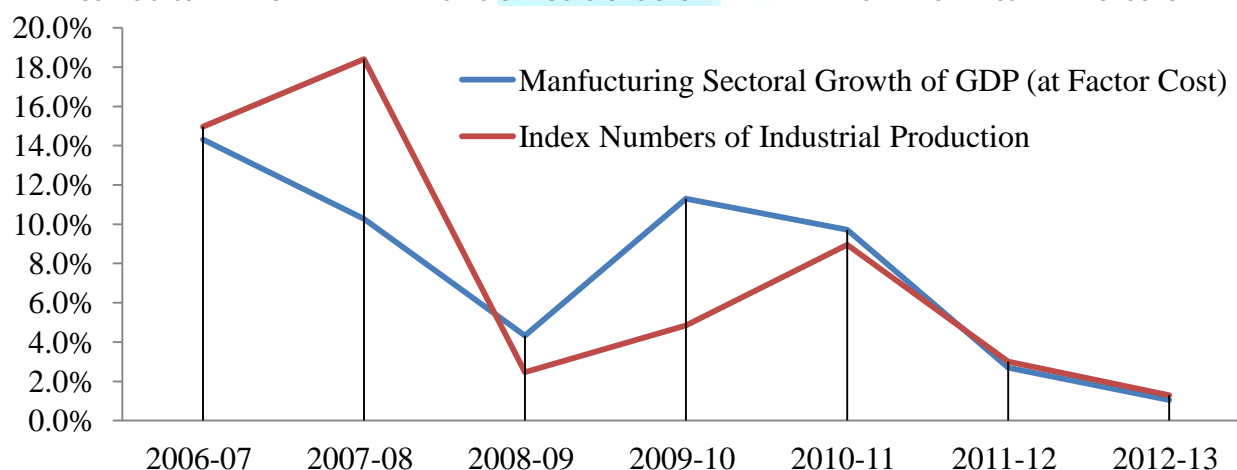


FIGURE 2.0: GROWTH IN MANUFACTURING SECTOR



The manufacturing sector is the primary driver of Industrial sector. The key success indicator for manufacturing sector's performance is measured as an Index number of Industrial Production. The correlation between among them may be observed in the below mentioned graph. The manufacturing sector witnessed a decline in growth to 2.7 per cent in 2011-12 and 1.9 per cent in 2012-13 compared to 11.3 per cent and 9.7 per cent in 2009-10 and 2010-11, respectively. While India's recent slowdown is partly rooted in external causes, however, domestic aspects also are important reasons for these trends. The strong post-financial-crisis stimulus led to stronger growth in 2009-10 and 2010-11. However, the boost to consumption, coupled with supply-side constraints, led to higher inflation. Monetary policy was tightened, even as external headwinds to growth increased. The consequent slowdown, especially in 2012-13, has been across the board, with no sector of the economy unaffected.

FIGURE 3.0: CORRELATION BETWEEN MANUFACTURING SECTOR'S GROWTH AND INDEX NUMBER OF INDUSTRIAL PRODUCTION



#### 4.0 ORGANIZATIONAL PERFORMANCE DEPENDENCE ON COUNTRY'S ECONOMY

It is clear from the foregoing analysis that for country's economic growth to be strong, the contribution from the industry sector, and in particular from the manufacturing sector, has to increase. The manufacturing sector's economic performance detailed above signifies the rapidness with which the organizations in manufacturing industry across the country have to develop their strategies and initiatives year on year. Market and economic realities shall be challenging and organizations need to reciprocate by proactively being prepared with their ever evolving business priorities and changing their strategic intent by rigorously indulging in analysing various dynamics which influence the performance of the firm. This strategic intent usually incorporates stretch targets, which force companies to compete in innovative ways [Hamel, et al.]. This intent prepares the organizations to well develop their strategies to counter external and internal forces. The urgency in which the change is accelerating in most industries, the predictability and reciprocating time span is becoming shorter. Hence, the objective of strategic intent is to predict future and analyse the probable actions into the present. Organizational objectives are required to be aligned to create value by adopting appropriate people strategies and initiatives to channelize right employee behaviours so as to ensure that the company achieves its strategic goals.

#### 5.0 ORGANIZATIONAL URGENCIES

Manufacturing industries to achieve world class standards need to benchmark themselves globally on all parameters affecting its business, both external and internal influences. To achieve competitive advantage, the organization's strategy needs to include marketing strategy, innovation, technology along with manufacturing strategy [Skinner, 1969]. Hence, in the current economic scenario, the speed at which the manufacturing companies readjust themselves which global benchmarks and India's economic challenges assumes prominence. Prahalad and Harnel, in 1990 have stated that, the true source of competitive advantage of an organization is management's ability to consolidate its enterprise level technologies and production capability and maturity in its skills into competencies. Skinner (1969) explained the concept of "operations priority" and its significance to align operations priority to corporate strategy. Organization objectives obtain priority when internal and external forces start impacting business rapidly.

For manufacturing sector, the dimensions of quality, quantity, cost, delivery, time, margin, operating income, marketing strategies, people strategies, value added solutions, flexibility and brand form the natural priorities. The interrelated ratios are used to evaluate firms' performance. These obtain the speed when the external forces such as economy, competition, technology changes, environment, social dimensions, competition strategy and internal strategies, assume importance and have significant impact on organizational performance. Such of those factors which obtain velocity and amplitude influencing the organization to change its strategy to improve the response and performance of an organization to attune to external and internal challenges are termed as "Organisational urgencies".

## 6.0 DEVELOPING COMPETENCE TO COMPREHEND AND MITIGATE THESE ORGANIZATIONAL URGENCIES

Voss (2005) propounded that there are three distinct, but inter-related, models of manufacturing strategy, namely, competing through manufacturing, strategic choice in manufacturing and best practices. These in turn may enhance or change the way it chooses to compete through manufacturing. Hence, manufacturing organizations need to strive to adopt continuous improvement techniques and ensure development of processes which will enhance their performance and develop company's competence. Companies have to embrace change and embrace an appropriate velocity map with a strategic long-range plan to balance its strengths and weaknesses with the dynamics of external market environment, opportunities and threats in order to maintain a competitive advantage in line with the organization's mission and vision. It is more important to develop a smart and clearly laid out execution strategy by instituting appropriate control mechanisms so that the company's capabilities and competitive advantage is matched to reciprocate and proactively meets the demands of its external environment and internal environment.

Michael Porter (1980, 1985) has defined three generic organizational strategies: differentiation, cost leadership, and focus, to respond to the aspects of competition and market entry barriers. Organizations need to aim superior performance after careful exploration of external and internal forces. Organizations that have value added products and services with differentiation in these offerings have better financial results, achieve better growth rate, higher customer satisfaction thereby higher market share, and as a result an improved return on investment. Organizations with such comprehensive strategy tend to outperform organizations those are solely focussed on cost to compete. Economic consistency and predictability is long gone. In such a flux - uncertainty and variability, organizational urgencies are atmost prominent for the success of organizational performance. To outperform or merely retain forward looking strategies in such tiring times, leadership and the organizations' people capability need to come to fore and they will be tested. Leaders are required to make suitable strategic, structural, financial and operational changes – and all of them need to be quick, bold and drastic. Organizational urgencies need to immediately challenge the status-quo and should be flexible for all scenarios.

Table 3.0: The focus of organizational urgencies should be:

<ul style="list-style-type: none"> <li>• Profitable growth</li> <li>• Cash generation</li> <li>• Margin improvement</li> <li>• Engaged workforce</li> <li>• Intelligence building</li> <li>• Improved operating income</li> <li>• Delivering value addition to customers</li> <li>• Product integration</li> <li>• Reduce complexity</li> <li>• Improved value to customers</li> <li>• Innovation</li> </ul>	<ul style="list-style-type: none"> <li>• Extend international customer base</li> <li>• Operation excellence</li> <li>• Productive systems</li> <li>• Cost reduction</li> <li>• Productive work force</li> <li>• Co-engaging critical partners and stake holders</li> <li>• Execution accuracy</li> <li>• Product line simplification</li> <li>• All firsts – accurately and properly</li> <li>• Customer and product valuation</li> </ul>
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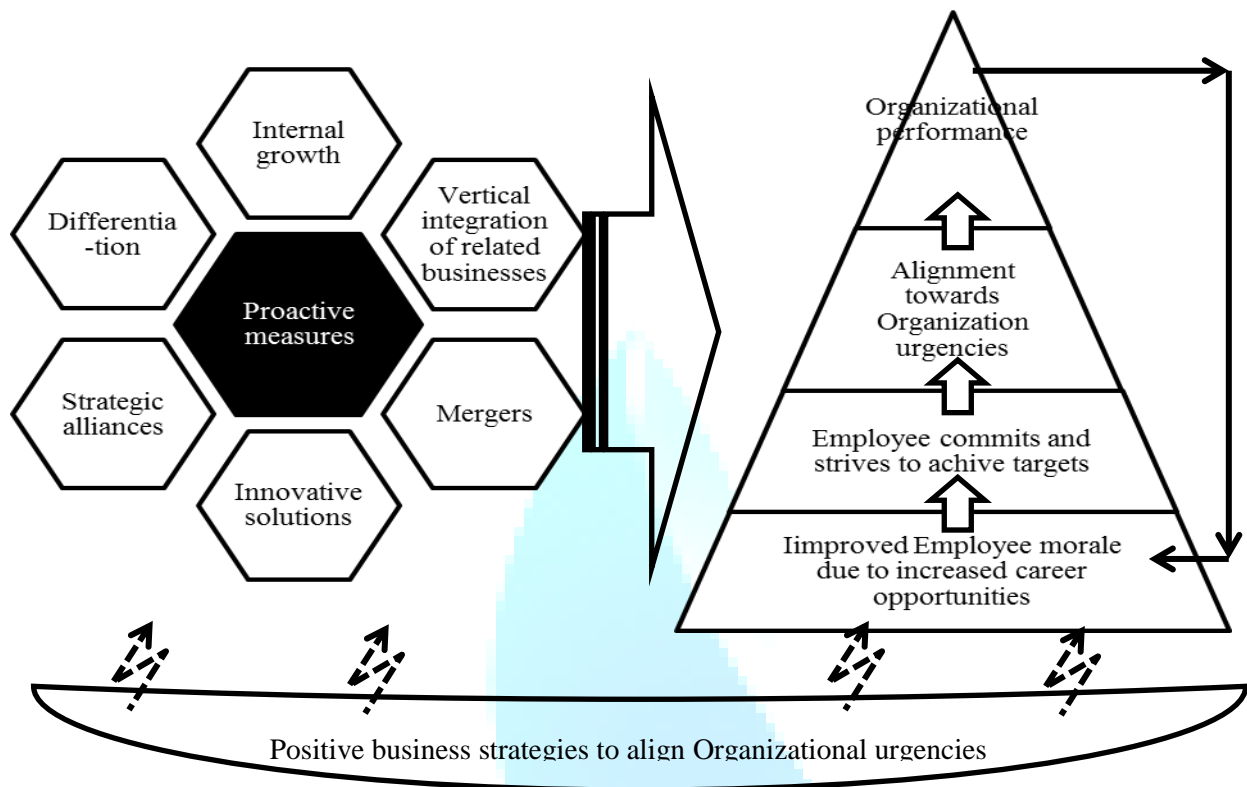
In the event of unpreparedness by the leadership during a slowdown in country's economy may bring down organization's profitability, thereby being forced to undertake reactive measures such as cost cutting, organization restructuring, exercising control on recruitment, travel and R&D etc.. This may lead to low morale of the employees. Organizations and its leadership team need to give extraordinary attention towards detailing and target achievement. Strategies will be required to be constantly nurtured and initiatives need to be scrutinized to ensure revenue, margin, operating income, costs, morale, safety, cash, exports, are at the planned levels. To ensure that the performance is at planned levels, internal and external interventions need to be undertaken.

Proactive strategic decisions will prepare the organizations well to respond to the urgencies required to be faced due to external and internal forces. It is important for successful companies to develop competence in change management and institute change initiatives while they are successful. Such organizations, which constantly endure change, develop positive orientation on all occasions even when external and internal environments challenge them. Such proactive measures depend from industry to industry. For manufacturing sector, we can generalise proactive measures that organizations adopt are, internal growth, vertical integration of related businesses, mergers, innovative solutions, differentiation and engaging in strategic alliances. These measures though driven from the top, the effectiveness is brought forward by engaged workforce. Manufacturing businesses competitive advantage vests in the competence of its technology and competence of the employees. This advantage enables to generate the profits needed to propel its growth and establish market dominance. Hence, it is essential that high performing organizations have their workforce always on high spirits and engaged.

Engaged employees demonstrate increased organization commitment, an essential element required for organizations ensure goal achievement, respond to organizational urgencies as per the desired velocity. As per Gallie et. al., organizations which have increased engagement and commitment have advantage in terms of:

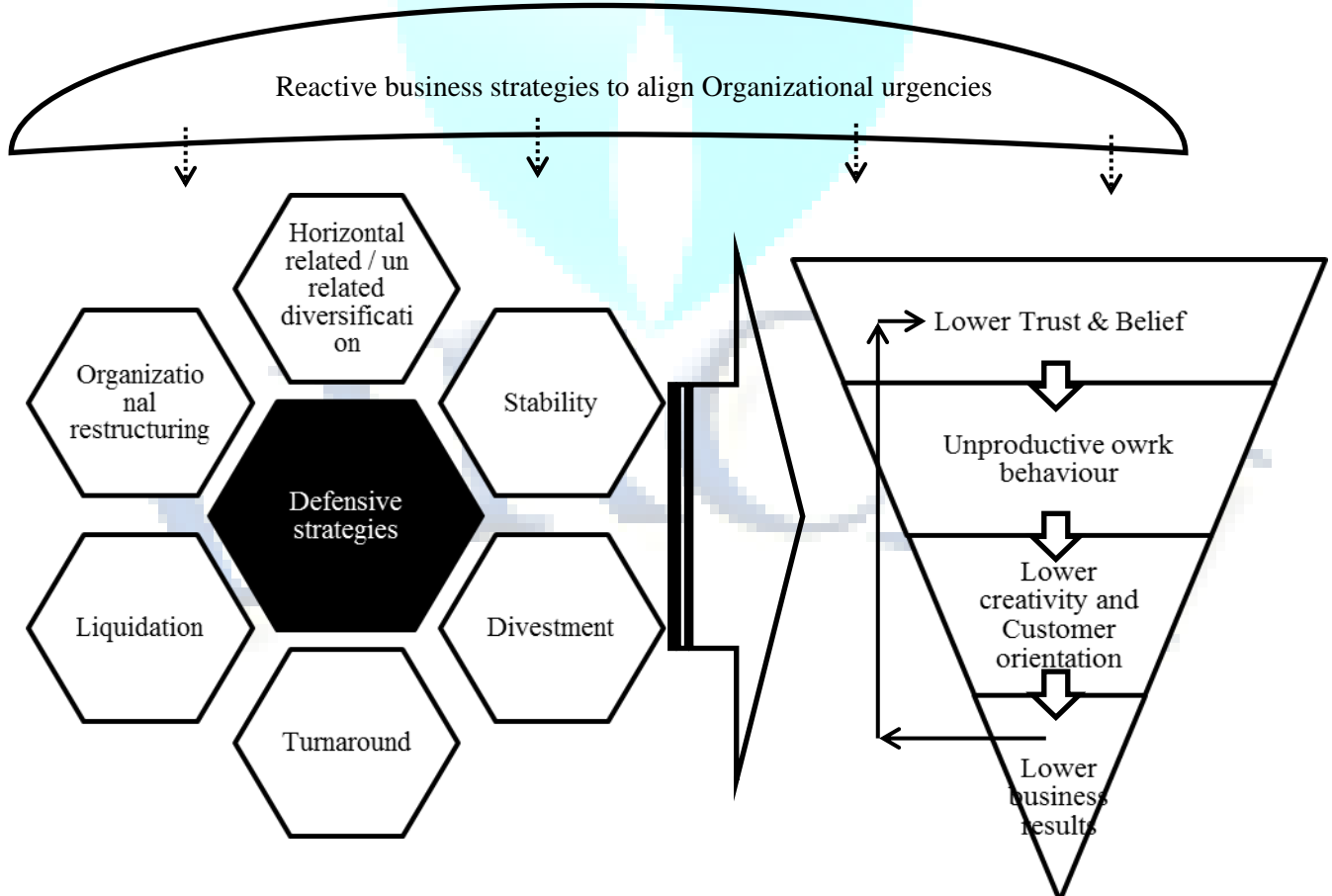
- Strive for extra beyond that is expected from employees;
- develop pride in the organization;
- desire to stay in the organization;
- have increased internalization of the values and goals of the organization;
- employees are willing to accept for role changes and demonstrate flexibility
- employees are loyal to the organization; and
- employees have higher brand perception and consider their organization as the best of all organizations.

FIGURE 4.0: INFLUENCE OF PROACTIVE BUSINESS STRATEGIES ON EMPLOYEES BEHAVIOUR



Predicting future is a challenging aspect and it is extremely difficult when an organization has no clue about the influence of external and internal environment on its organizational urgencies. Such organizations start administering reactive strategies trying to respond to the challenges. However, this further destabilizes the normal operating parameters of the organization. In such a situation, organizations need to develop change management competence and the leadership and its team needs to engage in top down strategies ensuring inter functional interventions with a focus to improve organizational performance not limiting to financial performance.

FIGURE 5.0: EFFECT OF DEFENSIVE STRATEGIES AND CORRESPONDING REACTION OF EMPLOYEE BEHAVIOUR



Reactive organizations require higher drive towards employee engagement and higher organizational commitment of its employees compared to proactive organizations. When employee behaviours do not match with the organizational urgencies, reactive organizations' performance will degenerate and the velocity of non-performance will be steeper. Reactive organizations upon facing the downward trend, start focus on negative instruments such as cost cutting measures, reducing growth investments, negative salary expenses, productivity improvement measures of restructuring etc., resulting in employee and customer dissatisfaction, which will not result in positive long-term job satisfaction. Job stability and career growth are important dimensions of organizational commitment and when these are compromised, the employees' performance star dwindling resulting in lower organization performance. The absence of engaged and committed employees, lack of proficient processes and systems, and absence of high performance-driven culture could lead to a potential collapse. Defensive strategies of organizations result in lower trust towards organization's values and reduces belief in its' leadership capability. As a result employees will not be able to use their strengths at work and: dreads going to work, has more negative than positive interactions with coworkers, treat customers poorly, tell friends that he or she works for a miserable organization, achieves less on a daily basis, has fewer positive and creative moments; in all sum total leading into lower business results and this cycle further brings doom to the organizations.

## 7.0 INFLUENCE OF SOCIAL FACTORS IN ORGANIZATION PERFORMANCE

Engaged employees are those who demonstrate high levels of commitment towards organization urgencies during all change management demands. Employee is fully absorbed and is enthusiastic about striving towards achieving higher or expected level of performance and takes positive actions to further the organization's reputation and financial results. As per Crim et. al., an organization with 'higher' employee engagement has increased probability to outperform similar organizations which have 'lower' employee engagement, if not being equal. Organizations which have higher engagement strive to create a conducive environment that can sustain employee passion, employee aspiration and leverage their talent to drive organizational performance and respond to organizational urgencies. This needs alignment of opportunity, harness individual's passion towards their natural styles to performance by enhancing awareness of individuals on their performance styles. Employee work behaviours determine organizations' performance by ensuring maximizing organizational enablers to higher performance and minimizing organizational barriers towards lower performance. Such an effort helps in channelizing employee engagement and competence to derive improved passion within individuals towards attainment of higher organizational productivity and performance.

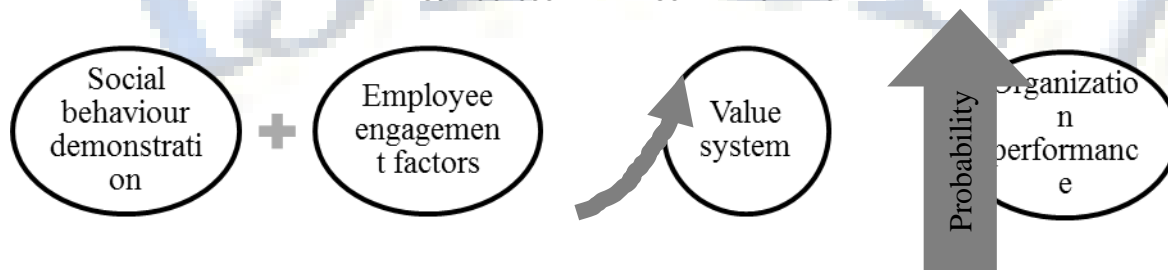
On careful examination, we may observe that employee engagement corresponds to the degree of involvement of employees towards organizational objectives, congruence of employee aspirations and commitment towards organizational urgencies and coherence to strive extra competence to exceed productivity and profitability of organizations. Organizations need to institute suitable systems and processes to cascade organizational urgencies to employees' performance expectations. For this critical linkage, the performance model of, the balanced scorecard (BSC), suggested by Kaplan & Norton may be used. BSC is effective in that as it articulates the links between leading inputs (human and physical), processes, and lagging outcomes and focuses on the importance of managing these components to achieve the organizational urgencies and organization's strategic priorities.

For long term success of higher engagement levels, it is essential to establish collective belief across the organisation, and ensure goal attainment for all levels of employees as articulated by Robinson et. al.. Further, to achieve congruence among employee engagement and organizational urgencies, there needs to be an alignment and integrating structure at employee level, department level, and business unit level and at organizational level. This entails effective collaboration of leaders, managers and employees across the enterprise. Each level need to engage emotionally and intellectually and there should be social interaction and harnessment of social matrices which endure employee engagement and organization performance. The social matrices have some characteristics:

- organizational plans are bottom up
- feel the shared vision of the organization as their personal growth aspiration
- employees exercise control on resources, suggest appropriate processes, methods, working conditions and work schedules
- employees trust leadership and develop open channels of communication
- decision is taking at the operating level
- employees deliberate with their managers in transparent and with trusteeship establishing targets and accountabilities in line with the organizational urgencies and priorities
- leaders entrust critical initiatives to employees to champion effective performance
- collaborative learning, execution and matrix organizing skills are encouraged
- employees actively engage in organizational and leadership feedback and also are open for peer and 360 degree feedback and external feedback incl. from customers and other stake holders.
- employees establish high-quality relationship and have more positive attitudes, intentions, and behaviours.

The above key social aspects of the employees cannot be ignored when organizations undertake change management initiatives to meet the organizational urgencies. Organizations are integral part of country's economy and country's social structure. Manufacturing organizations are microcosm of society. Just like society is a composite of human beings influenced by culture, convenience, climate, economic, political circumstances, religion beliefs and classified based on occupation, organizations too are a composition of humans, classified based on roles and responsibilities, grouped together for a common purpose and is susceptible to all the influences which a society is put-to. Employees in an organization carry forward their citizen social behaviour. These citizen social behaviours are influenced by the socio-politico-economic influences before and during employment in an organization. It is hence essential that managers attune the expected social behaviours of employees towards the organizational expected behaviours. Humans are organic and social. Organic because of biological aspects and social because employees (humans) derive existence and alliances in an organization by configuring themselves based on the values, cultures, aspirations, ethics, principles of conduct, expected work behaviours, organization form and organization's goals. This nature of employees brings forth the social aspects at business activity. Social behaviours can be classified as those behaviours which employees crave naturally or otherwise to bring forth their ability of doing extra despite as expectedly or un-expectedly by the organization, so as to enhance their social existence or satisfying their social desirous competence, which come forth on the circumstance of need being influenced by the factors in the society or in an organization. These social behaviours may be voluntary behaviours of an individual or behaviours as expected by the organization.

FIGURE 6.0: SOCIAL BEHAVIOUR AND ITS IMPACT



Hence, when these social behaviours are rightfully channelized towards organizational urgencies, the performance of the organization enhances beyond the contributory elements of employee engagement. Social behaviours channelization and harnessing employee engagement factors will help build improved organizational culture and value system of an organization. When all these coherent forces are aligned, the probability of organization performance improvement is high.

## 8.0 SOCIAL FACTORS AND SOCIAL COHESION COMPENDIUM MATRICES

Employee engagement factors are a subset of social matrices. Cohen and Syme, 1985 have defined social support as resources provided by colleagues and other persons and Cobb, 1976 has added care and love. There is further need to augment these social factors, and hence there is a requirement to handle critical social needs of: employee care, self-esteem, being valued, employee well-being, being involved, welfare, being integrated, value diversity, autonomy and considered being included. These factors are defined as 'employee social cohesion matrices (eSCM)' as these factors more comprehensively encompasses employees' shared adoption of organization's values and are emotionally aligned towards attaining organizational urgencies and enhances employees' 'fulfillment'. 'Social Fulfillment index' (SFi) is a factor of employees' social cohesion matrices and employee engagement drivers are sub set of social cohesion matrices.

TABLE 4.0: SOCIAL FULFILLMENT INDEX (SFi)

Social Fulfillment Index = f (Social Cohesion matrices) and Employee social cohesion matrices = f ( Engagement Drivers)		
Engagement Drivers		Social Cohesion Matrices
Advocacy	a1	Autonomy
Loyalty	a2	Care
Strive	a3	Collaboration
	a4	Inclusion
	a5	Integrated
	a6	Self esteem
	a7	Support
	a8	Trust
	a9	Valued
	a10	Well being
		Engagement Drivers
	b1	Advocacy
	b2	Loyalty
	b3	Strive

The social cohesion matrices typically are tacit in nature and reside as emotional and rational ability. These cohesion matrices are best demonstrated when organizations call upon the employees to voluntarily act and respond to organizational urgencies for the improved performance and to weather off the challenges in general. The velocity-ability of such social cohesion matrices determines the strength of the organisation.

## 9.0 EMPLOYEE ENGAGEMENT AND ORGANIZATIONAL PERFORMANCE

To reinforce the arguments mentioned earlier that employee engagement is a significant element in responding to organizational urgencies and considering the fact that we are correlating the comprehensiveness of Indian economy - Manufacturing sector performance with that of employee engagement, the author has chosen two of the India's Best employers who have consistently been listed in the Aon Hewitt study of Best employers in India.

TABLE 5.0: CASE OF TWO BEST EMPLOYERS – COMBINED FINANCIAL PERFORMANCE

Best Employers Performance ***	FY 2013	FY 2012	FY 2011	FY 2010	FY 2009	FY 2008
Revenue	53,933	51,300	43,956	37,924	33,047	34,570
Operating Income (EBIT)	7,827	7,196	5,517	4,475	2,879	3,048
Revenue growth	5%	17%	16%	15%	-4%	
% Operating Income (EBIT)	14.5%	14.0%	12.6%	11.8%	8.7%	8.8%
Operating Income growth (EBIT)	9%	30%	23%	55%	-6%	

\*\*\* Combined Annual reports of Hindustan Unilever and Aditya Birla group

Based on the above data, the Indian economy in terms of sector contribution on GDP; Base: 2004-05, studied in earlier part of this paper and the growth in manufacturing sector is mapped with the employee engagement study for the financial years of FY 2011 and FY 2013 is correlated. The details are reproduced below:

TABLE 6.0: CASE OF TWO BEST EMPLOYERS' EMPLOYEE ENGAGEMENT DETAILS

Best employers' Engagement	FY 2013 *	FY 2011 **
Strive	76%	81%
Loyalty	68%	67%
Advocacy	86%	84%
Overall Engagement Index *, **	76%	77%

\* source: India Human Capital Scan, Best Employers 2.0 India Study, 2013; \*\* source: Aon Hewitt Best Employers Market Insights Report India 2011; Aon Hewitt Best Employers in India 2011 Press Release May 05 2011, 2009 - top 25

Employee engagement and employee social fulfilment are processes which include building trust, inclusion, values, and many such aspects mentioned earlier in this paper. Hence, while studying the employee engagement and employee social index it is thought appropriate to consider a period for study, referred as cumulative effect, which consolidates the organizations' performance for the current and preceding year. For continued reference, the same two companies are considered for the hypothesis testing.

TABLE 7.0: EMPLOYEE ENGAGEMENT MAPPED WITH FINANCIAL PERFORMANCE FOR A CASE OF TWO BEST EMPLOYERS IN STUDY

Dimension (cumulative effect) **	FY 2011	FY 2013	Variance
Overall Engagement Index	77%	76%	-1%
Revenue growth	15%	2%	-88%
Profitability improvement	106%	103%	-3%
Growth in Manufacturing sector (India)	2.7%	1.0%	-61%

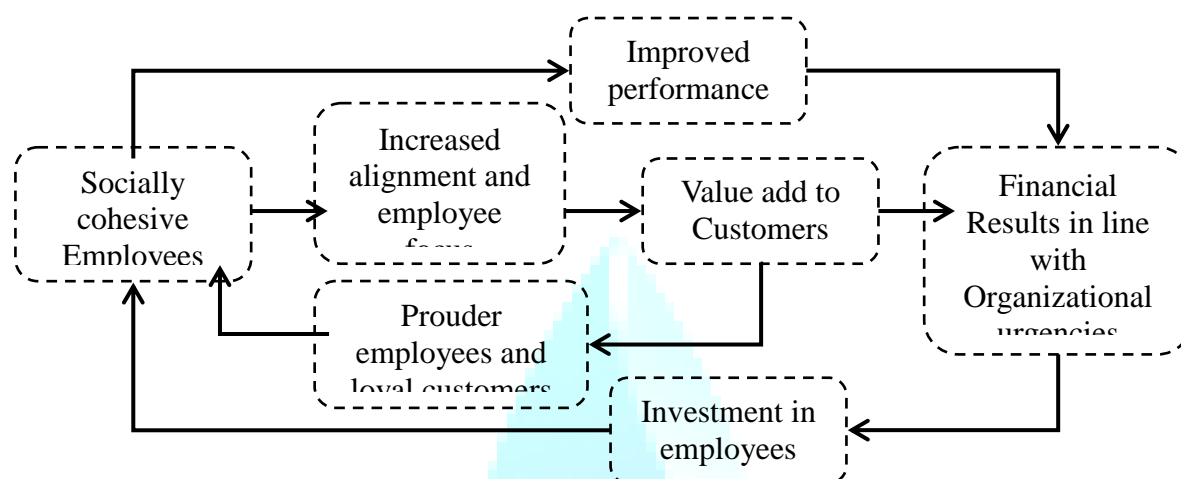
\*\* case of 2 Best employers in India [a FMCG Manufacturing US MNC, a Multi-product India MNC with Manufacturing as key base] in the context.

During the economic recession and awful performance of Indian manufacturing sector, while organizations focus on various strategies, the primary of them would be innovation, cost reduction, improved cash management and higher profitability. Profitability here is considered as earnings before interest and tax as a percentage of revenue. From the table above, we can clearly note that all the factors have underperformed. The impact of Indian manufacturing sector non-performance has certainly impacted the revenue growth of these manufacturing multi-national and best employers in India. However, there is a clear evidence



that the these organizations have certainly focussed on improved profitability – by improved cost management or better marketing strategies, which resulted in lesser impact on profitability in financial terms. With this we can derive that employee engagement is a critical element in ensuring success on organizational urgencies.

FIGURE 7.0: BLOCK DIAGRAM FOR SUCCESS ON ORGANIZATIONAL URGENCIES



### 10.0 SOCIAL FULFILMENT INDEX AND ITS IMPACT ON ORGANIZATIONAL URGENCIES

Social fulfillment index (SFI) is a comprehensive indicator and is a lead factor which predicts the employee behaviours and their collaborative alignment in organizations. Hence, SFI helps organizations to work on their strategies to ensure appropriate organizational performance.

**Methodology:** To test this hypothesis regarding the 'Social Fulfilment index (SFI)', a set of 57 questions in FY 2013 have been administered in an organization. n = number of exclusive questions asked per metric.

Metric	n	Metric	n	Metric	n
Autonomy	1	Care	4	Well being	6
Support	2	Integrated	4	Valued	7
Advocacy	2	Collaboration	5	Inclusion	8
Loyalty	2	Self esteem	5	Trust	9
Strive	2				

These questions were administered in a leading multi-national company in the year 2011 and 2013. However, in the year 2011, the number of social metric questions was limited, which are parts of the above listed metrics forms the limitation to this hypothesis. Nevertheless the significant population being administered strengthens the research. In total 754 employees across the organization were invited to participate in the survey in FY 2013. Overall, 705 responded to the survey out of a total of 754. Survey participants were sent an email with a unique user name and password to access the survey. Employees responded to survey questions using a six-point scale (1=Strongly Disagree, 2=Disagree, 3=Slightly Disagree, 4=Slightly Agree, 5=Agree, 6=Strongly Agree). In FY 2011, the response was obtained from 294 employees and the administering process was same.

**Measure:** The overall employee engagement index is arrived based on 6 questions based on the drivers of Strive, loyalty and advocacy. Strive is the extra-mile which an engaged employee puts forth in contributing to the success of organizational urgency. Loyalty is the desire to stay and advocacy is the positive promotion of organization reputation. The measurement analysis is based on the respondents who have chosen 'Strongly Agree' (6) or 'Agree' (5) on a particular question.

TABLE 8.0: EMPLOYEE ENGAGEMENT DRIVERS OF A MANUFACTURING MNC – A CASE IN STUDY

Engagement factors of a Manufacturing MNC referred as 'MFG MNC'	FY 2013 *	FY 2011 **
N (population studied)	705	294
Strive	80%	78%
Loyalty	66%	69%
Advocacy	83%	76%
Overall Engagement Index	76%	69%

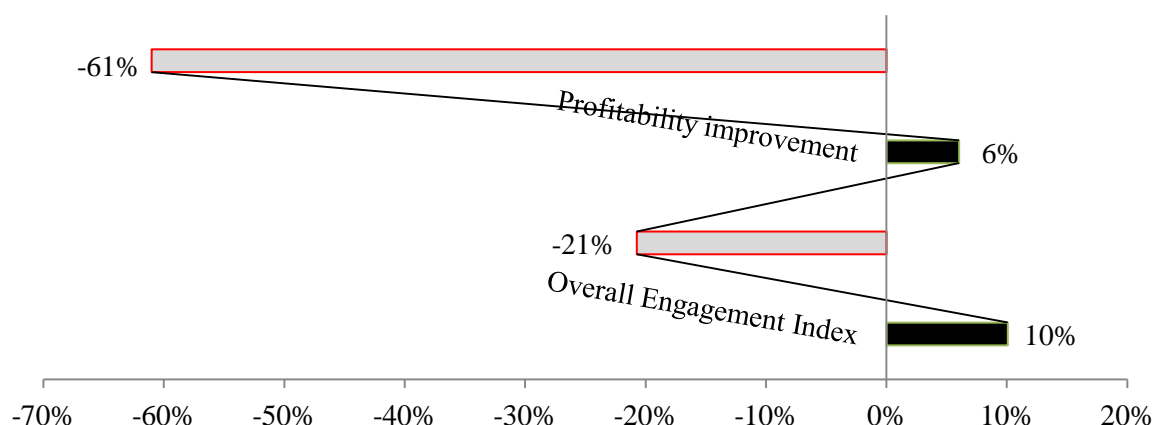
\* Source: India Human Capital Scan, Best Employers 2.0 India Study, 2013

This organization in this case, a leading manufacturing multi-national company in its segment and is referred as 'MFG MNC' had to face challenges both external and internal. External in terms of economic and market challenges and internal in terms of having new leadership at management committee level and at the next levels. The company has prudently undertaken certain strategies not limiting those as narrated below:

External	Internal	Social Instruments
<ul style="list-style-type: none"> <li>Differentiation</li> <li>Adding Value</li> <li>Profitable growth</li> <li>Sustainability platform</li> <li>Customer engagement</li> <li>Out-side in</li> <li>Productivity improvement for customers</li> <li>Valued vendor management</li> <li>Profitability engagement program for customers</li> <li>External benchmarks</li> <li>Expert engagement</li> </ul>	<ul style="list-style-type: none"> <li>Bottom line orientation</li> <li>Bench marking</li> <li>Cost reduction</li> <li>Margin growth</li> <li>Safety</li> <li>Increasing operational efficiency</li> <li>Using information technology</li> <li>Ability to customize services/products</li> <li>Automation</li> <li>Training</li> <li>Competence buiding – technical and behaviours</li> <li>Improved talent management focus</li> <li>Action learning programs</li> <li>Operational excellence</li> </ul>	<ul style="list-style-type: none"> <li>Engaged workforce</li> <li>Communication</li> <li>Matrix structure</li> <li>Business reviews</li> <li>Autonomy</li> <li>Decentralization</li> <li>Skills upgrading/training of workers</li> </ul>

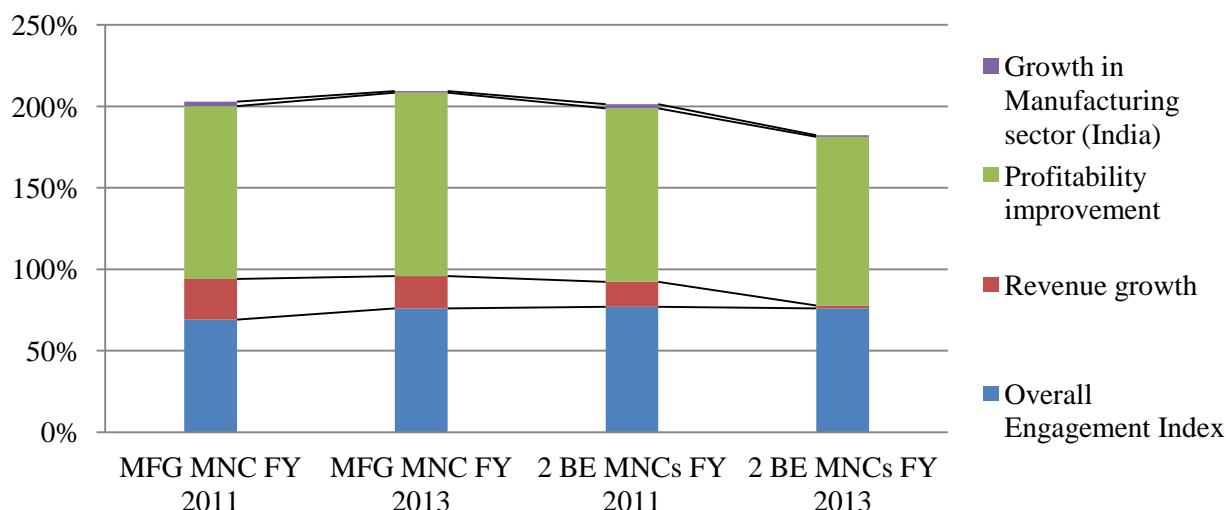
As a result, when we study the overall employee engagement index (OEI) and with the similar financial performance ratios, we see a healthy trend as compared to the two organizations studied earlier.

FIGURE 8.0: VARIANCE ANALYSIS OF FINANCIAL PERFORMANCE AND OEI OF A MFG MNC



Since the MFG MNC has similar trends and is likely to have been affected, a comparison with other two MNCs is done.

FIGURE 9.0: TREND ANALYSIS OF MFG MNC WITH TWO BEST EMPLOYERS – EMPLOYEE ENGAGEMENT AND FINANCIAL PERFORMANCES



This is quite an interesting aspect to review, as the external environment for all the three organizations is almost similar and the overall engagement index (OEI) in FY 2013 is also same. A dig deeper into the analysis of influence of social fulfilment index (SFI), we are able to demystify the success. Population = N = 705 and n = number of question elements within a dimension.

TABLE 9.0: SOCIAL FULFILMENT INDEX AND EMPLOYEE ENGAGEMENT INDEX

Metrics	n	index as %
<b>Social dimensions</b>	<b>51</b>	<b>80%</b>
• Autonomy	1	90%
• Care	4	80%
• Collaboration	5	82%
• Inclusion	8	79%
• Integrated	4	77%
• Self esteem	5	84%
• Support	2	76%
• Trust	9	80%
• Valued	7	77%
• Well being	6	78%
<b>Engagement dimensions</b>	<b>6</b>	<b>75%</b>
• Advocacy	2	83%
• Loyalty	2	66%
• Strive	2	80%

*n = number of questions asked for the dimension*

Overall Engagement index - OEI	75%
Social Fulfilment index - SFI	79%

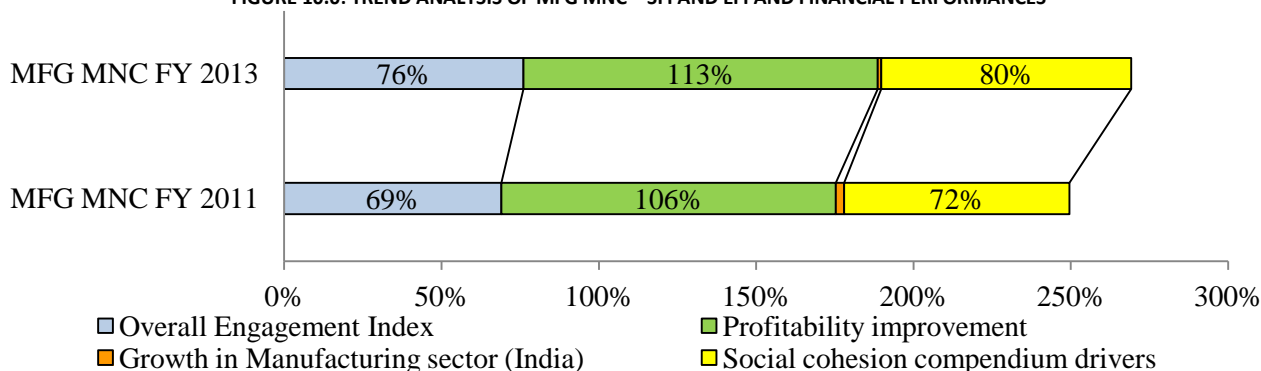
It may be observed that the social fulfilment index is significantly higher OEI (significant is when the relative difference is +/- 2%). Hypothesis is further studied when we compared the similar dimensions in FY 2011 and FY 2013 to understand the response trend. However, in FY 2011, only 18 questions were administered to a sample population of 294 employees, which was later augmented to 56 questions administered to a sample population of 705 employees in FY 2013. All these social dimensions need not matter equally to every employee. The reciprocation to the organizational urgencies and initiatives can be observed for a period of 4 years span of financial performance as a function of external environment and internal employee engagement.

TABLE 10.0: VARIANCE ANALYSIS OF SOCIAL COHESION COMPENDIUM METRICS

Dimension (cumulative effect) **	MFG MNC FY 2011	MFG MNC FY 2013	Variance
Overall Engagement Index	69%	76%	10%
Profitability improvement	106%	113%	6%
Growth in Manufacturing sector (India)	3%	1%	-61%
Social cohesion compendium metrics	72%	80%	11%

This provides a realistic fact that organizations have fiscal advantage when the social fulfilment index is higher as it not only increases the probability of improved performance, reduces the risk of non-performance but also accelerates the velocity towards achieving organizational urgencies. Social fulfilment index bonds the employees greater towards organization for ensuring effective administration and ensuring efficient operations. Also, the SFi enables the organization to better prepare for the future challenges and opportunities.

FIGURE 10.0: TREND ANALYSIS OF MFG MNC – SFI AND EFI AND FINANCIAL PERFORMANCES



## 11.0 CONCLUSION

As global economies keep fluctuation, country's economy will always change. This will impact organizations and they would be under increasing pressure to maintain their performance and shareholder value. Organizations, before they undertake reactive actions and defensive strategies, the first task of proactive measures are undertaken. Successful organizations are built by employees. For them to strive and thrive, they need to understand to manage and maintain their own performance in line with the company's objectives and priorities. This would help organizations to wade through the rough tide, organizations with higher engagement levels and having higher social fulfilment index have increased ability and capability to build competitive advantage to establish and undertake forward looking actions to improve the financial performance by means of bonding the employees greater towards effective administration and ensuring efficient operations thereby accelerating towards achieving organizational urgencies.

The freshness and rarity of concept of social fulfilment at workplace and its alignment with organizational urgencies to date, we have purposely reserved the approach of this particular article more empirical, exploratory and conceptual. The above research can further be enhanced by introspection of demographics – age, tenure, pay grade and bring in performance management measures and business unit wise response within an organisation. The concept of social fulfilment is in the evolving stage and we have brought forth certain critical aspects in this short article with a hope for further developmental work on this topic.

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**SERVICE QUALITY IN SUPER MARKETS: A STUDY OF CONSUMERS SATISFACTION IN APPAREL RETAILING****J. JAYANTHI****LECTURER****THIRU.VI.KA. GOVERNMENT COLLEGE ARTS COLLEGE  
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DHARMAPURAM ADHINAM ARTS COLLEGE  
MAYILADUTHURAI****ABSTRACT**

*The purpose of the study is to determine the consumer satisfaction of service quality offered at supermarket in Tiruvarur city. The data was collected from 200 respondents through structures questionnaire by using five point likert scale and was analyzed using one sample t test and multiple regression. The five dimensions such as tangibles, customer knowledge, responsiveness, convenience (dependent dimension) and competence. The finding showed that the dimensions of service quality such as tangibles, customer knowledge, convenience Competence were positively related to customer satisfaction. The management should focus on competence dimensions to be ahead of the competitor.*

**KEYWORDS**

service quality, customer satisfaction, apparel retailing, Tiruvarur city.

**INTRODUCTION**

Customer satisfaction has received considerable attention in recent years. Apparel retailing in Tiruvarur is poised to reach its height with recent opening of supermarkets. Indian apparel retailing is the country's largest opportunity for the organized retailing after food retailing. Branded apparel accounts for only 20 percent of the total apparel market. Fashion consumers today are better informed, more sophisticated than they expect service quality apart from the quality of merchandise purchased. The concept of customer satisfaction has relevance to both single, discrete encounters and to relationship. A service quality can be the cornerstone to retailing success retailers need to constantly evaluate their service quality through the use of a reliable scale. Retailing in India is gradually inching its way toward becoming the next boom industry. The whole concept of shopping has altered in terms of format and consumer buying behavior, ushering in a revolution in shopping in India.

**REVIEW OF LITERATURE**

In service literature, service quality is usually defined based on consumers' assessment. Parasuraman et al. (1985, p. 42) defined service quality as "a measure of how well the service level delivered matches customer expectations; delivering quality service means confirming to customer expectations on a consistent basis". Parasuraman et al. (1988, p. 16) defined perceived service quality as "a global judgment, or attitude, relating to the superiority of the service". Zeithaml (1988, p. 3) defined service quality as "the consumer's judgment about a product's overall excellence or superiority". It is clear that defining service quality is an important step toward the development of a solid foundation for this study. Kotler and Armstrong (1996, p. G9) defined service quality as "the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". Therefore, being in line with the service literature, this study looks into service quality as the standard of excellence toward fulfilling customers' requirements, which contributes toward achieving customers' ultimate satisfaction. This, in turn, entails organisations and firms to investigate, explore, and identify customers' requirements and to try to meet them in order to provide a high standard of service quality. Service quality is an elusive concept and there is considerable debate in the literature about how best to conceptualize this phenomenon. An all-embracing definition of service quality is notoriously difficult to produce. Parasuraman. described it as: the ability of the organization to meet or exceed customer expectations. Customer expectations may be defined as the "desires and wants of consumers" i.e. what they feel a service provider should offer rather than would offer.

**OBJECTIVE OF THE STUDY**

The objective of the study is to determine whether the dimensions of service quality significantly affect customer satisfaction in apparel retailing.

**METHODOLOGY**

The relevant data for the study has been collected from both primary and secondary sources. Research methodologies used in the study are descriptive methods. Simple random sampling is used to collect the information regression analysis was used in this research the data was collected through structured questionnaire by using five point likert scale. A sample of 200 respondents was selected for the study.

**HYPOTHESIS**

- 1) Ho-The tangibles have significant positive impact on customer satisfaction.
- 2) Ho-The customer knowledge have significant positive relationship on customer satisfaction.
- 3) Ho-The responsiveness have significant positive impact on customer satisfaction.
- 4) Ho-The convenience have significant positive relationship on customer satisfaction
- 5) Ho-The competence have significant positive impact on customer satisfaction.

**DATA COLLECTION AND ANALYSIS****INDEPENDENT VARIABLES**

Tangibles – shop position, decoration, transaction method, product price

Customer knowledge- mutual understanding, product knowledge of employee, performing the right service at the first time.

Competence- self confidence of employees, accurate delivery service, willing to help

Responsiveness- speed in solving problem, operating hours, speed in handling complaint, individual attention, courteous.

**DEPENDENT VARIABLE**

Convenience - Advertisement, Communication system, Employee behavior, product availability, after sales service.

## DEMOGRAPHIC

Analysis of demographic information revealed that 40 percent customers were young and aged between 19 years to 25 years and 46 percent of the respondents were males. Around 44 percent of the sample respondents had graduation and 62 percent were employed; out of the total sample 36 percent of the respondent's annual income was in between 20000 to 25000;

## One sample t-test Analysis

## ONE-SAMPLE STATISTICS

	N	Mean	Std. Deviation	Std. Error Mean
TANGIBLE	200	12.3850	1.47569	.10435

## ONE-SAMPLE TEST

	Test Value = 3					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
TANGIBLE	89.940	199	.000	9.38500	9.1792	9.5908

Based on the results of the **One sample t-test analysis at 95% confidence level**, the Hypothesis **H<sub>0</sub>** - There are no significant effects of tangible on customer satisfaction at supermarket in Tiruvurur is **rejected**, and **H<sub>a</sub>** - There are significant effects of **tangible** on customer satisfaction at supermarket in Tiruvurur is **not rejected** since one sample t-test successfully revealed a statistically significant values for policy factors. **Mean values** fall in positive side of rating (less than 3), **t<sub>cal</sub> value > t<sub>tab</sub> value** and **p-value < α = 0.05** for all the select policy factors under study.

## ONE-SAMPLE STATISTICS

	N	Mean	Std. Deviation	Std. Error Mean
CUSTOMER KNOWLEDGE	200	10.8200	1.53930	.10885

## ONE-SAMPLE TEST

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
CUSTOMER KNOWLEDGE	99.407	199	.000	10.82000	10.6054	11.0346

Based on the results of the **One sample t-test analysis at 95% confidence level**, the Hypothesis **H<sub>0</sub>** - ere are no significant effects of customer knowledge on customer satisfaction at supermarket in Tiruvurur is **rejected**, and **H<sub>a</sub>** - There are significant effects of **customer knowledge** on customer satisfaction at supermarket in Tiruvurur is **not rejected** since one sample t-test successfully revealed a statistically significant values for policy factors. **Mean values** fall in positive side of rating (less than 3), **t<sub>cal</sub> value > t<sub>tab</sub> value** and **p-value < α = 0.05** for all the select policy factors under study.

## ONE-SAMPLE STATISTICS

	N	Mean	Std. Deviation	Std. Error Mean
COMPETENCE	200	8.4050	1.48052	.10469

## ONE-SAMPLE TEST

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
COMPETENCE	80.286	199	.000	8.40500	8.1986	8.6114

Based on the results of the **One sample t-test analysis at 95% confidence level**, the Hypothesis **H<sub>0</sub>** - There is no significant influence of competence on customer satisfaction at supermarket in Tiruvurur is **rejected**, and **H<sub>a</sub>** - There is a significant influence of **competence** on customer satisfaction at supermarket in Tiruvurur is **not rejected** since one sample t-test successfully revealed a statistically significant values for physical aspects. **Mean values** fall in positive side of rating (less than 3), **t<sub>cal</sub> value > t<sub>tab</sub> value** and **p-value < α = 0.05** for all the select physical aspects under study.

## ONE-SAMPLE STATISTICS

	N	Mean	Std. Deviation	Std. Error Mean
RESPONSIVENESS	200	14.9600	1.79570	.12697

## ONE-SAMPLE TEST

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
RESPONSIVENESS	117.819	199	.000	14.96000	14.7096	15.2104

Based on the results of the **One sample t-test analysis at 95% confidence level**, the Hypothesis **H<sub>0</sub>** - There is no significant influence of responsiveness on customer satisfaction at supermarket in Tiruvurur is **rejected**, and **H<sub>a</sub>** - There is a significant influence of **responsiveness** on customer satisfaction at supermarket in Tiruvurur is **not rejected** since one sample t-test successfully revealed a statistically significant values for physical aspects. **Mean values** fall in positive side of RSQS rating (less than 3), **t<sub>cal</sub> value > t<sub>tab</sub> value** and **p-value < α = 0.05** for all the select physical aspects under study.

## ONE-SAMPLE STATISTICS

	N	Mean	Std. Deviation	Std. Error Mean
CONVENIENCE (DEPENDENT)	200	14.9950	2.21120	.15636

## ONE-SAMPLE TEST

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
CONVENIENCE (DEPENDENT- CUSTOMER SATISFACTION)	76.716	199	.000	11.99500	11.6867	12.3033

Based on the results of the **One sample t-test analysis at 95% confidence level**, the Hypothesis **H<sub>0</sub>** - There is no significant influence of **convenience** on customer satisfaction at supermarket in Tiruvurur is **rejected**, and **H<sub>a</sub>** - There is a significant influence of **convenience** on customer satisfaction at supermarket in Tiruvurur is **not rejected** since one sample t-test successfully revealed a statistically significant values for physical aspects. **Mean values** fall in positive side of RSQS rating (less than 3), **t<sub>cal</sub> value > t<sub>tab</sub> value** and **p-value < α = 0.05** for all the select physical aspects under study.

## CONCLUSIONS

The measurement of service quality has become a significant marketing tool for retail stores that wish to develop a competitive advantage by learning about their customers, consumption experiences validating the implementation of the, retail service quality and by providing empirical evidence of how retail service quality dimensions leads to customer satisfaction in this setting. The result showed that all the four dimensions have the significance effect on the customer satisfaction and the alternative hypothesis was not rejected. The study was designed to know that the dimensions of service quality that have significant effect on customer satisfaction. The study revealed that the management needs to improve service quality in areas of responsiveness. Improvement in customer satisfaction would mean that it is gaining competitive advantage.



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**ORGANIC COTTON INDUSTRY: A CASE OF PRESENT STATUS, PRODUCT AND PRICE****KEERTHI CHANDAK****STUDENT****ASPEE AGRIBUSINESS MANAGEMENT INSTITUTE****NAVSARI AGRICULTURAL UNIVERSITY****NAVSARI****DR. ALPESH LEUA****ASSOCIATE PROFESSOR****ASPEE AGRIBUSINESS MANAGEMENT INSTITUTE****NAVSARI AGRICULTURAL UNIVERSITY****NAVSARI****DR. V. M. THUMAR****ASSOCIATE PROFESSOR****ASPEE AGRIBUSINESS MANAGEMENT INSTITUTE****NAVSARI AGRICULTURAL UNIVERSITY****NAVSARI****ABSTRACT**

Cotton is an important agricultural commodity, heavily traded in more than 150 countries. Prior to 2008, the world cotton industry had been experiencing robust demand growth and rising yields. Over the last 60 years, cotton production once almost quadrupled, from 7 million tons in 1950/51 to 27 million tons in 2006/07, but declined thereafter to 22 million in 2009/10. Indian organic cotton continues to make its presence felt. Initial heady growth took a sharp dip for the first time in three years since India overtook Turkey the year 2006 - 07 to emerge as the global leader. Growth from 2007 to 2010 was fuelled by a combination of reasons and brought with it several challenges supply/demand, price, profile of stakeholders and regulatory issues. However, the year 2010-11 had been a defining year for organic cotton in India. As in previous years, the prices of organic cotton were based on the prices of conventional cotton. Some of the more committed producer have offered an increase of 8 to 12 % over conventional cotton prices for organic and an increase of about 5% for in-conversion fiber, especially where there were written contractual agreements. However, the global economic situation resulted in a modest demand situation from the market, with a resulting reluctance from buyers to pay any more than a marginal increase for organic over conventional. At yarn level, organic was perhaps slightly more profitable at about a 7% increase over conventional, but the majority of producer groups reportedly received only about 3 – 5% at fiber level. Finally, the fashion industry has realised that there is money in this new “Green market”. The market for apparel products obtained with “Ethical” raw materials will remain a niche area, but is likely to grow. Although the organic cotton is still only a niche within the global cotton market, it has gained an extremely high profile with retailers and consumers. According to Harkirat Singh, Managing Director Woodland, “Despite being a niche market, the market for organic clothing is growing in India as people are getting aware and more conscious about what they are purchasing. Though the consumer is willing to pay more for eco- friendly products, they also like transparency in knowing that the product is actually eco- friendly”. India would thus emerge as a country with one of the fastest growing markets for apparel, up from four percent of global share to seven percent. Currently the market consists of both branded and unbranded apparel but all indications are that the preference for branded apparel will grow considerably in the future. Even a casual visitor to India can see clear evidence of this. There is growing consumerism and urbanization, a larger segment of people with bigger incomes, young people with higher discretionary incomes, preference for easy and wider access to a greater variety of clothing, more organized retail through shopping malls, and both Indian and International brands.

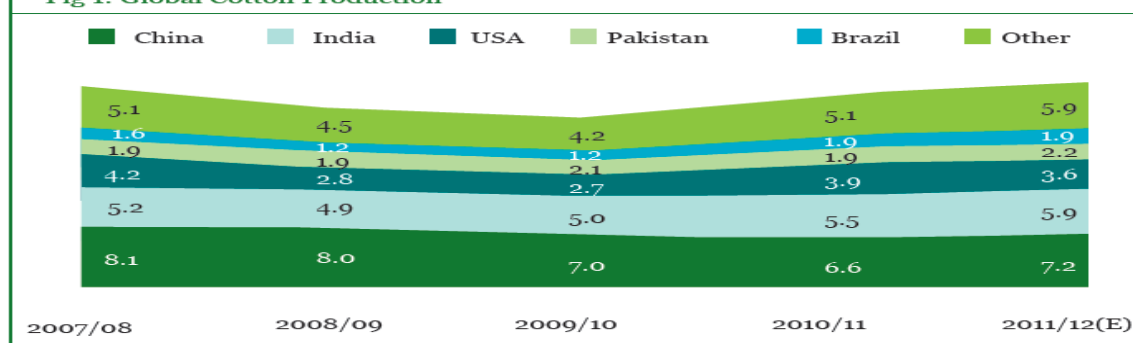
**KEYWORDS**

Organic cotton industry, green market.

**1. INTRODUCTION**

Cotton is an important agricultural commodity, heavily traded in more than 150 countries. In many developing and underdeveloped countries, cotton exports are not only a vital source for generating foreign exchange earnings, but also account for a significant proportion of their GDP and tax income, leading to significant economic and social development.

Prior to 2008, the world cotton industry had been experiencing robust demand growth and rising yields. Over the last 60 years, cotton production once almost quadrupled, from 7 million tons in 1950/51 to 27 million tons in 2006/07, but declined thereafter to 22 million in 2009/10. The introduction and adoption of new technologies and expansion of the area under cotton has resulted in significant production gains in the world. About 70% of the global cotton production comes from 4 countries, which include China (27%), India (22%), USA (13%) and Pakistan (8%).

**Fig 1: Global Cotton Production**

Source: ICAC, USDA

**1.1 EMERGENCE OF THE ORGANIC COTTON**

With the world getting sensitive towards the environment, there has been a quick response from the textile industry, and are becoming involved in the re-thinking process. Today, clothing must not only be fashionable but also be produced in an environmentally conscious, socially acceptable and efficient way. It means that a product with a modern brand must not cause harm, firstly to the Consumers, secondly, to the persons who participate in the production process and most of all the Mother Nature.

**TABLE 1: WORLD SCENARIO OF ORGANIC COTTON IN A SNAP SHOT**

World Production	1,38,813mt
No. of countries growing Organic Cotton	18
Largest producer	74% from India
Total area under Organic Production	3,16,907 ha
Total number of Certified Organic Cotton Farmers	2,14,905

Source: Textile Exchange, 2013

**1.2 KEY FINDINGS OF ORGANIC COTTON ACROSS THE WORLD**

With rapid increase in the production from 2006 to 2010, there had been a significant drop in the year 2010-11. However, the production seemed stabilizing in the year 2011-12, with relative increase in the global production of organic cotton to 1,38,813 Mt.

India is consistently being the largest producer, since last five years. It has experienced a 1 % increase in production, expanding from 102,452 Mt last year to 103,004 Mt fibers in the year 2011-12.

In the USA, Texas organic cotton farmers suffered severe drought. Despite an increase in planting by 36 percent the actual area harvested plunged – with nearly two thirds of the planted crop abandoned to drought. As a result the USA saw a 45 percent reduction in the overall harvest (from 2,893 Mt to 1,580 Mt fibers)

Africa achieved a record growth of 103% increase in the production for the year 2011-12 from last year. Also, there was a dramatic increase from Tanzania which is of 153%. Due to favorable rains, Tanzania's production leapt from 2,723 Mt fibers to 6,891 Mt on similar land area.

**TABLE 2: TOP 10 COUNTRIES PRODUCING ORGANIC COTTON IN THE WORLD**

Country	Fiber Production (Mt)	Fiber Production(% of Total)
India	103,003.52	74.20
Turkey	15,802.00	11.38
China	8,105.53	5.84
Tanzania	6,890.90	4.96
USA	1,580.00	1.14
Others	2583	1.86

Source: Textile Exchange, 2013

**TABLE 3: GLOBAL PROFILE OF ORGANIC COTTON SECTOR, 2011-12**

Region	Number of Producer Groups	Number of Farmers	Number of Women Farmers
Africa	9	25,584	6,625
China	5	1,993	952
EMENA & CA	25	1,273	261
Latin America	13	1,186	219
South Asia (India)	100	1,84,029	No data
USA	6	40	No data

Source: Textile Exchange, 2013

**1.3 COTTON SCENARIO IN INDIA**

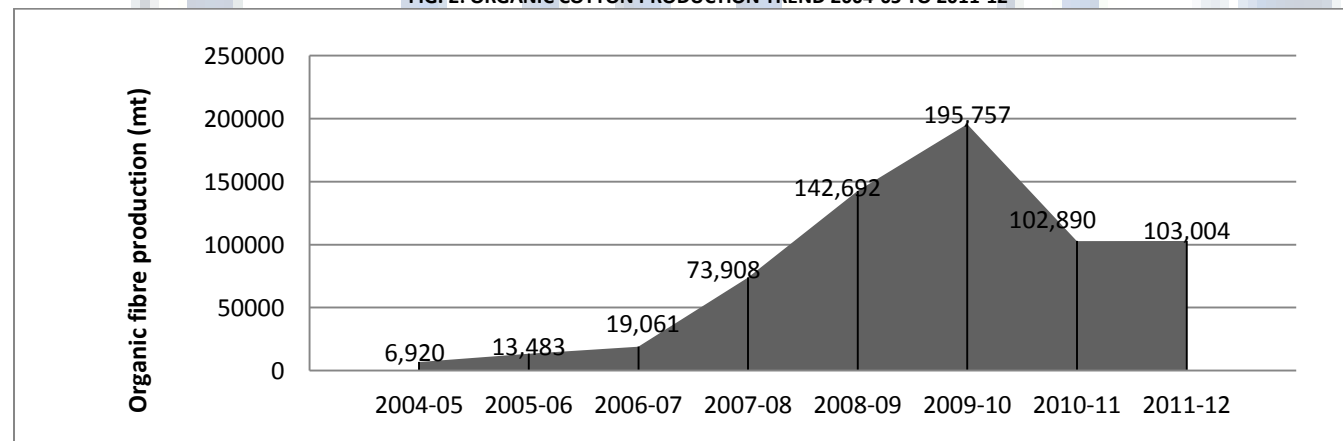
With the highest acreage of land under cotton in the world, (30.4 percent of global production, International Cotton Advisory Committee) India's connection with cotton spans across cultural, historic, commercial, spiritual and emotional realms. India has over 5,000 years of agricultural history. The growing, processing, and commercial aspects of cotton continues to dominate agriculture.

Cotton continued to play a big role in India's agronomy and economy in the year 2011- 12. India had the largest acreage under cotton in the world (34 percent of global acreage) and is the second largest fiber producer. In 2011-12 India's cotton production grew from 11.14 million ha in 2010-11 to 12.17 million ha, an increase of 10 percent which clearly demonstrated the Indian farmer's faith in cotton. Production of cotton correspondingly raised from 325 lakhs bales (32,500,000) in 2010-11 to 353 lakhs bales (35,300,000) in 2011-12 (one Indian bale equals 170 kg of lint). (Cotton Advisory Board)

**1.4 ORGANIC COTTON IN INDIA**

Indian organic cotton continues to make its presence felt. Initial heady growth took a sharp dip for the first time in three years since India overtook Turkey the year 2006 - 07 to emerge as the global leader. Growth from 2007 to 2010 was fuelled by a combination of reasons and brought with it several challenges supply/demand, price, profile of stakeholders and regulatory issues. However, the year 2010-11 had been a defining year for organic cotton in India. It was buffeted by the storms that battered this commercial crop, despite operating within a sub system with its own unique fluctuations and vigor.

India remained the biggest producer for five years running, by the year 2011-12. It produced 103,004 Mt of organic cotton, with an area of 253,161 ha, which was 75 percent of world's organic cotton and roughly two percent of India's cotton acreage. Production grew by 1% over last year, 2010-11.

**FIG. 2: ORGANIC COTTON PRODUCTION TREND 2004-05 TO 2011-12**

Source: Textile Exchange, 2013

However, there has been no dramatic difference in the acreage. Madhya Pradesh, despite a small drop, continued to have the highest acreage. Maharashtra follows, though with a fairly significant rise mostly on account of the 2010-11 addition of conversion acreage. Rajasthan has emerged the third largest producer with a significant increase, followed by Odisha. Maharashtra and Madhya Pradesh together constitute 78.7 percent of India's organic cotton.

**TABLE 4: ORGANIC COTTON PRODUCTION IN INDIA, 2011-12**

States	Area(ha)	Seed Cotton Production (Mt)	Fiber Cotton Production (Mt)
Andhra Pradesh	3,625	4,469	1,475
Gujarat	4,690	5,783	8,760
Madhya Pradesh	126,165	155,553	51,333
Maharashtra	73,124	90,157	29,752
Odisha	16,540	20,392	6,729
Rajasthan	27,594	34,022	11,227
Others	423	522	172
Total	253,161	312,131	103,004

Source: Textile Exchange, 2013

**TABLE 5: INDIA ORGANIC COTTON PROFILE, 2011-12**

States	Number of Producer Groups	Number of farmers	Farmer distribution (%)
Andhra Pradesh	3	5,500	3
Gujarat	10	18,350	10
Haryana	2	1,820	1
Karnataka	4	1,840	1
Madhya Pradesh	44	90,500	49
Maharashtra	21	38,000	21
Odisha	9	16,500	9
Rajasthan	3	3,500	2
Tamilnadu	4	8,019	4
Total	100	184,029	

Source: Textile Exchange, 2013

## 2. PRODUCTS OF ORGANIC COTTON

The main use of organic cotton is for the following textile products:

- T-Shirts
- Athletic apparel
- Socks
- Baby wear
- Towels
- Underwear
- Bathrobes
- Denim
- Bed sheets
- Napkins
- Diapers

### 2.1 PRICING OF ORGANIC COTTON

It is a known fact that organic cotton items are anywhere from 10 to 45% more expensive than conventional cotton products. The price of organic includes investments made by farmers who are protecting the environment, maintaining soil fertility, preserving biodiversity and conserving water. This means organic cotton sometimes is more expensive because the costs aren't hidden. With organic cotton, the cost is passed not only to the retailer, but to the weavers, seamstresses, pickers and growers who made that item's production possible.

As in previous years, the prices of organic cotton were based on the prices of conventional cotton. Some of the more committed producer have offered an increase of 8 to 12 % over conventional cotton prices for organic and an increase of about 5% for in-conversion fiber, especially where there were written contractual agreements. However, the global economic situation resulted in a modest demand situation from the market; with a resulting reluctance from buyers to pay any more than a marginal increase for organic over conventional. At yarn level, organic was perhaps slightly more profitable at about a 7% increase over conventional, but the majority of producer groups reportedly received only about 3 – 5% at fiber level. This was an all time low for organic cotton prices in India.

**TABLE 6: PRICE COMPARISON OF FEW OF THE PRODUCTS MADE FROM COTTON AND ORGANIC COTTON**

Type of Product	Price			
	Non- Cotton		Organic Cotton	
	USD (US \$) ( FOB Price)	INR (1USD=58.00RS.)	USD (US \$) ( FOB Price)	INR (1USD=58.00RS.)
Raw cotton and organic cotton / kg	US \$1.95-2.30	113.10- 133.40	US \$1.70-2.00	Rs. 98.60- 116.00
White t shirts (adult men) / piece	US \$1-3	58.00-174.00	US \$ 0.75-4.00	Rs.43.50-232.00
Kids t shirts / piece	US \$0.85-0.90	Rs.49.30-52.20	US \$0.75-1.25	Rs. 43.50-72.50
Bath towel / piece	US \$1-4	Rs.58.00-232.00	US \$4.5-6.6	Rs.261.00-382.60
Kitchen towels / piece	US \$0.40-4.00	Rs.23.20-232.00	US \$0. 5-5	Rs.29.00-290.00
Tote bags / bag	US \$2-4	Rs.116.00-232.00	US \$0.50-5.00	Rs.29.00-290.00
Terry bathrobe / piece	US \$1-2	Rs.58-116.00	US \$3.00-5.00	Rs.174.00-290.00
Socks (adults) / pair	US \$1-2	Rs. 58-116.00	US \$2-4	Rs.116.00-232.00
Denim / meter	US \$2.0-5.0	Rs.116.00-290.00	US \$5.75-7	Rs.333.50-406.00
Bed sheet / set	US \$15-22	Rs.870-1276	US \$20-25	Rs. 1160-1450.00
Table napkins	US \$2.00-2.25 / Set	Rs.116-130.50	US \$0.40-6.50 / Piece	Rs.23.20-377.00

Source: Alibaba.com

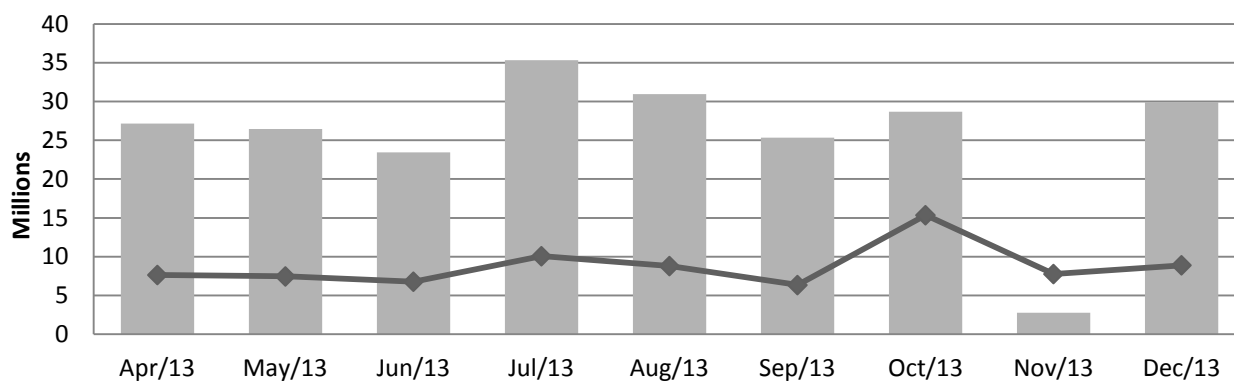
### 2.2 SCENARIO OF EXPORT - ORGANIC COTTON AND COTTON

#### 2.2.1 ANALYSIS OF EXPORTS OF ORGANIC COTTON

India exported organic cotton worth USD 254,892,298 with total quantity of 79,048,872. Chittagong is the largest buyer of organic cotton accounting for exports worth USD 59,654,082 followed by Rotterdam and Hamburg which imported organic cotton worth USD 30,986,796 and USD 12,794,366 respectively.

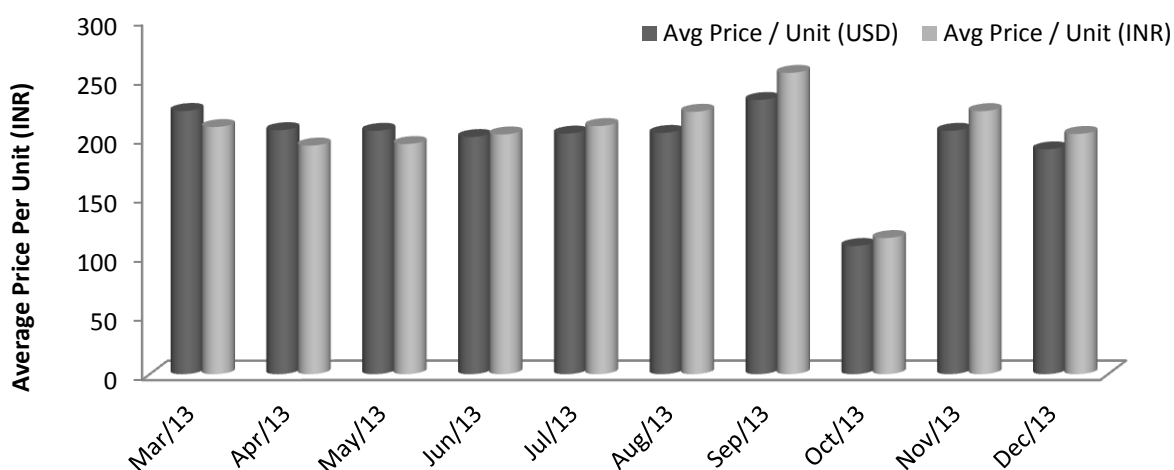
NhavaSheva Sea accounted for 27.8% of exports followed by Chennai Sea and Tuticorin Sea which account for 15.5% and 10.7% of exports respectively. Average price of organic cotton per unit is USD 3.22 and average value per shipment is 8,428.

FIG 3: TOTAL VOLUME AND VALUE OF EXPORTS



■ total value USD    ◆ total quantity

FIG. 4: AVERAGE PRICE PER UNIT OF ORGANIC COTTON



	Mar/13	Apr/13	May/13	Jun/13	Jul/13	Aug/13	Sep/13	Oct/13	Nov/13	Dec/13
Avg Price / Unit (USD)	222.72	206.48	205.9	200.68	203.58	204.16	232	108.46	205.9	190.24
Avg Price / Unit (INR)	209.11	193.43	194.75	202.86	209.97	222.05	254.94	115.21	222.54	203.3

Source: Zauba.com

Note: 1USD = 58 INR

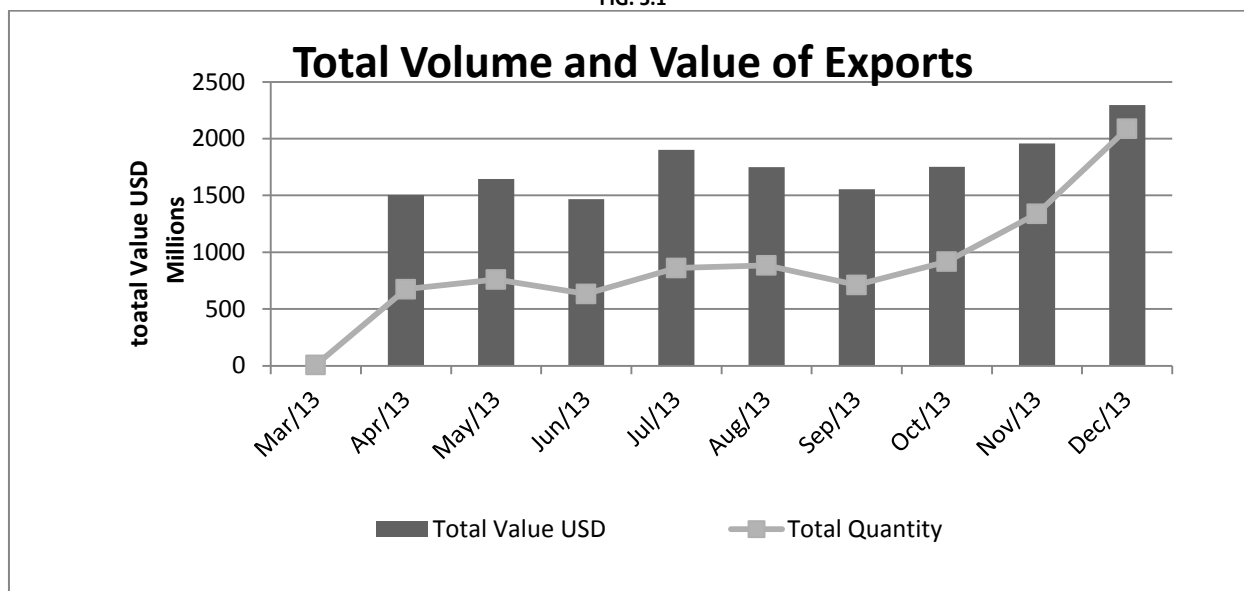
## 2.2.2 ANALYSIS OF EXPORTS OF COTTON

India exported cotton worth USD 15,857,687,564 with total quantity of 8,882,140,810. New York is the largest buyer of cotton accounting for exports worth USD 888,451,872 followed by Shanghai and Qingdao which imported cotton worth USD 811,578,778 and USD 783,477,157 respectively.

NhavaSheva Sea accounted for 27.3% of exports followed by Chennai Sea and Tuticorin Sea which account for 11.3% and 11.3% of exports respectively. Average price of cotton per unit is USD 1.79 and average value per shipment is 8,063.

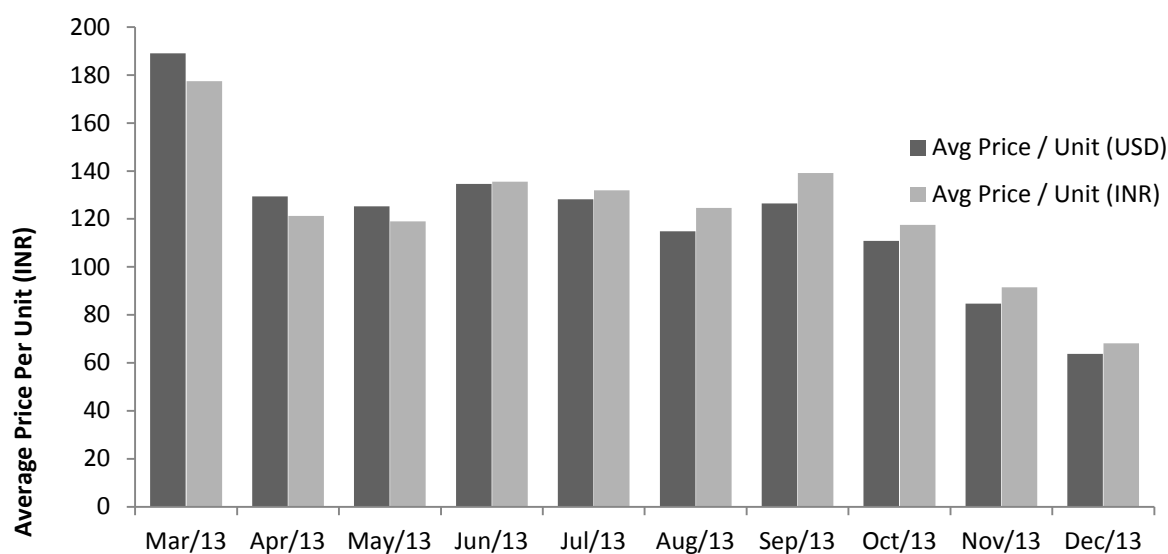


FIG. 5.1



Source: Zaub.com

FIG. 5.2: AVERAGE PRICE PER UNIT OF COTTON



Source: Zaub.com

Note: 1USD = 58 INR

### 3. ROAD AHEAD FOR ORGANIC COTTON IN INDIA (OPPORTUNITIES)

A new fabric fashion is reinforced by the impression for high quality and elegance. A new social awareness is setting in, which encounters the natural fibre and eco - trend. Many collections are changing towards the modern naturalness. Wool and cotton are mixed with linen, silk, cashmere, bamboo and more recently with the hollow fibre kapok, to make the fabrics lighter and furnish them with a sophisticated sheen.

Finally, the fashion industry has realised that there is money in this new "Green market". The market for apparel products obtained with "Ethical" raw materials will remain a niche area, but is likely to grow. Although the organic cotton is still only a niche within the global cotton market, it has gained an extremely high profile with retailers and consumers. According to Harkirat Singh, Managing Director Woodland, "Despite being a niche market, the market for organic clothing is growing in India as people are getting aware and more conscious about what they are purchasing. Though the consumer is willing to pay more for eco- friendly products, they also like transparency in knowing that the product is actually eco- friendly".

The market for organic goods in India is at a nascent stage and has great potential especially for the apparel segment. Currently accounting for less than 1% of the Rs. 32,000-crore organized branded apparel market, the organic clothing segment has a potential to grow to about 5% of the total market in the next five years, according to experts.

Indian organic cotton continues to depend heavily on the overseas markets. The existing value chains typically extend from farmers engaged through a contracting system, through to gins, mills and finally to brands and retailers. Traders are also involved. However, given the current international market demand constraints, Indian producers and mills engaged with organic cotton would benefit hugely from expanding their markets within India. This would help them reduce their dependence on international markets, minimize their vulnerability, create more self-reliance and also help enhance their image within national boundaries. The domestic market holds great promise and remains relatively untapped. According to recent estimates, the Indian market for apparel is currently valued at USD 40 billion and is estimated to go up to USD 124 billion in 2020.

India would thus emerge as a country with one of the fastest growing markets for apparel, up from four percent of global share to seven percent. Currently the market consists of both branded and unbranded apparel but all indications are that the preference for branded apparel will grow considerably in the future. Even a casual visitor to India can see clear evidence of this. There is growing consumerism and urbanization, a larger segment of people with bigger incomes, young people with higher discretionary incomes, preference for easy and wider access to a greater variety of clothing, more organized retail through shopping malls, and both Indian and International brands.

### 3.1 INTEREST IN ORGANIC COTTON CLOTHING IS PRIMARILY DRIVEN BY THE FOLLOWING REASONS

- 1) A small group of people's demand is based on necessity. This segment includes individuals with chemical skin sensitivities and allergies strong enough to warrant special products with few or no chemical residues. Toxic chemical residue remains in industrially treated fibres; in clothing in contact with the skin can aggravate a variety of allergies and allergic symptoms such as asthma and multiple chemical sensitivities.
- 2) Another group of people can be characterised as those whose demand is based on choice rather than necessity. This is a much more substantial segment of the market as these are consumers who are changing their buying pattern to emphasise and encourage products that are perceived to be less damaging to the environment and health and safety of their families. The environmentally aware customer has gained promise in the marketplace so that the range of business-determining parameters has been extended by a new one: Ecology. Now there are more and more consumers with enough income to purchase products that are in alignment with their values.

## CONCLUSION

Cotton is an important agricultural commodity, heavily traded in more than 150 countries. Prior to 2008, the world cotton industry had been experiencing robust demand growth and rising yields. Over the last 60 years, cotton production once almost quadrupled, from 7 million tons in 1950/51 to 27 million tons in 2006/07, but declined thereafter to 22 million in 2009/10. Indian organic cotton continues to make its presence felt. Initial heady growth took a sharp dip for the first time in three years since India overtook Turkey the year 2006 - 07 to emerge as the global leader. Growth from 2007 to 2010 was fuelled by a combination of reasons and brought with it several challenges supply/demand, price, profile of stakeholders and regulatory issues. However, the year 2010-11 had been a defining year for organic cotton in India.

As in previous years, the prices of organic cotton were based on the prices of conventional cotton. Some of the more committed producer have offered an increase of 8 to 12 % over conventional cotton prices for organic and an increase of about 5% for in-conversion fiber, especially where there were written contractual agreements. However, the global economic situation resulted in a modest demand situation from the market, with a resulting reluctance from buyers to pay any more than a marginal increase for organic over conventional.

At yarn level, organic was perhaps slightly more profitable at about a 7% increase over conventional, but the majority of producer groups reportedly received only about 3 – 5% at fiber level. Finally, the fashion industry has realised that there is money in this new "Green market". The market for apparel products obtained with "Ethical" raw materials will remain a niche area, but is likely to grow. Although the organic cotton is still only a niche within the global cotton market, it has gained an extremely high profile with retailers and consumers. According to Harkirat Singh, Managing Director Woodland, "Despite being a niche market, the market for organic clothing is growing in India as people are getting aware and more conscious about what they are purchasing. Though the consumer is willing to pay more for eco- friendly products, they also like transparency in knowing that the product is actually eco- friendly". India would thus emerge as a country with one of the fastest growing markets for apparel, up from four percent of global share to seven percent. Currently the market consists of both branded and unbranded apparel but all indications are that the preference for branded apparel will grow considerably in the future. Even a casual visitor to India can see clear evidence of this. There is growing consumerism and urbanization, a larger segment of people with bigger incomes, young people with higher discretionary incomes, preference for easy and wider access to a greater variety of clothing, more organized retail through shopping malls, and both Indian and International brands.

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**NATURE OF PRODUCTION RELATIONS IN ORGANISED MANUFACTURING SECTOR OF INDIA**

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**ABSTRACT**

*The Indian manufacturing sector has come off age after passing through many hurdles and has largely become immune to the political ideologies. It has certain inherent strengths to deal with fast changing external sector. The availability of industry-wise year-wise data at two digit level allows us to estimate the production functions based on neo-classical assumptions in Indian setting. The present paper attempts to analyze the nature of production relations in organised manufacturing sector of India using translog production function with three input variables labour, capital and technology (represented by time in years). It means the 'technology' here means all factors other than labour and capital i.e. it includes effects of governance, legal systems, law & order, market conditions, availability of physical infrastructure & its quality. With this understanding, we have tried to capture the changing nature of the production function 1979-80 to 2010-11. The positive slopes of marginal products are indicators of the appetite of the economy to absorb large investments. The capital deepening technical progress has not reduced the employment generation potential of the economy. However, there is a need to focus on the sectors which have maximum vertical linkages.*

**JEL CLASSIFICATION**

D24

**KEYWORDS**

Capital, Production, Technical Progress, Total Factor Productivity.

**1. INTRODUCTION**

Manufacturing sector has long been the main source, user and diffuser of technical progress and associated skills and attitudes. Its special role can be understood only in a world of dynamic learning and technical change, where large enterprises strive to increase their size and capabilities to realize economies of scale and societies constantly transform their structures and habits. In this world, the manufacturing industry is not just an ingredient of development-it is the essential ingredient. It provides the direct demand that stimulates the growth of many modern services. It is often the largest customer for banking, transport, insurance, communications, advertising and utilities. It creates markets for new services and skills, particularly important for finance, education and logistics. It is the source of new service enterprises, many of them originally part of manufacturing enterprises and hived off to provide design, logistics, maintenance, training and other services. It is also a vital source of new skills and attitudes, transforming traditional economic structures. It creates an industrial work ethic, spreading the discipline and organization required in modern societies. It fosters entrepreneurial capabilities, with small enterprises as the springboard, and it develops new managerial and technological capabilities, the core of modernization and competitiveness.

India's development strategy placed greater emphasis on creation of a well-diversified industrial base to realize the dream of industry-led development. In order to maximize growth with limited resources, the importance of increasing productivity, efficiency and competitiveness needs no rationalization. It is the foremost duty of the economists to keep evaluating the technology continuously to generate warning signals for the policy makers. Recently, the technological changes in the Indian industries have gained momentum. This has many implications for share of labour, productivity, employment and future growth potential of the industry. In the present paper, the nature of production relations in organised manufacturing sector of India has been analysed using translog production function. The review of related literature, methodology used and data analysis have been discussed in the next sections.

**2. REVIEW OF LITERATURE**

There is no dearth of research on analysis of production related aspects. There have been many attempts to understand the nature of technical progress in manufacturing sector. Productivity studies gained prominence in India after 1950s and early 1960s, when development was basically growth oriented. In later part of 1960s, a number of studies have been conducted in the manufacturing sector in India. Several studies like Dholakia (1994)<sup>04</sup>, Ahluwalia (1991)<sup>01</sup>, Mohanty (1992)<sup>10</sup>, Balakrishnan & Pushpangadan (1998)<sup>02</sup>, Balakrishnan, P, K Pushpangadan and M Suresh Babu (2000)<sup>03</sup>, Majumdar (1996)<sup>09</sup>, Rao (1996a)<sup>11</sup>, Rao (1996b)<sup>12</sup>, Srivastava (1996)<sup>14</sup>, Krishna, K.L (1987)<sup>08</sup>, Pradhan & Barik (1998)<sup>13</sup>, Hulten & Srinivasan (1999)<sup>07</sup>, Balakrishnan et al (2000)<sup>06</sup>, Goldar (2000)<sup>05</sup>, Trivedi et (2000)<sup>16</sup>, Goldar & Kumari (2003)<sup>06</sup>, Trivedi (2003)<sup>15</sup> have measured the productivity trends, employment trends and growth of Indian organized manufacturing sector during the post independence period. A significant number of studies have focused on the measurement of Total Factor Productivity Growth (TFPG) and found different figures within different underlying methodological framework. Recent studies like Balakrishnan and Suresh Babu (2003), find the growth rate of labour productivity and employment in the nineties has risen as compare to eighties. But at the same time, the growth rate of money wage, product wage and real wages has declined in the post-reform as compare to pre-reform period. Some of the indicators of their study do commensurate with the findings of Unel (2003) and Gangopadhyay and Wadhwa (1998). But Goldar (2004) finds a deceleration growth in Indian manufacturing during post-reform periods as compared to pre-reform period. He has compared his results with Unel (2003) and TSL (2003) and criticized their findings on the ground of measurement problems. Goldar's study also finds a negative employment growth in Indian organized manufacturing sector after 1997-98. The study by Bidhe and Kalirajan (2004) also shows a slow growth rate of employment in organized manufacturing sector in post-reform period as compare to pre-reform period. Indian government policies with regards to industry, foreign investment and trade have been sprouting over the years. In 1950s and 60s, the focus of the government was on attaining self-sufficiency in all sectors of the economy, generating employment, promoting small industries and preventing private sector monopolies. Over the years, however, these policies had detrimental effect on low productivity, lack of professional management in most of the Indian firms. In state owned enterprises and government ownership, the bureaucratic system delayed in decision-making process. The compulsory licensing for all the industries, price controls and subsidies removed motivation to improve performance. After the 1991 reforms, Indian manufacturing has been opened out to competition from global players. However, the pace of reform has been slow. The government should find out proper immediate action in order to enhance the

productivity, which will accelerate the growth process and competitiveness of the economy. In order to take various steps for increasing the productivity, it is more important to see the dynamic relationship between the key variables in the manufacturing sector. The present paper has a different dimension. It differs from the previous literature on the ground of specific focus on explaining the managerial and labor productivity in the manufacturing sector. It is well documented that the mutually reinforcing phenomena of low productivity in manufacturing sector is the cause for low income. Low income in turn leads to low standards of living, which constitute the root cause for poverty and unemployment in the country. So, the issue of labour productivity growth, the only route to enhance labour welfare in the long run has been under examined. In this paper, we have used the translog production function to analyse the nature of technical progress and its impact on labour productivity and share of labour.

### 3. IMPORTANCE OF THE PRESENT STUDY

The real innovation in an economy takes place in firms due to creativity of managers. The innovations change the nature of production functions reflected in the changes in the parameters. The technical progress of whole manufacturing sector depends upon the improvement in social, legal, physical, technological and administrative infrastructure. The relationships among labour, capital and technology keep on changing continuously. This is the job of economists to keep on evaluating these relationships by studying production functions. Recently, no such attempt has been made for whole of the Indian manufacturing sector. The present paper contributes towards this objective.

### 4. STATEMENT OF THE PROBLEM

The research problem selected in this paper is to analyse whole manufacturing sector as a single firm so that we can measure the changes in total factor productivity, marginal products of labour & capital, marginal rate of technical substitution, substitution elasticities, returns to scale and labour elasticity of output for periods 1979-80 to 1989-90, 1990-91 to 2001-02 and 2002-03 to 2010-11.

### 5. HYPOTHESES

The present study tests the following null hypotheses:

- The total factor productivity during three phases as mentioned in the statement of the problem has been rising.
- The marginal rate of technical substitution is Hicks-neutral.
- There are constant returns to scale in the manufacturing sector.
- The labour elasticity of output has been increasing.

### 6. RESEARCH METHODOLOGY

Let us assume, that one business house is producing a homogeneous product called "value added  $Q$ " using capital  $K$  represented by investment in net fixed capital and labour  $L$  represented by number of total persons engaged with constantly and continuously improving technology  $T$  represented by time (year). All inputs have been allocated in thirteen different industries. We have used ASI data at two digit level from 1979-80 to 2010-11 for variables  $Q$ ,  $L$ ,  $K$ , share of labour and capital.

The Translog Production function is a twice differentiable function with assumptions of homogeneity, homotheticity, separability, continuity and additivity. It can be used for measuring the slope of isoquants showing the direction of technical progress. We have used the following form of the function in our analysis:

$$\ln Q = \alpha_0 + \alpha_L \ln L + \alpha_K \ln K + \alpha_T \ln T + 1/2 \alpha_{LL} (\ln L)^2 + 1/2 \alpha_{KK} (\ln K)^2 + 1/2 \alpha_{TT} (\ln T)^2 + \alpha_{LK} (\ln L) (\ln K) + \alpha_{KT} (\ln K) (\ln T) + \alpha_{LT} (\ln L) (\ln T) + u \dots\dots\dots(1)$$

Where  $Q$ ,  $L$ ,  $K$ ,  $T$  stand for Output, Labour, Capital and Technology;  $\alpha_i$  's are the parameters to be estimated and  $u$  is the random error term with usual assumptions of normality, zero mean, constant variance and absence of autocorrelation. The translog function has been defined with following restrictions:

$$\alpha_L + \alpha_K + \alpha_T = 1 \dots\dots\dots(2)$$

$$1/2 \alpha_{LL} + \alpha_{LK} + \alpha_{LT} = 0 \dots\dots\dots(3)$$

$$1/2 \alpha_{KK} + \alpha_{LK} + \alpha_{KT} = 0 \dots\dots\dots(4)$$

$$1/2 \alpha_{TT} + \alpha_{KT} + \alpha_{LT} = 0 \dots\dots\dots(5)$$

$$\alpha_{ij} = \alpha_{ji} \dots\dots\dots(6)$$

The translog function has been estimated along with two share equations. If we differentiate the equation (1) with respect to  $L$  and then multiply with  $L$  we will get the share of labour, as shown below:

$$((\partial Q / \partial L) L) / Q = \alpha_L + \alpha_{LL} \ln L + \alpha_{LK} \ln K + \alpha_{LT} \ln T \dots\dots\dots(7)$$

Similarly, the share of capital will be:

$$[(\partial Q / \partial K) K] / Q = \alpha_K + \alpha_{KK} \ln K + \alpha_{LK} \ln L + \alpha_{KT} \ln T \dots\dots\dots(8)$$

We can get the marginal rate of technical substitution (i.e. the slope of isoquants or MRTS) from equations (7) and (8) as given below:

$$MRTS = (K/L) \{(\alpha_L + \alpha_{LL} \ln L + \alpha_{LK} \ln K + \alpha_{LT} \ln T) / (\alpha_K + \alpha_{KK} \ln K + \alpha_{LK} \ln L + \alpha_{KT} \ln T)\} \dots\dots\dots(9)$$

Whole data has been divided into three subsets from 1979-80 to 1989-90, from 1990-91 to 2001-02 and from 2002-03 to 2010-11 for analysis purpose. If we get the all second order partial derivatives, we will get following expressions:

$$\partial^2 Q / \partial L^2 = (Q \alpha_{LL} / L^2) + (\partial Q / \partial L)^2 - (\partial Q / \partial L) / L \dots\dots\dots(10)$$

$$\partial^2 Q / \partial K^2 = (Q \alpha_{KK} / K^2) + (\partial Q / \partial K)^2 - (\partial Q / \partial K) / K \dots\dots\dots(11)$$

$$\partial^2 Q / \partial T^2 = (Q \alpha_{TT} / T^2) + (\partial Q / \partial T)^2 - (\partial Q / \partial T) / T \dots\dots\dots(12)$$

$$\partial^2 Q / \partial L \partial K = [Q \alpha_{LK} / LK] + [(\partial Q / \partial L) (\partial Q / \partial K) / Q] \dots\dots\dots(13)$$

$$\partial^2 Q / \partial K \partial T = [Q \alpha_{KT} / KT] + [(\partial Q / \partial K) (\partial Q / \partial T) / Q] \dots\dots\dots(14)$$

$$\partial^2 Q / \partial L \partial T = [Q \alpha_{LT} / LT] + [(\partial Q / \partial L) (\partial Q / \partial T) / Q] \dots\dots\dots(15)$$

Marginal Rate of Technical Substitution between any two inputs is given by the expression:

$$MRTS_{ij} = (\partial Q / \partial X_i) / (\partial Q / \partial X_j) \dots\dots\dots(16)$$

The Allen Elasticity of Substitution between any two inputs has been computed by the expression:

$$\sigma_{ij} = G / \alpha_{ij} + S_i S_j \dots\dots\dots(17)$$

where  $S_i$  is the share of  $i^{\text{th}}$  input and  $G$  is the determinant of the following matrix:

0	$S_L$	$S_K$	$S_T$
$S_L$	$\alpha_{LL} + S_L S_L$	$\alpha_{LK} + S_L S_K$	$\alpha_{LT} + S_L S_T$
$S_K$	$\alpha_{LK} + S_L S_K$	$\alpha_{KK} + S_K S_K$	$\alpha_{KT} + S_K S_T$
$S_T$	$\alpha_{LT} + S_L S_T$	$\alpha_{KT} + S_K S_T$	$\alpha_{TT} + S_T S_T$

If we take the total derivative of equation (1) and put  $dL/L = dK/K = dT/T = dX/X$  then the returns to scale (RTS) can be written as  $(dQ/Q)/(dX/X)$ :

$$RTS = \alpha_L + \alpha_K + \alpha_T + \alpha_{LL} \ln L + \alpha_{KK} \ln K + \alpha_{TT} \ln T + \alpha_{LK} \ln LK + \alpha_{KT} \ln KT + \alpha_{LT} \ln LT \dots\dots\dots(18)$$

If we introduce all the restrictions in the equation (1), we need to estimate only six parameters i.e.  $\alpha_0$ ,  $\alpha_K$ ,  $\alpha_T$ ,  $\alpha_{LK}$ ,  $\alpha_{KT}$  and  $\alpha_{LT}$ . The other parameters i.e.  $\alpha_{LL}$ ,  $\alpha_{KK}$  and  $\alpha_{TT}$  can be computed using the restrictions (2) to (5). After using the restrictions (1) becomes:

$$\ln(Q/L) = \alpha_0 + \alpha_K \ln(K/L) + \alpha_T \ln(T/L) + \alpha_{LK} [\ln L \cdot \ln K - (\ln L)^2 - (\ln K)^2] + \alpha_{KT} [\ln K \cdot \ln T - (\ln K)^2 - (\ln T)^2] + \alpha_{LT} [\ln T \cdot \ln L - (\ln L)^2 - (\ln T)^2] \dots\dots\dots(19)$$

With restrictions, we get two forms of the share equations. For share of capital ( $S_K$ ):

$$S_K = \alpha_K + \alpha_{LK} [\ln L - 2 \ln K] + \alpha_{KT} [\ln T - 2 \ln K] \dots\dots\dots(20) \quad \text{and}$$

$$S_K = \alpha_K + \alpha_T + \alpha_{LK} [2 \ln L - \ln K] + \alpha_{LT} [2 \ln L - \ln T] \dots\dots\dots(21).$$

## 7. RESULTS & DISCUSSION

The equation (21) has been obtained by the share of labour from 1 ( $S_K = 1 - S_L$ ). The equations (19), (20) and (21) have been estimated simultaneously with Zellner estimation method of seemingly unrelated regression equations (SURE). It is to be noted that no share has been allocated to the third input T. The estimated values of all parameters have been given in the Table 1:

TABLE 1: RESULTS OF TRANSLOG PRODUCTION FUNCTION

Parameters	1979-80 to 1989-90	1990-91 to 2001-02	2002-03 to 2010-11
$\alpha_0$	-0.1189*	0.0076*	-0.1988*
$\alpha_L$	0.3750*	0.4395*	0.2605*
$\alpha_K$	0.5292*	0.5178*	0.8637*
$\alpha_T$	0.0958*	0.0427*	-0.1241*
$\alpha_{LL}$	0.0129*	0.011495*	0.01251*
$\alpha_{KK}$	0.0104*	0.008429*	0.000833*
$\alpha_{TT}$	-0.0181*	0.019286*	-0.05296*
$\alpha_{LK}$	-0.0103*	-0.0098*	-0.0166*
$\alpha_{KT}$	0.0052*	0.0056*	0.0162*
$\alpha_{LT}$	0.0039*	0.0041*	0.0103*
R	0.9773	0.8611	0.8848
R <sup>2</sup>	0.9546	0.7415	0.7830
DW	1.8002	1.7709	1.6923
F	1803*(5,423)	242*(5,423)	249*(5,345)

Source: Estimated by Researcher based on ASI Data

\*Significant at 1% Level

TABLE 2: PARAMETERS OF TRANSLOG PRODUCTION FUNCTION

		1979-80 to 1989-90	1990-91 to 2001-02	2002-03 to 2010-11
$MP_L$	$\partial Q / \partial L$	1.5300	2.7793	3.4235
$MP_K$	$\partial Q / \partial K$	0.2379	0.3565	1.3664
$MP_T$	$\partial Q / \partial T$	1.0309	1.7789	4.4424
SLOPE OF $MP_L$ w.r.t. L	$\partial^2 Q / \partial L^2$	2.3409	7.7247	11.7202
SLOPE OF $MP_L$ w.r.t. K	$\partial^2 Q / \partial L \partial K$	0.0566	0.1271	1.8670
SLOPE OF $MP_L$ w.r.t. T	$\partial^2 Q / \partial L \partial T$	-1863	3177	-25867
SLOPE OF $MP_K$ w.r.t. L	$\partial^2 Q / \partial K \partial L$	0.0135	0.0231	0.0332
SLOPE OF $MP_K$ w.r.t. T	$\partial^2 Q / \partial K \partial T$	0.0004	0.0008	0.0065
SLOPE OF $MP_T$ w.r.t. L	$\partial^2 Q / \partial T \partial L$	0.0030	0.0051	0.0380
$MRTS_{LK}$	$\partial K / \partial L$	6.4324	7.7958	2.5055
$MRTS_{LT}$	$\partial T / \partial L$	1.4842	1.5624	0.7706
$MRTS_{TK}$	$\partial K / \partial T$	4.3339	4.9897	3.2512
$AES_{\sigma_{LK}}$		1202.4	-1231.9	333.4
$AES_{\sigma_{KT}}$		26.3	-29.0	24.2
$AES_{\sigma_{LT}}$		19.7	-21.2	15.4
RTS	$(dQ/Q)/(dX/X)$	1.1554	1.1904	1.0475
LABOUR ELASTICITY OF OUTPUT		0.3933	0.4471	0.1854

Source: Computed by Researchers based on ASI data and Table 1

\*Marginal Products in Rs. Lakhs for L in number; in Rs. For K and Rs Lakh for T in years.

\*\*All values have been computed for one set of Q, L, K and T for comparing MRTS in different time periods.

It can be seen from Table 1 that the estimated regression equation is very much meaningful since we have obtained reasonably high R<sup>2</sup> and F-ratio. The Durbin-Watson (DW) also indicates absence of autocorrelation. The choice of independent variables and the logarithmic form of the function has also ensured the escape from the problems of multicollinearity and heteroscedasticity. High level of significance of all the parameters allows us to use the estimated function as a good proxy of capturing the nature of technical progress underlying the production system of the manufacturing sector. Now we use the values of Table 1 to



compute the important parameters of the production function like Marginal Products, respective slopes, Marginal Rate of Technical Substitution (MRTS) and Allen's Elasticity of Substitution for three selected periods using average values of  $Q$ ,  $L$ ,  $K$ ,  $T$ ,  $S_L$  and  $S_K$  as shown in Table 1.

## 8. FINDINGS

The first hypothesis i.e. the total factor productivity during three phases as mentioned in the statement of the problem has been rising, is partially true. The values of the parameter  $\alpha_0$  during three phases show that the total factor productivity increased only during the middle phase and has come down in the third phase.

The second hypothesis i.e. the marginal rate of technical substitution is Hicks-neutral has been tested by computing MRTS for labour and capital which has been found falling. It indicates that technical progress in Indian manufacturing sector has been a capital deepening one and not the Hicks-neutral.

The third hypothesis i.e. there are constant returns to scale in the manufacturing sector is accepted. The value of RTS is approaching unity indicating the increasing competition among industries.

The fourth hypothesis i.e. the labour elasticity of output has been increasing is also rejected, because it increased only during middle phase.

A stylized fact about all the results given in Table 2 can be said that productivity and efficiency increased after liberalization but subsequently these benefits have slowed down in the later phase. It is clear that marginal products of the factors of production have increased sharply in early phase of liberalization and continued increasing in later phase also but at decreased pace. It is observed that slopes of the marginal products are also positive which means that more and more employment of labour and capital would lead to more productivity. This is indication of hidden potential of Indian economy.

The slope of marginal product of  $T$  with respect to  $T$  is negative in the pre-liberalization phase and later liberalization phase, it simply means that all other things other than labor and capital like social, legal, institutional infrastructure, investment climate and government policies have not been moving in pace with industrial productivity.

The early liberalization phase has shown a labour deepening technical progress as MRTS has gone up but in the later phase there has been intense capital deepening, creating concerns for employment. The values of labour elasticities of output also strengthen this view.

Observing values of AES, we can say that possibilities of substitution emerged in the early phase due to creative destruction process. The returns to scale for whole of the industry first increased due to expansion in sales and outputs, emergence of new opportunities and positive cross externalities and then have reached to nearly constant currently showing development of competitive markets.

## 9. RECOMMENDATIONS

The inherent potential of the manufacturing sector can be realised into sustained growth by improving the skill set of workers. The Indian youth is technologically friendly by nature and they can adopt the new technology very fast if cost-effective learning solutions are provided to them. Among four factors of production i.e. land, labour, capital and entrepreneurship we have strategic advantage only in first, and that also is slipping out of our hands fast. We should focus on creating a conducive business climate so that the flow of foreign capital can be increased. India should send clear policy signals to the investor community to gain advantage. Every state can also plan to develop land banks as we observe that it is becoming increasingly difficult to procure large tracts of land for industrial expansion. The entrepreneurship can be improved by improving the business ecology through a system of technical & management institutions, venture capitalists, angel investor networks, consultants and financial organisations. The industries which can absorb the technology faster like pharmaceuticals, IT & ITES, automobiles, heavy engineering, food processing where India has some core competence also should be given special thrust. They can act as drivers of productivity growth in short run. In the long run, we should focus on increasing the technology absorption capability of the industries like metals, metal products, non-metals, bulk chemicals etc. The flexible labour laws with proper safeguards of labour welfare is also need of the hour.

## 10. CONCLUSIONS

It can be concluded from the study that the benefits from economic reforms helped the Indian manufacturing sector to some extent for a certain period. However, we should not forget that many long term advantages were created during the protectionist regime also. The slopes of marginal products have decreased but they never have been negative. It means there is huge growth potential in the economy but it can be realised by making business nurturing policies meticulously.

## 11. LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

In the present paper the study has been conducted at highly aggregate level, so it makes statements for whole sector and for general policies. To make specific sectoral policies, there is a need for estimating production functions for each industry. Here, we have used only one type of production function for analysis. The same hypotheses can be tested with alternative forms of production functions in further research.

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# A SURVEY ON ATTRIBUTES AND FACTORS AFFECTING ON THE AFFORDABLE HOUSING: AN ANALYTICAL REVIEW

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## ABSTRACT

*Housing is the basic human minimum need. Housing indicates the quality of life and the status scio – economic condition of people in an economy. With the rising population density, demand for affordable housing has also been increased. There is no clear cut definition of the term 'Affordable', as it is a relative concept and could have several implied meanings in different contexts. The concept of housing affordability is a contested issue, but a pressing and widespread problem for many countries. The term 'Housing Affordability' simply implies the ability to purchase housing. This paper presents an analytical review of various attributes that determine the housing affordability and comes under general review paper. Various attributes have been discussed in different contexts and different set up of locations. Furthermore, the paper discusses that how they are interlinked and correlated with each other. Finally, it has been suggested that enough factors and attributes are there which determine housing affordability such as the concept of housing affordability which varies from time and place, each and every attribute was further explained by giving various studies so that measurement of housing affordability can be properly carried out with greater effectiveness in the field of affordable housing.*

## KEYWORDS

Affordable housing, basic human needs, quality of life.

## 1. INTRODUCTION

Housing is considered as one of the basic needs of the human being. The availability and quality of housing has a significant impact on people's lives. It has direct impact on the socio-economic development of a nation. Better housing facilities leads to community growth and stability, improved health conditions, increased safety and education among the citizens which in turn leads to the development of a country. Households in the low-income range have great difficulty of finding adequate housing that can accommodate their needs within their financial means. Housing costs are the single largest expenditure as many households and families are spending so much on housing that they cannot meet other expenses (Assaf et al, 2010). Housing choice is a response to an extremely complex set of economics, social, and psychological impulses. For example, some households may choose to spend more on housing because they feel they can afford to, while others may not have a choices.

There is no clear cut definition of the term 'Affordable', as it is a relative concept and could have several implied meanings in different contexts. The concept of housing affordability is a contested issue, but a pressing and widespread problem for many countries (Milliner and Maliene, 2012). The term "Housing Affordability" has come popular usage in the last two decades, replacing 'housing needs' at the centre of debate about the provisions of adequate housing for all (Whitehead, 1991; Swartz and Miller, 2002). The term 'Housing Affordability' simply implies the ability to purchase housing. However, beyond this point any attempt to precisely define and grapple with the concept becomes slippery. According to KPMG Report on 'Affordable Housing' – A Key Growth Driver in the Real Estate Sector, affordable housing is defined in terms of three main parameters, namely income level, size of dwelling unit and affordability. While the first two parameters are independent of each other, the third is a dependent parameter that can be correlated to income and property prices. The definition is shown in the following table -1.

**TABLE – 1: DEFINITION OF AFFORDABLE HOUSING**

Category	Income Level	Size of Dwelling Unit	Affordability
EWS	<INR 1.5 Lakhs per annum	Up to 300 sqft.	EMI to monthly income: House price to annual income ratio: less than 5:1 (Task Force headed by Deepak Parekh)
LIG	INR 1.5-3 Lakhs per annum	300 – 600 sqft.	
MIG	INR 3-10 Lakhs per annum	600 – 1200 sqft.	

Source: KPMG Report

In other words, affordability implies the ability of households to pay the costs of housing without imposing constraints on living costs (Stone, 1993). In New Zealand, housing affordability is defined as the "ability of households to rent or purchase housing in an area of choice at a reasonable price, the capacity of households to meet ongoing housing costs, and the degree that discretionary income is available to achieve an acceptable standard of living"(Working Party on Affordability Issues, 2003).

According to the Task Force on Affordable Housing set up by the MHUPA in 2008, affordable housing set up by the MHUPA in 2008, affordable housing for various segments is defined by size of the dwelling and housing affordability derived by the household income of the population. (Table - 2)

**TABLE – 2: DEFINITION OF AFFORDABLE HOUSING – MHUPA, 2008**

Category	Size	Cost	EMI or Rent
EWS	300-600sqft. Carpet area	Not exceeding four times the household gross annual income	Not exceeding 30% of gross monthly income of buyers
MIG	Not exceeding 1,200 sqft. carpet area	Not exceeding five times the household gross annual income	Not exceeding 40% of gross monthly income of buyer

Source: MHUPA, Task Force on Affordable Housing, 2008.

The JNNURM Mission Directorate of MHUPA has also defined affordable housing in its amended Guidelines for Affordable Partnership released in December 2011, as shown in table 3.

TABLE – 3: DEFINITION OF AFFORDABLE HOUSING – MHUPA 2011

Category	Size	EMI or rent
EWS	Minimum of 300 sqft. Super built-up area minimum of 296 sqft. (25 sqm) carpet area.	Not exceeding 30 – 40% of gross monthly income of buyers.
LIG	Minimum of 500 sqft. Super built – up area maximum of 517 sqft. Super built – up area maximum of 517 sqft. (48 sqm) carpet area.	
MIG	600 – 1,200 sqft. Super built- area maximum of 861. (80 sqm) carpet area.	

Source: MHUPA, Guidelines for Affordable Housing in Partnership (Amendments), 2008.

## 2. SYNOPTIC VIEW OF VARIOUS ATTRIBUTES AND FACTORS OF HOUSING AFFORDABILITY

The various important attributes and factors which determine the housing affordability which can be understood through the following available earlier studies/literature.

**Kolbre et al. (2013)** have stated first that how to evaluate affordability of housing in the Estonian market? and second, assessed the regulatory framework decisions' impact on the housing market in Estonia. The Housing Industry Association's Housing Affordability Index (HAI) proposed by the authors could be calculated regularly and it could be used as a possible indicator to evaluate the capability of the population to take on household loans in the Estonian household market as a whole. They found that there is an affordability problem, and political decisions have helped to make housing loans affordable for households, but at the same time the high debt burden has weakened households' financial position.

**Worthington et al. (2013)** have discussed the issues related to the model the drivers of Australian housing affordability and forecast equilibrium affordability. Authors have used autoregressive distributed lag (ARDL) approach to model housing affordability measured by the Housing Industry Association's Housing Affordability Index (HAI) and the housing price-earnings multiplier (HPE). Six sets of explanatory variables, including housing finance, housing construction activity and costs, economic growth, population, alternative investments and taxation. They have found that Primary long-run drivers are housing finance, dwelling approvals and financial assets. Economic and population growth only have a short-run influence, while housing taxation has limited impact in long run.

**Leland et al. (2013)** have expanded the study of representative bureaucracy by exploring attitudes about the use of public funds to support privately-owned real estate development projects. Strong support for public-private partnerships was observed in the sample and demographic characteristics were found to influence attitudes. Minority planners tended to be more supportive of programs designed to provide affordable housing and eliminate blight, while female planners and planners in older age cohorts were more supportive of efforts to rejuvenate urban areas. Political ideology was, however, found to have the most consistent impact on attitudes. Authors have suggested diversity in the planning profession offers one means of protecting citizen preferences when public-private partnerships are formed to encourage urban development. However, the benefits of diversity must be evaluated in conjunction with planners' attitudes about the appropriate role of government in real estate development.

**Tang (2012)** has compared relative levels of rental affordability across the English Housing Association sector. A total of two methods, rent-to-income ratio and residual income standards (poverty-line and budget standard), are used to maximise their strengths and complement their weaknesses in measuring rental affordability. The rent-to-income ratio analysis identified that housing association rents were generally affordable. However, the residual income analyses using two different minimum acceptable standards suggested some scepticism in this regard. In particular, both analyses confirmed the affordability problem in London where nearly half of existing housing association tenants had disposable household incomes that were well below the poverty-line as well as the largest rent-to-income ratio. Both analyses also confirmed that lone parents were more likely than average households to have an affordability problem.

**Ibem (2012)** has examined the adequacy of incrementally constructed government assisted self-help housing in addressing the needs of residents of the Workers' Housing Estate, Abeokuta, Ogun State, Nigeria. The author has stated that incremental housing construction strategy can provide adequate housing for low and middle-income public sector workers in the developing countries; and this can be enhanced through measures that ensure rapid upgrading of housing units and access to housing services and basic infrastructure by the residents. He has also found that about 50 percent of the respondents felt that housing environment in the estate was adequate in meeting their needs. Adequacy of housing unit characteristics was higher than that of housing services, social infrastructure and management of the housing estate.

**Bentzien et al. (2012)** have stated that Relative to comparable industrialized countries, Germany stands out in terms of its low homeownership rate (43 percent). For Germany, it is unknown so far to what extent the low rate of homeownership that can be related to housing which is being unaffordable. One reason for the lack of evidence is the apparent lack of data. Author has found that average German household would have to sacrifice a large part of its non-housing consumption to afford homeownership, especially of single-family homes. As the regional analysis reveals, certain types of households can even be considered excluded from the ownership market in some particularly unaffordable states with cost burdens of over 50 percent. Germany provides a unique environment for affordability research, due to its reunification history, observations from which may thus yield insights valuable to the international research community.

**Kuang et al. (2012)** have examined the degree of housing affordability in China's 35 large and medium cities. Furthermore, they have investigated the relationship between housing affordability and the house prices using data from China's 35 large and medium cities from 1996 to 2007. He has found that housing price has played a more important role in housing affordability than household income. Thereby, decreasing housing price is more important than household income to alleviate the housing affordability problem. It is also found that the housing reform facilitates the housing affordability issue due to the low sale price of the public houses; the population growth rate and geographic locations have no significant impact on the housing affordability. Author has suggested that developing more affordable houses is an alternative to mitigate the housing affordability issue in China.

**Poon et al. (2012)** have presented an analytical summary of UK housing policies. Authors have evaluated the UK government's housing policies, before and after the publication of the Barker Review, to tackle affordability issues in the owner-occupied sector. They have examined the extent to which housing policy contributes to or alleviates the problem of the affordability of owner-occupied housing. The Barker Reviews brought about a major re-think in government policy towards housing, particularly relating to new build and the planning system. However, the heavy reliance on the private sector to provide additional housing has reduced the effectiveness of policy changes. In addition, the adoption by the government of "demand-side" housing policies has done little to negate the volatility of UK house prices or to raise the overall affordability of owner-occupied housing.

**Worthington (2012)** has analysed the record on housing affordability in Australia over the period 1985 to 2010, conceptually link this with the purported demand and supply drivers given in the literature, and comment on government policy responses. Housing affordability in Australia has worsened significantly in the past quarter century, including in both urban and regional areas, and is now among the world's most unaffordable. The main contributor at the national level has been the escalation of housing prices because of continuing strong demand arising from strong economic and population growth, the availability of cheaper and more accessible finance, and tax and other incentives for home and investor housing ownership. An additional contributor is unresponsive housing supply resulting from an extensive governmental role in land release and zoning, infrastructure charges, and building and environmental regulation.

**Whitehead (2011)** has explored the role of affordable home ownership in the light of the recent global financial crisis. There are clear implications for policy makers in other countries, notably the benefits from developing an intermediate tenure market which includes institutional equity and risk taking rather than continued large-scale reliance on debt finance. Author has found that the main products share many of the attributes of full home ownership while remaining more affordable. The economic situation of post-2007 made both shared ownership and shared equity more difficult. The crisis and its aftermath also suggest that there is a need to develop a more robust and longer term market in equity sharing. This could be of real significance into the longer term, especially if the availability of mortgage finance remains constrained for many years to come. The author concludes that in the longer term, developing a range of partial tenures which provide most of the benefits of owner-occupation but which reduce risks to individual households and improve affordability in the early years is a desirable strategy.



**Camilleri (2011)** has analyzed to trends and principal causes of developments in-house prices in Malta over the past 26 years, with a specific focus on the issue of affordability. This focusing on the strong demand for home ownership and interest from foreign buyers, supply availability together with its relationship to the high vacancy rate existing. Also delved into include the distortions in the rental market, sustainable housing measures, housing densities and high-rise developments. Finally, noted that the implication on the use of housing as an investment asset in relation to trading on Malta's Stock Exchange. Author has found that the present global credit crunch can offer some relief with regard to housing affordability for first time Maltese home buyers. Updating of restricted home rentals can lead to an improved working for the Maltese property market, with some of the large proportion of vacant units being released onto the market.

**Gibb (2011)** has assessed new and often innovative models that aim to fund and deliver affordable housing in Scotland within a context of fiscal crisis. These models and their setting have implications for other countries with limited funds to support their housing systems. Author has found that the new models and the government's approach are pragmatic and have elements of genuine innovation. Other elements are only aspirations at this point and considerable uncertainties remain. The new environment will be difficult for housing associations, but also in terms of wider knock-on effects between the market-rented sector and intermediate housing. Major concerns remain about rent levels and there is a lack of clarity about government's long-term objectives for social housing.

**Alaghbari et al. (2011)** has developed affordable housing design for poor with low income and examined their ability to afford houses in Sana'a, Yemen. As housing costs are very high in Yemen compared with Middle East countries, which caused a shortage of housing supply especially for low-income groups. Author has found that that the low-income group can afford new houses in Sana'a in consideration of the following: constructing multi-storey housing units such as apartment system through using the concrete frame structure and building the internal and external walls with concrete blocks with limited areas of 65 to 120 square meters.

**Wapwera (2011)** has identified and analysed the methods of housing finance adopted by the low income and informal groups in Nigeria. A survey of 300 households in selected areas (low-income/informal) of Jos Metropolis, Nigeria, was carried out, concerning the methods of housing finance used for building and home improvement. The analysis of traditional financing methods highlights the range and structure of the traditional methods of financing in operation in informal and low income areas of Jos Metropolis, Nigeria. The survey showed that 75% of the households utilized traditional methods of financing and 25% using modern methods.

**Jones et al. (2011)** has addressed both the measurement of affordability and variations in affordability between local Housing Market Areas (HMAs). They have examined affordability at the local level based on functional areas rather than local authority administrative boundaries. This approach gives a truer picture of the variability in local affordability. The applied analysis tackles the data constraints of functional areas and has the potential to be adapted and extended. The local UK affordability indicators are shown to be primarily about access to home ownership rather than a wider view of local house price structures on affordability. The results of the analysis presented highlight that there are local differences in house price structures and hence associated differential affordability of house types between local HMAs.

**Othman (2011)** has investigated the role of partnership in integrating the corporate social responsibility (CSR) of project stakeholders towards better housing affordability. Affordable housing is one of the greatest challenges that face countries around the globe, especially developing countries. The complexity of the problem hinders governments, alone, from achieving their plans for sustainable development. Project stakeholders must have social responsibilities towards supporting government initiatives for affordable housing development. The five-domain CSR-partnership models developed by the authors which will help integrating the CSR of project stakeholders as an approach for developing affordable housing project. Because of the conceptual nature of the proposed model, it has to be tested and validated to ensure its capability to integrate the CSR of project stakeholders as an innovative approach for overcoming the difficulties facing governments in providing housing for the poor. The proposed CSR-partnership model and its action plans are expected to serve as a foundation for optimising the partnership of project stakeholders with government authorities towards better housing affordability.

**Ingaroma et al. (2011)** has offered an insight in the Italian rented housing market, with a focus on large metropolitan areas. It presents a review of evidence of housing affordability problems facing medium to low-income groups, and therefore adds to growing body of social housing international literature. The recently introduced changes to the delivery and funding model in the Italian social housing system offer an opportunity to overcome the traditional Italian approach to social housing. First, the new model serves a new target group to avoid it drifting into relative poverty, and second it allows new subjects, and primarily banking foundations, to actively pursue an ethical return on their investment in new housing. The complexity of the local real estate ethical funds, however, constitutes a source of risk in the new delivery model, and the short time for which existing funds have been operational only leaves room for some preliminary considerations. Nonetheless, the analysis are done by author indicates the core areas that will need to be monitored in the medium to long term to ensure a meaningful understanding of the implications of the plan.

**Berry et al. (2011)** have empirically analysed the interrelationships between mortgage liquidity and housing affordability in Northern Ireland (NI) during the boom-bust cycle in the residential property market. Authors have found that the relationship between mortgage finance and affordability has been driven by deregulation of the mortgage market contributing to the rise in house prices and affordability pressures during the market up cycle. More recently, ongoing liquidity constraints within the financial sector are impairing recovery in the residential property market culminating in heightened concerns of both purchase and "deposit gap" affordability. They have suggested that the new significant capital requirement needed to access the housing market will inevitably prolong affordability pressures for the foreseeable future.

**Kupke et al. (2011)** have explored the access to home ownership for the workers for the years of 2001 and 2009, a period which included the introduction and reintroduction of increased Australian government grants to first home buyers. Author has examined the opportunity for home ownership by first-time buyers who are in occupations defined in the UK literature as key workers within four state capitals in Australia. Many of these workers are moderate or average income earners who deliver essential community services such as health, social services, education, safety and emergency services. They have identified the pressure for multiple incomes in order to purchase as well as discussing the commuting distances some workers in Adelaide and Sydney may have to accommodate in order to afford a home.

**Phang (2010)** has stated that affordable homeownership is a policy that is often accorded a great deal of policy attention by governments of many countries. Author has examined the market implications of setting a housing price to income ratio target for a market segment by the government. The policy requires active intervention by the government with regard to the targeted sector. There is a political pressure on the government to expand homeownership affordability targets to increasing segments of the population. Housing price to income ratios tend to be fairly constant over time and across targeted groups, the housing supply is relatively price inelastic and the income elasticity of housing demand is less than one. Author has found that In the presence of uncertainty and resource constraints, the objective of homeownership affordability is achieved for the targeted group at the expense of greater volatility in residential construction activity. When the size of the targeted sector is significant in size, there are spill-over price and crowding out effects on the non-targeted housing market segment.

**Abdulaziz et al. (2010)** have discussed the main factors that affect the construction cost of affordable housing in Saudi Arabia. A survey of 14 consultants, 16 contractors and five real estate investors was performed. The survey included 34 different factors affecting the construction cost of affordable houses and their degree of importance. The severity of those factors was measured by the level of importance and ranked according to the severity index for consultants, contractors and real estate investors and a combination of all respondents. There is an agreement (correlation) by each group and the overall ranking by all participants. It was concluded that inadequate labour availability, material standards, design quality and design changes are the most severe factors with relatively high overall scoring.

**Alaghbari et al. (2009)** have identified the factors that cause housing shortage for low income groups in Yemen and recommend some solutions to alleviate the problem. Authors have found that the most important economic factors causing housing shortage are poor handling of available economic resources and shortage of economic resources. The most important administrative factors causing housing shortage are lack of organization and synchronization and not conducting studies on housing. The most important legal factor causing housing shortage is lack of legalization of housing. They have also found that housing

finance programs are still premature in Yemen. Therefore, some of the professional respondents have suggested that the government build low - cost housing projects for low – income groups and distribute the houses equally to the people.

**Monk (2009)** has examined whether the continuing decline of the social rented sector in England implies increased residualisation of the sector, to estimate who is likely to be living in social housing in the future, and also explored the policy implications in terms of the future role of social housing. Author suggested that the sector will house three main groups of households in the future: those for whom it provides a secure home for life; those for whom it is a temporary tenure; and a smaller group who enter for the first time in old age.

**Al-Homoud et al. (2009)** has explored the potentials and obstacles facing low-income housing supply. It is shown that there is undersupply in low-income housing. The housing sector in Jordan suffers from a lack of balance between supply and demand, in general, and from the inability to meet the demands of low-income households, in specific. Results indicated that most plausible causality of undersupply of low-income housing is due to macro-environment attributes: controllable – management (lack of human resources and capacity building), real estate (lack of marketing skills and sales advertising), technology and construction industry (inaccessible appropriate building technology and affordable construction), land ownership and site selection (limited to the developers geographical area); and uncontrollable – financing (small capital operation and difficulties in bank loans and lending), government policies (lack of incentives, tax exemptions, and rigid laws and regulations), and social and cultural (social needs requires certain spatial arrangements and rejection of borrowing from financial institutions for religious reasons).

**Mengjie et al. (2008)** has stated the housing reform in China commenced in 1998. Beijing residents, government officers and academics have been concerned about high housing prices in the city, which is considered beyond the buying capability of the ordinary residents. Author has analysed to what extent the high price had led to low levels of housing affordability in the period 2002-2006 in Beijing. Due to the importance of housing for local residents and the crucial position that real estate market in the Chinese economy is currently researching into the housing affordability issues which is now essential. It is important to consider the social circumstances that are predominantly related to both the standard of living and the national economy in Beijing.

**Silverman (2009)** has examined how executive directors of non profit organizations perceive local government performance in affordable housing. It builds on a larger body of research concerning the affordable housing activities of government and community-based nonprofit housing organizations at the local level. Author has highlighted the need for government to assume a broader and more activist role in affordable housing policy. Local government performance in affordable housing received lower grades than other levels of government, as well as intermediary organizations and private financial institutions. This dissatisfaction is expressed through non profit fields in which these organizations are embedded. These fields have witnessed declining governmental support for affordable housing and expanding influence from philanthropic organizations and the private sector.

**Niu (2008)** has estimated the benefits and costs of China's affordable housing program, as well as to provide recommendations to this housing policy. The total net benefits of this policy are estimated to range from \$234,176.7 million to ¥271,020.4 million. The costs are divided into sunk costs and current costs, computed to be ¥447,598.63 million and ¥328,685.21 million, respectively. The supply size of affordable dwellings is far from adequate due to the low level of housing affordability in China.

**Nyasulu et al. (2007)** have investigated the un-affordability of housing and limited access to finance as limiting factors to the provision of adequate housing in the urban areas of Malawi. Authors have found that the finance from the formal sector is accessible to fewer than 35 per cent of the urban population and less than 16 per cent of households in the major urban areas can afford an average house. No government subsidies are available for end users and development financing is limited and extremely dearer. The contribution from non-conventional finance sources to housing finance is negligible. They have suggested that the use of various instruments may alleviate the situation. Such instruments could include a housing tax for the implementation of subsidies, subsidies from developed countries, the formation of cooperatives and the implementation of securitisation.

### 3. DISCUSSION

The aforementioned literature highlights the complex nature of housing affordability and a wide range of attributes that may influence households. Maximum of the factors or attributes that define housing affordability are interlinked and correlated with each other. Attributes which are discussed above in the review literature are as follows: Government policy, price of house, availability of housing finance, quality of housing, population growth, demand and supply, alternative investments, Income of individuals, location of house and working place, transportation cost and other basic facilities.

This is a well known fact that government conducts survey before making any regulatory framework. In India we can see that a number of housing policies are there, but there is lacking of its proper implementation. There are various valid reasons for non – implementation of policy properly. Government should think about it. Population affects the cost and prices of houses because we have limited resources and in comparison to resources population are increasing at a very fast pace. Demand and supply is a very important factor. We are seeing that as population is increasing, demand for housing is also increasing and supply of houses is less. In this case, the price will automatically increase. There are so many people who want to invest other than housing property; this will also affect the housing affordability of those persons.

If we talk of availability of housing finance, it affects the housing affordability to a greater extent. It will be easy for an individual to own a house if there will be proper arrangement of housing finance which suits his eligibility. Income of an individual affects his housing affordability. If income will be more, he/ she can think of investing more on housing and vice versa. Location of person's jobs also affects his/ her affordability if he/ she have to travel longer distances between residents and jobs' place. Then the cost of transport is higher, there this will adversely affect the economic affordability of the people. Houses which are located, where there are all the basic facilities (availability of market, safety, access to good quality education, access to health services, energy efficiency of housing, waste management etc.) are available, the prices of houses in that area will be more in comparison to other areas. The other attributes will also affect the affordability based on the location, policies, standard of living of the people, literacy and others. Thus attributes will vary from time to time and location to location.

### 4. CONCLUSION

A significant amount of the research on housing affordability has been based on housing cost and household income. The main focus of maximum research is house price rather than conditions, locations, neighbourhood. Nevertheless, affordability is still commonly assessed by focusing primarily on financial burden. Research carried out in the U. S. hypothesizes that housing affordability should consider welfare of residents, which is affected by a wide range of location – related attributes, such as transportation cost, proximity to employment opportunities and public safety. Location is also highlighted as a significant factor related to housing affordability by other U. S. researchers. It is recommended that interaction between housing and location provides a more meaning measure of affordability (Fisher et al, 2009).

There is an increasing need to reconsider the way housing affordability is conceptualised and measured. Housing affordability is typically assessed by considering economic criteria, whilst other important factor such as housing location, quality of life and sustainability are often ignored.

Therefore, after discussing a lot on the attributes and factors, it can be suggested that enough factors and attributes are there which determine housing affordability; as the concept of housing affordability is relative to time and place, each and every attribute should be further explained by giving its main indicators so that measurement of housing affordability can be properly carried out with greater effectiveness.

### ACKNOWLEDGEMENT

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**IMPACT OF RECESSION ON INDIAN PHARMA SECTOR****SHRADDHA BHATT****STUDENT****SCHOOL OF PHARMACY AND TECHNOLOGY AND MANAGEMENT****NMIMS UNIVERSITY****SHIRPUR****DR. A. K. PANIGRAHI****ASSOCIATE PROFESSOR****SCHOOL OF PHARMACY AND TECHNOLOGY AND MANAGEMENT****NMIMS UNIVERSITY****SHIRPUR****ABSTRACT**

Every economy faces many economical downfalls and crisis in an era which affects the entire world and shakes its stability disastrously. Recession being the one, is a decline in the Gross Domestic Product of a nation for two or more consecutive quarters. The Great Recession was a global economic decline from 2008-2009. It initially began with financial liquidity crisis from 9th August 2007. It merely began as a national recession in United States from December 2007, but IMF's criteria for global recession met when there was a decline in annual per capita real World GDP in the single calendar year of 2009. The major cause of crisis of 2008 was the failure of the leading financial institutions globally, starting with the fall of investment bank Bear Stearns in March 2008, and failure of Lehman Bros. in 2008. The bursting of housing bubble in US was one of the primary causes. Decrease in consumer demand and consumption led to decline in production and raised unemployment. Soon it affected many other countries in Europe and Asia including India. But the matter of study is whether the Indian Pharmaceutical Sector which has always shown an accelerated trend in growth since the last few years is affected by recession or not. This study is designed to find out the impact of recession on Indian Pharmaceutical Sector. Looking into the growth trend of Indian Pharmaceutical Sector, we feel that, though recession affected all the sectors, Indian Pharmaceutical Sector is not affected to that extent.

**JEL CODES**

E2, E3, E44, F4.

**KEYWORDS**

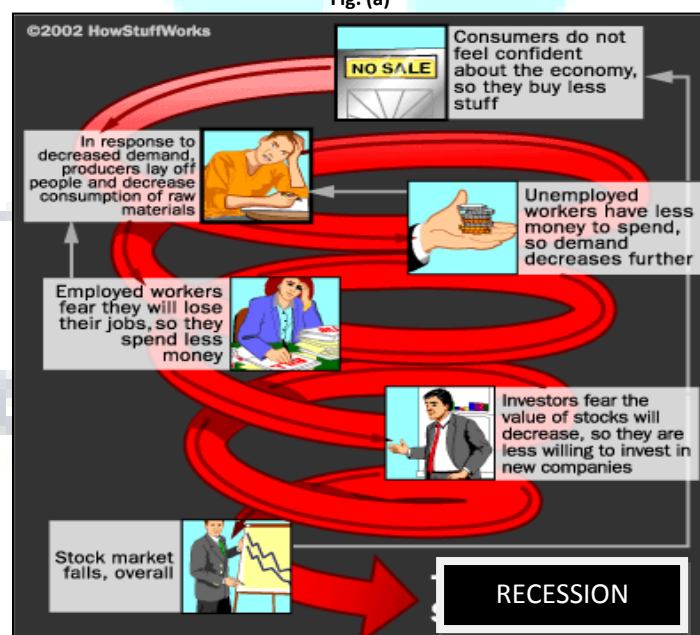
Economic Downfall, Gross Domestic Product, Indian Pharmaceutical Sector, Recession.

**INTRODUCTION**

India, a developing country got its much awaited freedom in 1947, and commenced with its Economic Planning since 1951-1952. Due to the economic crisis, the Liberalization, Privatization & Globalization (LPG) policy was adopted by the nation in the year 1991. The Great Recession of 2009 totally shook up the US economy and affected the rest of the world. This led to positive as well as negative effects on Indian Economy. This topic is discussed all over the world because it poses a threat to almost all the major fields. Industrialists as well as the common man are worried about their security and safety.

**WHAT IS RECESSION?**

Fig. (a)

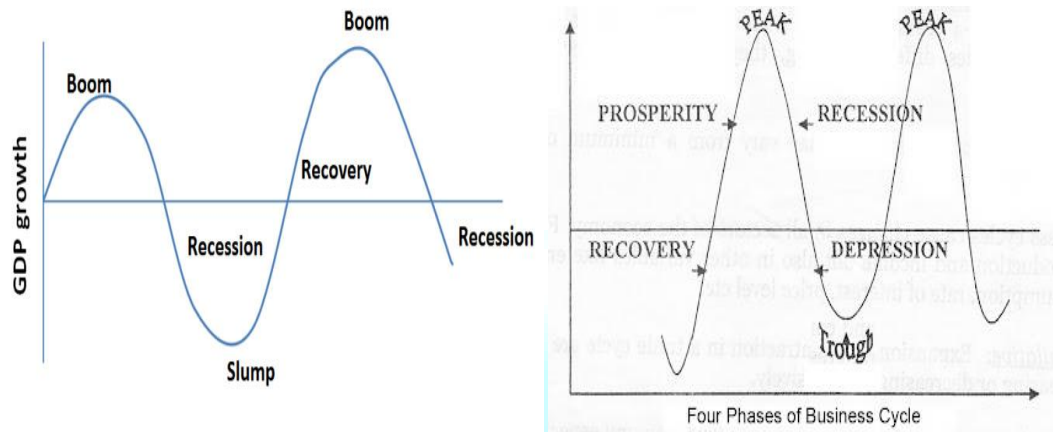


Source: Google images

Recession, a phenomenon which lately shook the entire economic world, is a process in which there is slowdown in the economic activity leading to business cycle contraction. International Monetary Fund (IMF) has changed the definition of Global Recession, the new definition is as follows, 'A decline in annual per-capita real World GDP (purchasing power parity weighted) which is backed up by a decline or worsening of one or more of the seven other global macro-economic indicators like industrial production, per-capita investment and per-capita consumption trade, capital flows, oil consumption, unemployment rate.' It

leads to a severe downfall of stock market, drop in employment rate leading to rise in unemployment and decline in housing market. Recession, a turning point from prosperity to depression is termed as Recession Phase in business cycle. Recession lasting for a longer time may result into Depression Phase (Slump).

Fig. (b &amp; c): BUSINESS CYCLE



Source: Google images

### WHAT ARE THE FEATURES OF RECESSIONS?

1. **RIISING UNEMPLOYMENT:** Unemployment is a major problem in this era and poses a threat to all age groups. Unemployment rate rises slowly and declines during recovery of economy.
2. **INCREASING GOVERNMENT BORROWING:** When a recession occurs it affects the Government Budget system as it leads to low tax revenues and high expenditure by the Government to provide benefits to the unemployed people.
3. **DECREASING SHARE PRICES:** Recession, one of the prime reasons for the fall in share prices make them less attractive. It leads to low profitability further causing a loss. The share prices usually fall when a market expects a recession.
4. **LOWER INFLATION:** Inflation and Recession are inversely proportional. Recession is caused due to Inflation and vice versa. Demand is low during recession whereas prices are high during inflation.
5. **FALLING INVESTMENT:** Investment is volatile than economic growth. Investment is hampered even if there is a slow growth rate of the economy.

### WHAT ARE ITS CAUSES?

Every business cycle shows a drop in its growth over a specific time period.

Low demand for goods and services leads to low productivity which further increases unemployment. Low demand may be generated due to high prices and less purchasing power or low income. Another reason for low demand may be loss of confidence in the market leading to decreased spending power.

### WHAT ARE ITS EFFECTS ON VARIOUS INCOME GROUPS?

Recession has various effects on the different income groups. The middle income groups faced a decline in their income, and retirement plans were taken aback. The recession leads to shrinkage of the middle class. The impact was majorly prominent on the 3<sup>rd</sup> fifth (Working Middle Class) or Middle of Middle class as compared to the other two classes. The middle and higher income groups which were largely dependent upon the labour market incomes were hit immediately, as there was a sharp decline in the net earnings. At the time of the post-recession fiscal consolidation, lower income groups were hit badly by the taxes and benefits measures.

### WHAT ARE THE PAST RECESSIONS AFFECTING THE GLOBE?

US Economy has faced 10 recessions till date. There are about four global recessions since World War II:

- 1975
- 1982
- 1991
- 2009

Fig. (d)



Source: National Bureau of Economic Research

## REVIEW OF LITERATURE

As per an article on 'Data Analysis Impact of Global Recession on Indian Economy with Special Reference to India's Exports' written by authors Jeet Singh & Preeti Yadav, the outcome was that recession had adverse effects on the exports of Pharmaceutical Industry. It showed a downfall in the value of exports by two dollars. Such an occurrence was observed for the first time as per the monthly analysis of Indian Pharmaceuticals' exports between April and October 2008, which was prepared by Pharmaceutical Exports Promotion Council. The exports by pharmaceuticals and fine chemicals deteriorated from end of October 2008, to a year ago, from \$646.41million to \$659.21 million and showed a decline as 1.9 %.

According to 'The Big Pharma Recession Report' based on a survey taken by Pharma IQ, recession mainly affected the high income countries in contrast to the middle and low income countries which showed no major effects. Asia was least affected. Hence Indian Pharmaceutical Sector is said to be immune to recession. According to the article 'Global pharma looks to India: Prospects for growth' by Price Waterhouse Cooper (PWC), despite of global crisis of 2008, the M&A in Indian pharmaceutical sector grew at a double pace. OTC medications have shown increase in the sales which has lead to high volumes and brand names in India.

In a report made by US BUREAU OF LABOUR STATISTICS named 'BLS SPOTLIGHT ON STATISTICS-THE RECESSION OF 2007-2009', the national unemployment rate drastically increased to 9.5 % in June 2009 from 5% in December 2007. It peaked in 2010 in October 2009 after a month of recession.

## SCOPE OF THE STUDY

This paper will deal mainly with the Great Recession of 2009 and provide us with precise and accurate knowledge about its impact on Indian pharmaceutical sector. It will help us clear our dilemma about whether recession affects pharmaceutical sector with the help of statistical and theoretical data. The role of generics and domestic market during economic crisis is explained briefly along with the effects of increasing sedentary lifestyle on health care system. Few details about the GDP, stock market, investments, imports, exports is discussed with the use of statistical data.

## OBJECTIVE

The study is designed to find out the impact of recession on Indian Pharmaceutical Sector and the future of Indian Pharmaceutical Sector by observing the growth trend and various macro-economical parameters.

## WHAT IS THE RELATION BETWEEN RECESSION & INDIAN ECONOMY?

The Great Recession of 2009 has adverse effects on Indian Economy. The US economy's contribution is quarter part to the world's GDP. Any economic crisis in US economy leads the whole world to a state of panic and restlessness.

- The IT Sector was affected the most leading to a drop in the revenue of Indian IT firms, as they obtain 75% or more of it from United States.
- During the year 2008-2009, there was decline in India's export rate showing a fall in September 2008, and drastically turned out to be negative in October 2008. The condition was same till the end of the financial year. According to a survey by Ministry of Commerce, about 109,513 employees lost their jobs during the period from August to October 2008, majorly in export based industries like textile, gems and jewellery, leather, food processing & engineering.
- Tourism sector, health care sector and agriculture sector were affected too.

Fig. (e)



Source: Ministry of Statistics and Programme Implementations

The fig (e) shows detailed graphical representation of India's annual growth rate. This shows a decline between the years 2008 to 2009.

## WHAT IS THE IMPACT OF RECESSION ON PHARMACEUTICAL SECTOR?

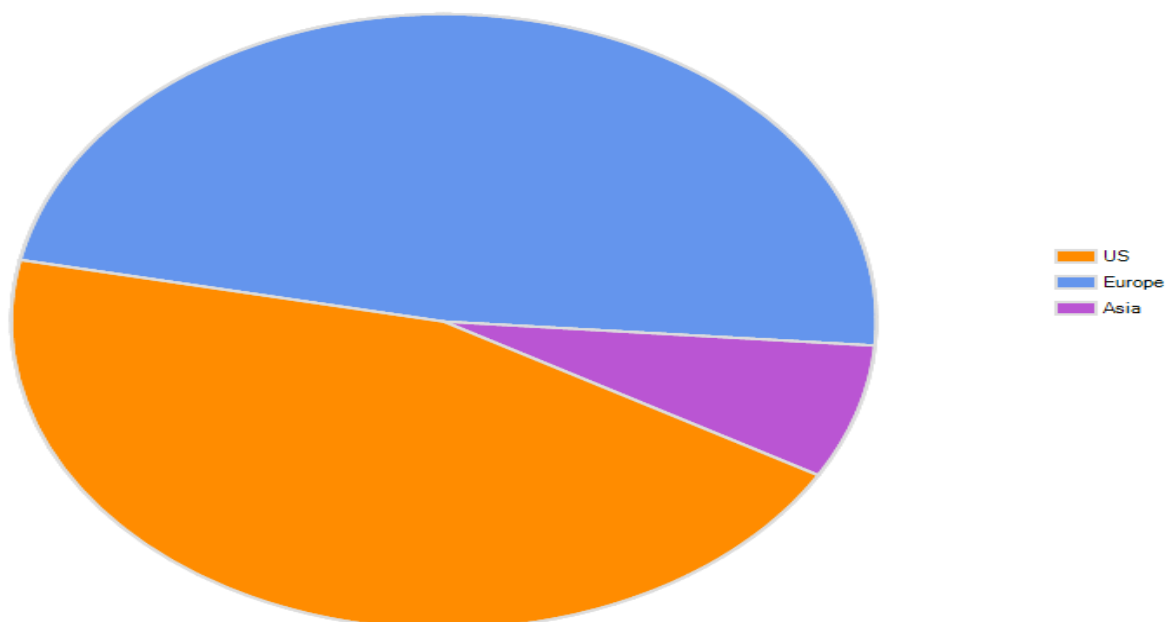
There is a dilemma whether recession affects the Pharmaceutical Sector. It has always been a matter of concern and discussion to industrialists, investors and the common man. History says that pharmaceutical sector is immune to recession as illness and diseases never take a vacation. Recession least affected the pharmaceutical sector mainly in case of export & investment. Investigation was done by IMS Health to study the changes in consumption of medicines, expenditure of pharmaceuticals and changes in process of 84 countries. This investigation was from the first quarter of 2007 till last quarter of 2009. The data was assessed by the World Bank Income category and the WHO regions. In order to establish a potential relationship between consumption (pharmaceuticals) and decline in GDP in European region, a linear regression analysis technique was used. The recession had substantial effects on the world. It adversely affected the high income countries and showed growth in the middle income and low income countries. Following are the changes in the countries:

Countries	Increase / Decrease
High Income Countries	-3% (Q3 09 compared to Q1 08)
Upper Middle Income Countries	+7% (Q4 09 compared to Q1 08)
Low Income Countries	+17% (Q4 09 compared to Q1 08)

The European Region showed a decline of -6%, Q3 09 compared to Q1 08 whereas South East Asian Region showed a tremendous increase of +28% in Q4 09. Countries like Estonia, Latvia & Lithuania showed the most drastic decline of -18%, -14% and -17% respectively in terms of consumption Q3 09 compared to Q1 08. Recession has caused job cut offs and closing of firms. Many small pharmaceutical companies entered into merger with big industries. Indian Pharmaceutical Sector has shown certain changes too. Let's have a look on certain important facts about this sector.

Fig. (f)

**Which geographic region has been harder hit specifically with regards to pharma?**

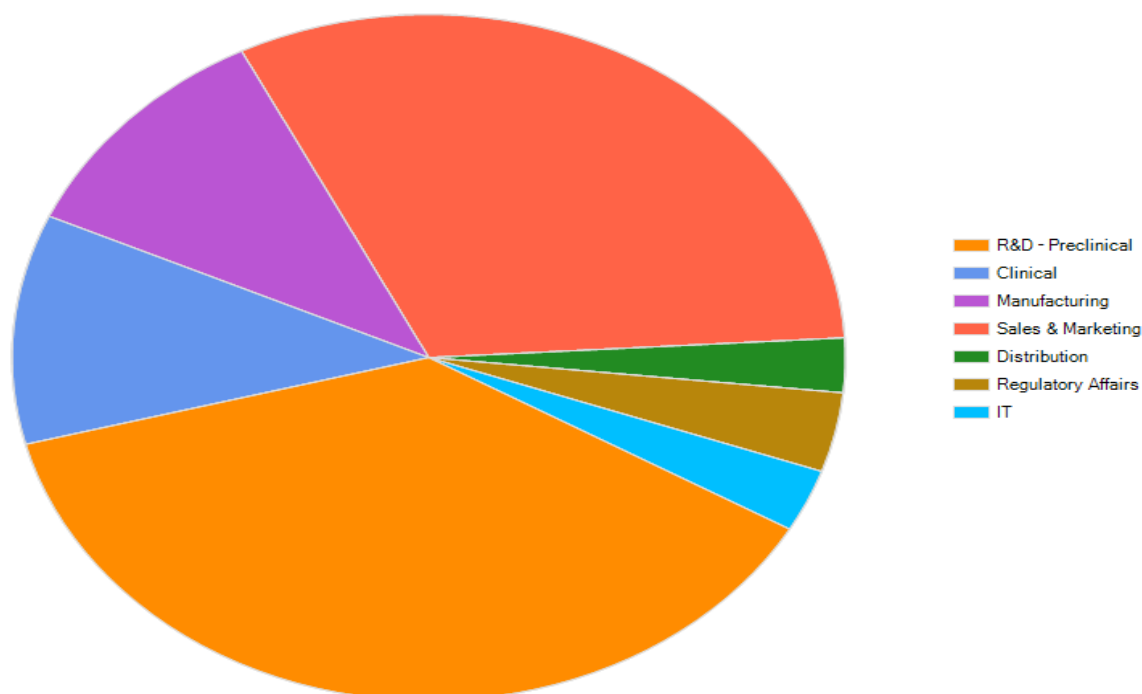


Source: *The Big Pharma Recession Report*

According to various surveys, the Asian Pharmaceutical Sector was affected the least.

Fig. (g)

**Which area has the global economic crisis impacted the most?**



Source: *The Big Pharma Recession Report*

The R&D department was hit abruptly followed by sales and marketing. Pharmaceutical Companies are making a lot of efforts in attracting investors to enhance investments.

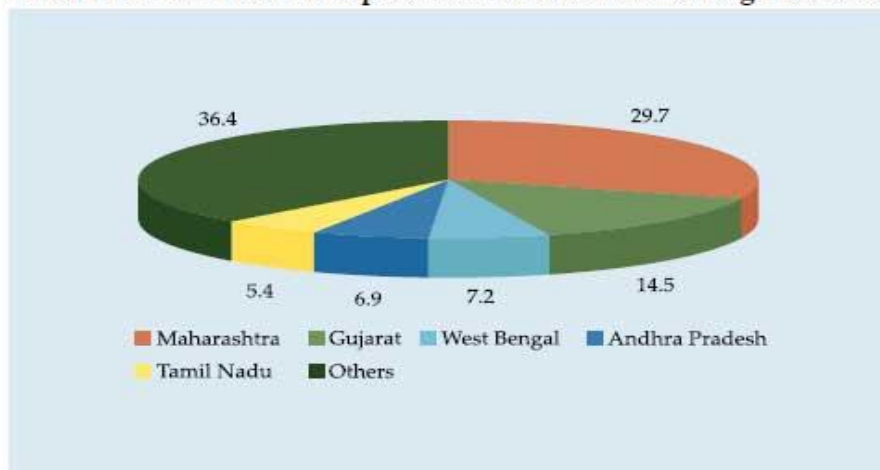
#### QUICK FACTS ABOUT INDIAN PHARMACEUTICAL INDUSTRY

- The Indian Pharmaceutical Industry (IPI) ranks fourth in terms of volume of sales with a share of 8% in global sales.
- In terms of value, it ranks 13th with a share of 1% of global sales.
- It produces 20-24% of globe's generic drugs.
- As per 2013, there are about 4655 manufacturing plants in India with 345 thousand workers.
- India has its own 42,291 patents.
- Indian Pharmaceutical Sector stands 17<sup>th</sup> in terms of export value and 4<sup>th</sup> in terms of generics.



Fig. (h)

Chart 2.2: Concentration of pharmaceutical manufacturing units in India (%)



Source: Department of Pharmaceuticals, GoI

Source: Department of Pharmaceuticals, GoI

## THE KEY CHARACTERISTICS OF INDIAN PHARMACEUTICAL INDUSTRY

THE FIG. (i) SHOWS THE EVOLUTION OF INDIAN PHARMACEUTICAL SECTOR FROM 1970 TILL 2010.

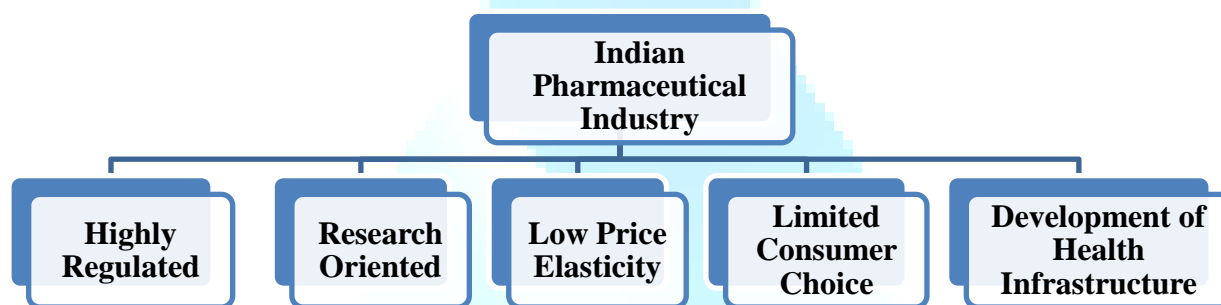
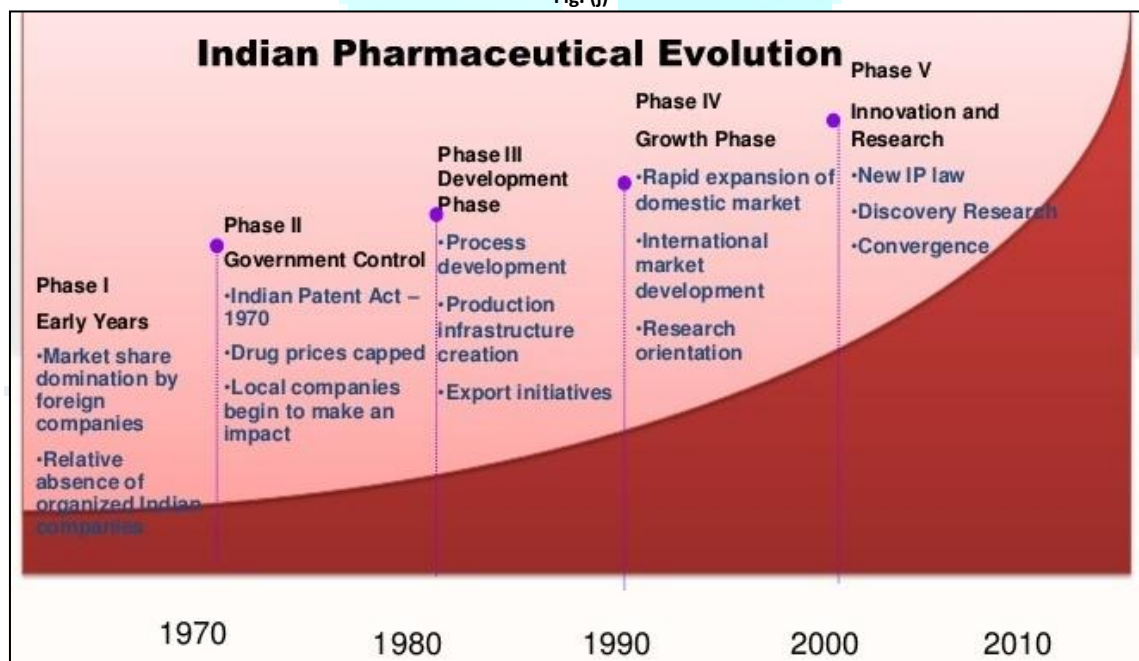


Fig. (j)



Source: Google images

As per Department of Pharmaceuticals, Ministry of Chemicals & Fertilizers, India's pharmaceutical industry had a total turnover of US\$21.04 billion between 2008 to September 2009, whereas the domestic market was worth US \$12.26 billion.

The Indian Pharmaceutical Sector was not affected adversely due to the dependency on the domestic market and generics. India is one of the largest producers of generics in the world. India being a developing country is benefited due to generics, as majority of people prefer cheap medications over branded ones. The cost of production is less and manpower is abundant due to which the MNCs have good advantage to increase their revenue and profit by setting up industries in India. Due to sedentary lifestyle, people are facing problems related to cardiovascular, hypertension, obesity and beauty enhancing medications which has led

to increase in the sale of concerned medications. There were some effects on the exports and drop in stock market but recovery was fast. The hiring rate has increased to 24% in the year 2014. The Indian Pharmaceutical Sector has shown good growth rate since the Great Recession of 2009. This study will provide justified statistical and theoretical data about its impact on Indian pharmaceutical sector.

## DATA ANALYSIS

### 1. WHAT WAS THE EFFECT ON THE SALES TREND AND NUMBER OF EMPLOYEES DURING THE RECESSION GLOBALLY?

Fig. (k)

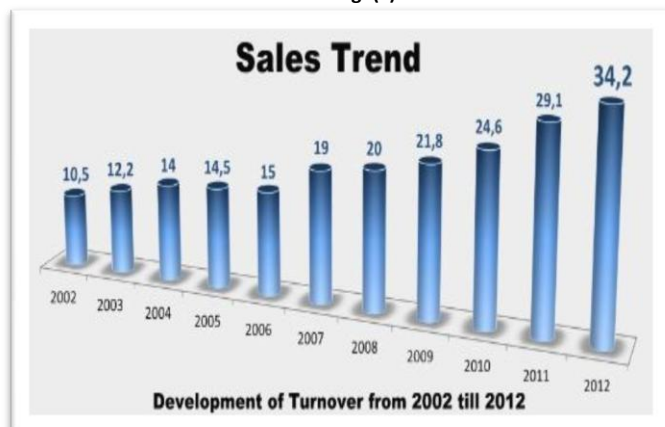
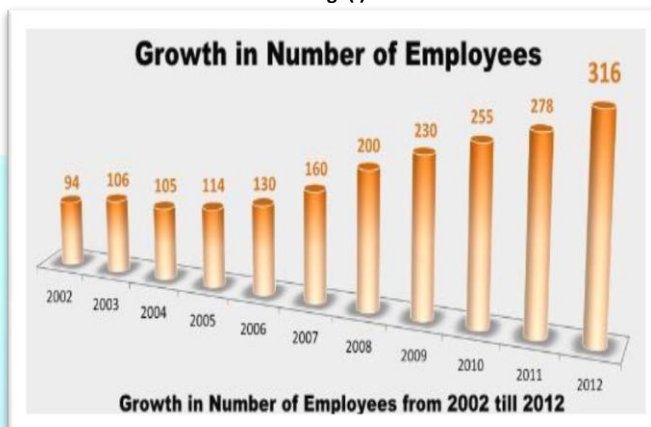


Fig. (l)



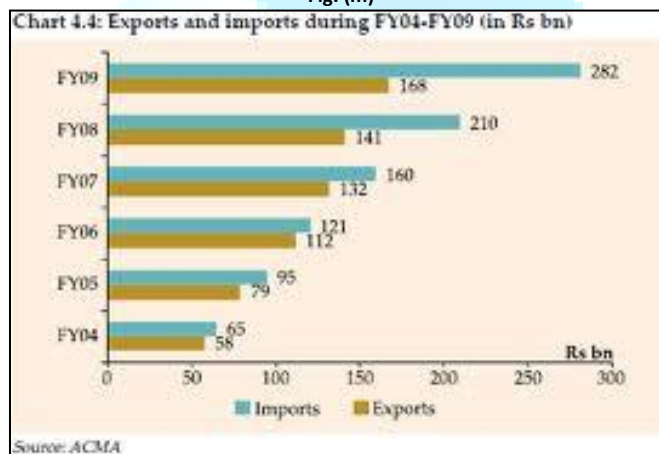
Source of both of above figures: Google images

The sales trend and the number of employees increased from year 2002 to 2012 which showed that recession had minimal impact on the pharmaceutical sector and showed gradual development.

### WHAT WERE THE EFFECTS ON INDIAN PHARMACEUTICAL'S EXPORT & IMPORT RATE?

The export rate did not show much decline due to recession. In fact due to depreciation of US Dollar and Euro, Indian pharmaceutical industries are benefiting as they have taken loans. Indian Pharmaceutical Industries have shown an increase in their exports 50 % more than their revenues.

Fig. (m)

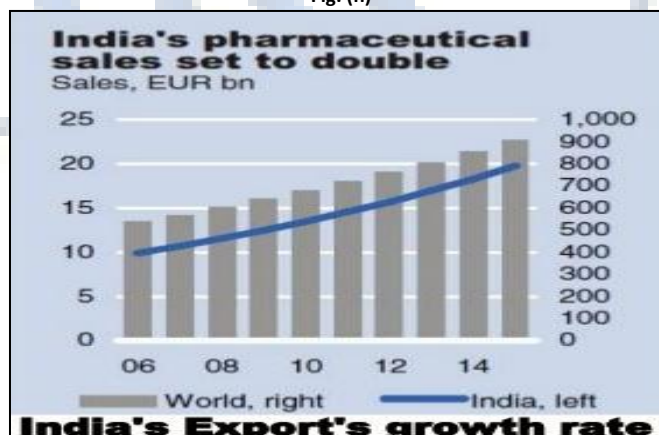


Source: ACMA

Source: ACMA

Fig (m) shows the gradual increase in the imports and the exports of the pharmaceutical products without major interruption in the growth rate. Even the pharmaceutical sales are set to double as per forecasted analysis. Indian Pharmaceutical is at a growth spree and is a major producer of medicines of this era. Indian Pharmaceutical industry is growing at almost the same rate as the world economy.

Fig. (n)

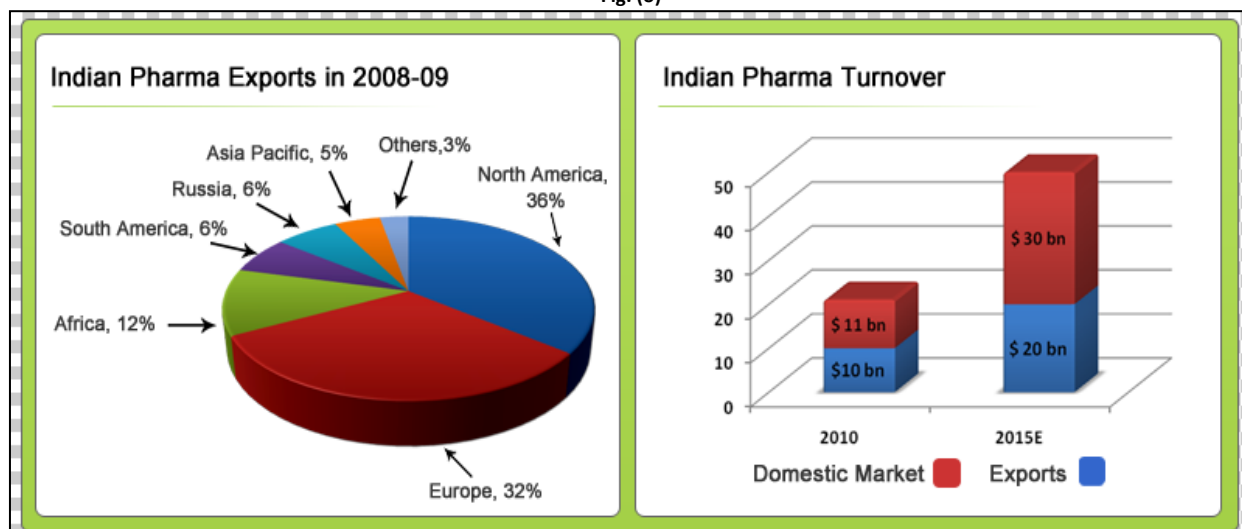


Source: Google Images

The Indian Pharmaceuticals exports during the period of Great Recession are as follows:

COUNTRIES	PERCENTAGE OF PHARMACEUTICAL PRODUCTS EXPORTED
North America	36%
Europe	32%
Asia Pacific	5%
South America	6%
Russia	6%
Africa	12%
Others	3%

Fig. (o)



Source: Capitalline

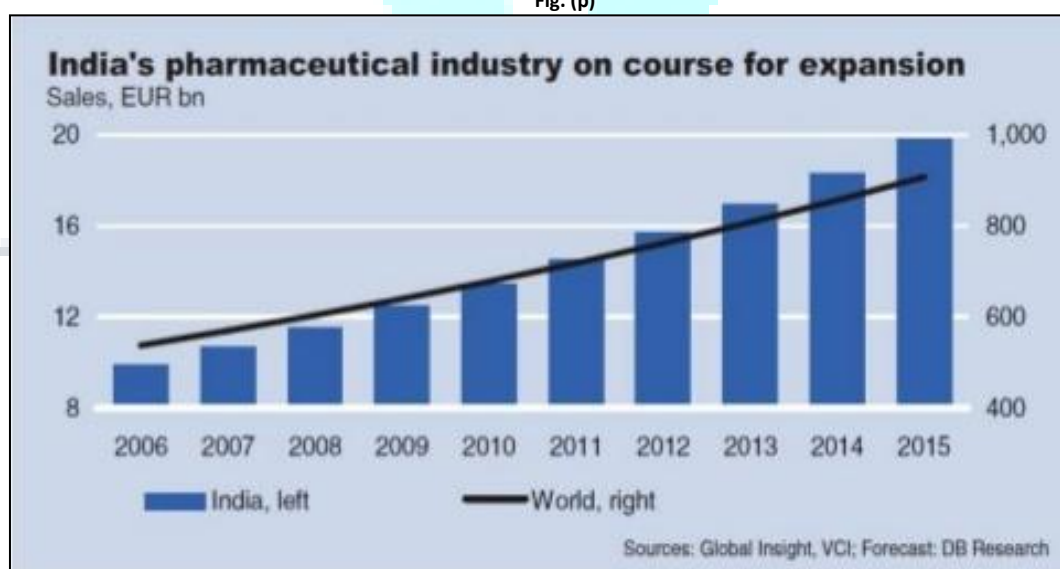
The Domestic Market as well as Indian Pharmaceutical Turnover shows a brilliant growth without an interruption.

The above data provides valid and appropriate information regarding the status of Indian Pharmaceutical Industry in terms of global development.

#### FUTURE PROSPECTS

- The Indian Pharmaceutical Sector is growing at a rate of 8-9 % annually.
- The Pharmaceutical market will grow at US\$ 55 billion, and if aggressive strategies are used it will grow to US\$ 70 billion by 2020.
- The Indian Pharmaceutical sector will be the sixth largest market by 2020.
- This market is expected to grow at CAGR of 14-17% by 2012-2016.
- Indian Pharmaceutical Industry will be considered as a major player in the world because of growing sales trend, heavy investment in R&D department, new technologies, expanding economy and globalisation.
- Hence investment in Indian Pharmaceutical Sector would prove beneficial because of the invasive domestic and generic market. Also MNCs are finding India to be best place to invest and set a business due to various profit parameters.

Fig. (p)



Source: Global Insights, VCI; Forecast: DB Research

The Indian Pharmaceutical Industry is on course of expansion from 2006 to 2015 as per fig (p).

#### CONCLUSION

Despite global crisis, the Great Recession of 2009 which affected the whole world and almost all sectors, the Pharmaceutical sector can be said to be immune to the changes and did not have adverse effects. The Indian Pharmaceutical Sector also showed certain changes but was not affected to that extent. The prime

reasons for Pharmaceutical Sector being immune to recession is the domestic pharmaceutical market experiencing a healthy growth due to sedentary lifestyle diseases and rising demand for generic medicines in international markets.

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**ANALYSIS OF IPO MARKET BEHAVIOR: POST LISTING PRICE PERFORMANCE****VARSHA GUPTA****ASST. PROFESSOR****BADDI UNIVERSITY OF EMERGING SCIENCES & TECHNOLOGY****BHUD****DR. HIMANSHU JOSHI****ASST. PROFESSOR****GOVERNMENT DEGREE COLLEGE****NARENDRA NAGAR****ABSTRACT**

Any investor willing to buy new securities of any company enters into market via Initial public offers, which is considered as one of the most important tool for raising money for corporate houses. Since long there had been vital requirement to strength the capital market by bringing more disclosures and transparency in the system. Earlier there was a time when majority of the public issues coming through the fixed price method were either under-priced or over-price so Security Exchange Board of India introduced Book building mechanism for demand and price discovery and to protect interest of investors in 1995. Along with Demand and Price, there had been many other factors which affect Initial public offer's performance in both short term and long term. These factors are market trend, Initial public offer grading, issue size, stock correlation with the Index etc. so to study the relation of various factors influencing Initial public offer's returns, issues floated in between 2011-2014 has been taken up for study. We have observed that the grading has a great impact on demand schedule of Qualified Institutional buyers and Non Institutional Buyers, but still the issues with high subscription could offer only listing day return. Their returns have fallen in long run.

**KEYWORDS**

Book Building, Correlation, IPO Grading, Subscription and Volatility.

**INTRODUCTION**

**I**PO (Initial Public Offer): An offer of new equity shares made to public for first time is called Initial public offer (IPO). It is a process by which any company can sell its shares in general public to raise long term finance. Companies can raise money by issuing equity shares to the public or the existing shareholders can sell their shares to the public without raising any fresh capital (Disinvestment). It is the most favoured and popular source of finance for most of the companies. Moreover retail investors also show their interest in buying IPO. Although investing in IPO is considered to be one of the most risky option but still very few IPOs has been cancelled due to under subscription in previous years in spite of market volatility. "Performance of the IPO varies in accordance with the market i.e. bullish to bearish. Interests of the investors are influenced by the market trend and thus the performance of the IPO. IPOs can be a risky investment. For the individual investor, it is tough to predict the performance of stock or share on its initial day of trading and in the near future since there is often little historical data for the technical analysis of the stock (K Hema Divya)"

When new company floats shares it is called IPO and when any existing company who is already listed floats new shares in the market, it is called FPO (further public offer). Once public subscribe for the shares company allot shares in their respective De-mat account after the complete process and then these shares get listed on any of the stock exchange for further buying and selling by investors. This Initial Public Offering can be made through the fixed price method, book building method or a combination of both.

**THERE ARE TWO TYPES OF PUBLIC ISSUES**

ISSUE TYPE	OFFER PRICE	DEMAND	PAYMENT	RESERVATIONS
<b>Fixed Price Issues</b>	Price at which the securities are offered and would be allotted is made known in advance to the investors	Demand for the securities offered is known only after the closure of the issue	100 % advance payment is required to be made by the investors at the time of application.	50 % of the shares offered are reserved for applications below Rs. 1 lakh and the balance for higher amount applications.
<b>Book Building Issues</b>	A 20 % price band is offered by the issuer within which investors are allowed to bid and the final price is determined by the issuer only after closure of the bidding.	Demand for the securities offered, and at various prices, is available on a real time basis on the BSE website during the bidding period.	10 % advance payment is required to be made by the QIBs along with the application, while other categories of investors have to pay 100 % advance along with the application.	50 % of shares offered are reserved for QIBs, 35 % for small investors and the balance for all other investors.

Source: (www.bseindia.com)

**NEED FOR BOOK BUILDING**

Before establishment of SEBI in 1992, the quality of disclosures in the offer documents was very poor. Fixed price system was being followed for IPO issuance. But the main problem with this system was that the prices of issue were fixed 2-3 months before IPO actually enters into the market.

The traditional fixed price method of tapping individual investors suffered from two defects: (a) delays in the IPO process and (b) under-pricing of issue. In fixed price method, public offers do not have any flexibility in terms of price as well as number of issues. Individual investors (i.e. retail investors), as such, are unable to distinguish good issues from bad one. This is because the issuer Company and the merchant banker as lead manager do not have the exact idea on the fixed pricing of public issues. That's why, Book Building mechanism, a new process of price discovery, has been introduced to overcome this limitation and determine issue price effectively (Mukesh.kr)

**BOOK BUILDING**

Book Building is essentially a process used by companies raising capital through Public Offerings-both Initial Public Offers (IPOs) or Follow-on Public Offers (FPOs) to aid price and demand discovery. It is a mechanism where, during the period for which the book for the offer is open, the bids are collected from investors at various prices, which are within the price band specified by the issuer. The process is directed towards both the institutional as well as the retail investors. The issue price is determined after the bid closure based on the demand generated in the process.



**PROCESS**

- The Issuer who is planning an offer nominates lead merchant banker(s) as 'book runners'.
- The Issuer specifies the number of securities to be issued and the price band for the bids.
- The Issuer also appoints syndicate members with whom orders are to be placed by the investors.
- The syndicate members input the orders into an 'electronic book'. This process is called 'bidding' and is similar to open auction.
- The book normally remains open for a period of 5 days.
- Bids have to be entered within the specified price band.
- Bids can be revised by the bidders before the book closes.
- On the close of the book building period, the book runners evaluate the bids on the basis of the demand at various price levels.
- The book runners and the Issuer decide the final price at which the securities shall be issued.
- Generally, the number of shares is fixed; the issue size gets frozen based on the final price per share.
- Allocation of securities is made to the successful bidders. The rest get refund orders.

**LITERATURE REVIEW**

Mittal, Gupta and Sharma (2012) studied 90 IPOs for 2001-10, where in there was high positive relation between IPO grading and Subscription status of IPOs. As per their study QIBs had highest positive correlation with IPO grading.

Further Triveni and Soni (2012) had studied 243 IPOs (2006-10) and proved that 80% of IPOs had been underpriced considering their Listing day open price but only 65% out of them could sustain their performance till the day end.

Khurshed et al. (2008) studied 251 IPOs inclusive of 47 graded IPOs listed on BSE and NSE from 1999 until August 2008. They concluded that grading is most useful to institutional investors rather than for retail investors. Another conclusion given by this study was that the book building process itself offers stronger signals for retail investors as compared to IPO grading. There are many other studies which talked about performance of IPOs with special reference to their under pricing and listing day return.

With respect to the IPOs listed on BSE in the year 2007-08, Gupta (2011) highlighted that during the boom period, the under pricing depended on the market conditions. Most of the investors gain by investing on the first day of the IPO, but in the study of 2008-09 Gupta (2011) highlighted that during the period of downturn, pessimism and slump, there was no under pricing, and on the contrary it showed overpricing. Bansal and Desai's (2012) study showed that in the Indian market during 2007-10, the listing day average volatility was 37.4% which steeply dropped down to 8.7% on the sixth day (including the listing day). The peak of volatility was found on the day of listing. The dwindling interest of the investors was clearly represented by a fall in the volume from the listing day onward. So with this literature view the purpose of my paper is to study the factors that are related with IPO and its subscription and their impact on the performance of IPOs after their listing. Year 2008, Jan when market was at 21206.77 (approx) and the within months till October 2008 it was being registered at the lowest point of 7697.39. So high market variations forced investors to stay away from market for long. Then in 2011, market revived again and started moving around 16000-19000. But gaining investor's confidence was not easy and so on it had affected IPO market performance a lot.

**RESEARCH PROBLEM**

One major source of business financing is through Initial Public Offerings (IPOs). Historically, IPOs have been listed on premium prices but later on a few of them could provide a hike over their listing price and maximum of the investors putting their money into IPO suffers losses in long term. So study focuses on finding out various factors having impact on IPO performance

**OBJECTIVES**

1. To assess the present state of the IPO market.
2. To analyze the performance of the IPO's issued in the market during the financial year April 2011- March 2014 and till 2nd quarter June 2014.
3. To ascertain the factors contributing to Positive and negative performance of IPO and its subscription.
4. Studying the correlation between the IPO return and Market Index
5. Studying the impact of IPO grading on IPO listing

**RESEARCH METHODOLOGY****DATA COLLECTION**

Study is based on IPO data of 43 companies that were being offered in The financial year April 2011- March 2014 and 2nd quarter till June 2014.

All the IPOs were listed on BSE stock exchange, where in 42 out of 43 were graded by either of the credit rating agency.

The secondary data was collected from the various sources available like websites mainly SEBI, BSE and NSE, magazines, journals etc. wherever necessary

Listing day return has been calculated by using  $P_x - P_o / P_o * 100$  where in  $P_x$  stands for Listing day opening price and  $P_o$  indicate offered price of IPO

**SCOPE OF STUDY**

Status of All IPOs offered in market during last 5 years

Profit/Loss Status of IPOs listing in between April 2011- June 2014

Subscription status of Cancelled IPOs

Subscription status of successful IPOs

Status of IPO Grading

Correlation of IPO prices with Market Movement and Impact of Volatility on IPO return and Subscription

**RESULTS AND DISCUSSION: (OBSERVATIONS FOR IPO DURING APRIL 2011-JUNE 2014)**

IPOS ANALYSES OVER LAST FIVE YEARS STARTING FROM 1/04/2009 TO 31<sup>ST</sup> MARCH 2014 AND 2<sup>ND</sup> QUARTER OF 2014

TABLE 1

YEARS	FPO (A)	IPO (A)	CANCELLED (C)	TOTAL (A+B+C)	AMOUNT (ISSUE SIZE) (IN CRORES)	AVERAGE AMOUNT(IN CRORES), PER ISSUE
2 <sup>nd</sup> Quarter 2014	0	1	0	1	181.25	181.25
2013-14	2	1	2	5	8383.18	2794.4
2012-13	0	9	3	12	6284.47	698.3
2011-12	1	32	3	36	10415.55	315.62
2010-11	5	50	2	57	44962.28	847.3
2009-10	4	40	0	44	46663.5	1060.5
<b>Total</b>	<b>12</b>	<b>133</b>	<b>10</b>	<b>155</b>	<b>116890.23</b>	<b>806.14</b>

**Note:** \*Issue size includes amount raised through Successful IPOs and NFOs in different financial years. It does not consist of issue size of cancelled IPOs

\*Number of IPOs and FPOs consist of those issues which were issues through book building process. It does not include any offer for sale and Fixed price Issue.

\*Data Source for all the issues has been taken from NSE and BSE websites only.

Highest numbers of issues were floated in 2010-11 while least numbers of issues were floated in 2013-14. Only one company could successfully issue shares via book building process which got listed on National stock exchanges like NSE and BSE.

Total amount raised: Since April 2011 till July 2014 is 25264.21 crores with average of 549.222 crore for 43 IPOs and 3 FPOs.

Issue size ranged from 23.25 crore to 6958.64 crore wherein Power grid FPO raised highest money and Timbor Home IPO was the smallest IPO. Total 11 issues out of 46 (24%) floated issue for more than 500 crores in market through Book Building Process.

#### IPO ANALYSIS (FROM APRIL 2011- MARCH 2014 AND 2<sup>ND</sup> QUARTER OF YEAR 2014)

TABLE 2

NAME OF COMPANY	LISTING DATE	ISSUE SIZE	SUBSCRIPTION DETAILS	LISTING DAY OPENING PROFIT/ LOSS	LISTING DAY CLOSING PROFIT/ LOSS	ONE YEAR PROFIT/ LOSS	IPO GRADE
Wonderla Holidays Ltd	9/5/2014	181.25	38.06	31.8	26.1		4
Just Dial Ltd	5-Jun-13	919.14	11.63	11.3	15.4	126.14	5
Repcos Home Finance Ltd	1-Apr-13	270.39	1.65	-4.1	-6.5	93.55	3
V-Mart Retail Ltd	20-Feb-13	94.42	1.2	2.9	-2.3	28.30	3
Bharti Infratel Limited	28-Dec-12	4155.8	1.3	-9.1	-13.1	-23.60	4
PC Jeweller Ltd	27-Dec-12	609.3	6.85	0.4	10.4	-34.25	3
CARE Ltd	26-Dec-12	539.98	40.98	26.5	23.2	-1.50	
Tara Jewels Limited	6-Dec-12	183.49	1.98	5.2	-0.02	-62.85	3
VKS Projects Ltd	18-Jul-12	55	1.03	1.5	1.1	-90.22	1
Speciality Restaurants Ltd	30-May-12	176.09	2.54	2.0	7.1	19.40	4
TBZ Ltd	9-May-12	200	1.15	-4.2	-7.3	91.38	3
NBCC Ltd	12-Apr-12	127.2	4.93	-5.7	-8.4	22.81	4
MT Educare Limited	12-Apr-12	35	4.8	7.6	12.9	5.81	4
Olympic Cards Ltd	28-Mar-12	25	0.993	-0.2	-5.0	96.90	1
MCX of India Ltd	9-Mar-12	663.31	54.13	34.4	25.7	-2.32	5
Indo Thai Securities Limited	2-Nov-11	29.6	1.18	1.4	-68.9	-83.96	2
M & B Switchgears Ltd	20-Oct-11	93	1.57	-3.2	70.7	-11.27	2
Flexituff International Ltd	19-Oct-11	104.63	1.17	0.0	7.4	22.94	3
Onelife Capital Advisors Ltd	17-Oct-11	36.85	1.53	4.5	32.6	644.76	1
Taksheel Solutions Limited	19-Oct-11	82.5	2.99	4.9	-62.8	-91.91	2
RDB Rasayans Limited	7-Oct-11	35.55	1.5	7.6	-66.5	-82.65	2
Prakash Constrowell Limited	4-Oct-11	60	2.21	5.1	66.3	13.12	2
PG Electroplast Limited	26-Sep-11	120.65	1.34	-4.8	96.0	6.50	3
SRS Ltd	16-Sep-11	203	1.25	-5.2	-42.0	-20.74	3
TD Power Systems Ltd	8-Sep-11	227	2.92	-1.7	7.3	0.85	4
Brooks Laboratories Limited	5-Sep-11	63	1.6	10.0	-39.8	-83.67	2
Tree House Edu. & Acc. Ltd	26-Aug-11	113.83	1.85	-1.6	-13.7	81.01	3
L&T Finance Holdings Ltd	12-Aug-11	1245	5.34	-1.9	-3.9	-14.02	5
Inventure Growth & Sec.Ltd	4-Aug-11	81.9	4.58	1.7	77.7	-82.65	2
Bharatiya Global Infomedia	28-Jul-11	55.1	2.06	2.4	-62.3	-92.52	2
Readymade Steel India Ltd	13-Jul-11	34.75	1.68	6.5	-38.5	-28.19	2
Birla Pacific Medspa Limited	7-Jul-11	65.18	1.18	1.0	153.5	-50.50	2
Rushil Decor Limited	7-Jul-11	40.64	2.62	12.8	66.2	184.03	2
Timbor Home Limited	22-Jun-11	23.25	5.78	14.3	44.8	-60.30	1
VMS Industries Ltd	14-Jun-11	25.75	1.36	9.9	-28.8	40.00	1
Aanjaneya Lifecare Limited	27-May-11	117	1.11	-1.9	33.0	135.33	2
Sanghvi Forging&Engineering	23-May-11	36.9	1.3	0.0	31.5	-18.82	3
Vaswani Industries Limited	20-Sep-11	115.1	4.16	-31.7	-63.8	-91.37	2
Innovative Industries Ltd	13-May-11	219.58	1.24	-6.0	-20.0	-2.32	3
Servalakshmi Paper Limited	12-May-11	60	1.47	3.4	-34.5	-83.52	2
Future Ventures India Limited	10-May-11	750	1.52	-5.0	-17.0	-15.20	3
Paramount Printpackaging Ltd	9-May-11	45.83	3.92	0.0	-23.9	-84.46	2
Muthoot Finance Ltd	6-May-11	901.25	24.55	2.9	0.7	-33.55	4

\*Source of Information: www.bseindia.com and www.chittorgarh.com

\* IPO of CARE has not been assigned any rating as it is a credit rating agency itself.

\* Last working day has been taken up for calculation at end of each period (e.g. 1 month, 1 year etc)

\* Bonuses, dividends or other actions are not considered while calculating 'Profit / Loss

#### LISTING DAY ANALYSIS

##### PROFIT/LOSS OVER OFFERED PRICE OF IPO (USING OPENING PRICE AND CLOSING PRICE):

As per table 3: Total 58% IPOs could gain premium value at the time of listing where as 7% IPOs had not provided any gain/loss and 35% IPOs inflicted losses.

Highest return (153.5%) till the end of trading session was given by script Birla Pacific Med spa.

**LISTING AT PREMIUM:** Total 25 IPOs were listed on premium. It has been observed that Only 3 out of 43 IPOs has shown consistency (15-35%) gain starting from opening till end) in gain throughout the day. 12 IPOs ended with premium returns. Rest 10 IPOs were being traded in losses due to high sales volume at the end of the day.

**LISTING WITH NEGATIVE RETURNS:** 11 IPO listed at discounted value could not revive throughout the day and ended with losses. Only 2 IPO later on due to high trading volume and presence of speculators and arbitrageurs had been traded at high premium value (more than 55 %) till the end of trading session out of which PG Electro-Plast IPO had given 96% returns.

TABLE-3: LISTING DAY PROFIT/LOSS STATUS

CLOSE (IN PERCENTAGE)	OPEN (IN PERCENTAGE)						TOTAL
	CLOSE/ OPEN	NEGATIVE	ZERO	0-5	5-15	15-35	
	NEGATIVE	11	1	5	5	0	
	ZERO	0	0	0	0	0	
	0-5	0	0	2	0	0	
	5-15	1	1	2	1	0	
	15-35	1	1	1	1	3	
	35-55	0	0	0	1	0	
	ABOVE	2	0	2	2	0	
	TOTAL	15	3	12	10	3	

## ONE YEAR RETURN ANALYSIS (PROFIT AND LOSS)

FIGURE: 1



## SUBSCRIPTION STATUS OF SUCCESSFUL IPOs

TABLE 4

SUBSCRIPTION (LIST OF IPOs OVERSUBSCRIBED)	NO OF COMPANIES	COMPANIES OFFERING LISTING DAY RETURN	COMPANIES OFFERING RETURN UP TO ONE YEAR(AFTER LISTING)
More than 10 times	5	5	1
5-10 times	3	2	0
2-5 times	11	7	6
less than 2 times	24	11	10
Total	43	25	17
Pearson's product of correlation		0.707	-0.041

(Source: bseindia.com)

Note: \*IPO of Wonderla Holidays Ltd has been listed in May 2014, so calculation on one year return is not possible

Table-4 indicates that issues which were oversubscribed by more than two times has responded well in market for short term as compared to those which were oversubscribed by less than 2 times. Around 74% stocks were listed on premium with high subscription whereas just 45 % stocks responded well who were not subscribed by more than 2 times.

There is high correlation between subscription of IPOs and listing day return i.e. 0.707 which indicates that higher subscription results in positive return on the day of listing. But comparing same with one year Return/ Loss, correlation proved to be (-0.041) which almost indicate neutral behavior of IPOs. During last three years, 42 out of 43 IPOs were oversubscribed in totality where in only 25 IPOs were listed on premium value at the day of listing. We have observed that out of these 25 scripts only 8 stocks have shown consistency in their return till one year.

Further 17 (40%) stocks out of 42 listed on various dated could offer returns to investors for their long term holdings.

21/43 IPOs were oversubscribed by QIBs (Based on shares offered to them) and 35 out of 43 were oversubscribed by RIIs. Data in case of NII/HNIs is 35/43 again. But in totality 12 IPOs were being subscribed beyond shares offered by all three categories.

## IPO GRADING AND SUBSCRIPTION ANALYSIS

TABLE 5

Grading	No of Companies	Total Subscription	QIBs	NIIIs	RIIs	Listing Day Return	One year Return
5	3	23.7	20.39	59.62	12.42	2	1
4	7	11.3	9.83	33.22	3.24	4	4
3	12	1.875	1.615	3.95	1.421	3	6
2	15	2.255	0.27	3.224	4.67	11	3
1	5	2.1386	0.567	1.816	4.525	4	3
Correlation ( r )=		.867	.896	.901	.539		

(Source: nseindia.com, bseindia.com)

Note:\* Contains detail of 42 IPOs as IPO of CARE has not been rated by any company because CARE itself is one of the rating companies

\*IPO of Wonderla Holidays Ltd has been listed in May 2014, so calculation on one year return is not possible

Table-5 indicates that 22 IPOs has been rated Average and Above average based on their fundamental factors but 9 IPOs out of 22 had been listed on premium value and only 11 scripts continues to give returns till the end of one year from their date of listing. Further 20 IPOs were rated below average and 15 out of them were listed on premium but only 6 could offer return for long term.

While studying the impact of IPO grading on IPO subscription, Table -5 indicated that IPO grading has direct positive relation with IPO subscription i.e. +0.867 which shows very high degree of correlation between factors. Further study proves that IPO grading has highest impact on demand pattern on NIIs (Non

institutional investors) followed by QIBs. But RILs had least positive correlation with IPO grading, Many IPOs having grade 1 and 2 which are considered as fundamentally poor have been subscribed well by investors and these IPOs were being floated in market in between May 11 to July 2012.

#### SUBSCRIPTION STATUS OF CANCELLED IPOs

TABLE 6

Name of the issue	Grade assigned	Overall Subscription
Loha Ispaat Limited	3	78%
Scotts Garments Limited	3	27%
Sai Silks (Kalamandir) Limited	2	93%
Plastene India Limited	3	29%
Samvardhana Motherson Finance Limited	4	23%
Goodwill Hospital and Research Centre Limited	3	1%
Swajas Air Charters Ltd IPO	2	1.72%
Galaxy Surfactants IPO	4	30%

(Source: nseindia.com, bseindia.com)

From above table it has been observed that 6 out of 8 IPOs were undersubscribed so company had to withdraw them. Even High IPO grading (4/5 for two IPOs) couldn't have any positive impact on shares Subscription

Swajas Air Charters Ltd withdrew its IPO in spite of being fully subscription because of bad Market sentiments. Moreover Sai Silks% subscribed but due to "safety net Arrangement" Promoters decided to withdraw the same also. Otherwise he may have to pay a heavy sum of money back to original allottee in case of price fall more than 20 % than the Index.

As per Regulation 44 of SEBI (ICDR) Regulations, 2009 "An issuer may provide for a safety net arrangement for the specified securities offered in any public issue provided that any such arrangement shall provide for an offer to purchase up to a maximum of one thousand specified securities per original resident retail individual allottee at the issue price within a period of six months from the last date of dispatch of security certificates or credit of De-mat account."

Subject to Disclosures specified in this regard in Part A of Schedule VIII of SEBI (ICDR) Regulations, 2009.

TABLE 7: CORRELATION OF IPO PERFORMANCE WITH STOCK MARKET INDEX

NO OF COMPANIES	CORRELATION	RESULT
11	$r > 0.5$	High Positive Relation
22	$-0.5 < r < +0.5$	Average/ Neutral
8	$r < -0.5$	High Negative Relation

(Source: bseindia.com)

TABLE 8: AVERAGE MEAN RETURNS OF LDR (LISTING DAY RETURN) AND ONE YEAR HOLDING

Year	Open	Close	% change	IPOs in market	Listing day mean return	One year mean return	Mean( Subscription) in times
April, 2011-March, 2012	19463.11	17404.2	-10.58	30	2	6.4	4.68
April, 2012-March, 2013	17429.96	18835.77	8.07	10	2.7	-4.5	6.52
April, 2013-March, 2014	18890.81	22386.27	18.50	2	3.6	109.8	11.63
April, 2014-June, 2014	22455.23	25413.78	13.18	1	31.8	NA	38.06

Note \*closing price of every month has been taken since launch of IPO in market

\*closing price of Sensex for each month parallel to IPO listing month has been taken from bseindia.com

\* Data include 41 IPOs excluding 2 IPOs, (Taksheel solution- as prices are not available after Dec 2013 and Wonderland Holidays-As listed in the month of May 2014 itself)

As we know that  $r$  (correlation) value fall in between -1 to 1 ( $-1 < r < 1$ ). More the value is near to +1 indicate highly positive correlation between factors and more the value is near to -1, there is highly negative correlation. In my study if  $r > +0.5$  is taken as highly positive and if  $r < -0.5$  is considered as highly negative and value falling in range of  $-0.5 < r < +0.5$  are considered as average relation. Based on the following table no 7 shows that Out of all the IPOs only 27% IPOs performance is highly correlated with market while around 20% IPOs are highly negatively correlated with index. Rest 54 % have average relation with market and further it has been observed that majority of the IPOs had negative correlation with the market Index. **Table no 8** compare the return of market and IPOs. Market Volatility has a major impact on IPO subscription and returns so on. In 2011-12 when market was little volatile and return of Sensex for the financial year was negative (-10.58%), mean subscription for IPOs was 4.68 times which was quite less than year 2010-11, where it was 11.82 times and approx 17 times for year 2009-10 where in market had shown 79% positive movement. Market revived drastically from 2009 to 2011 (96.35% movement) where in the movement was just 15% approx in between 2011-14 and so on the subscription of IPOs were quite less as compared to 2009-11 IPO's subscription.

#### FINDINGS

- 1) Highest no. of IPOs was being floated in year 2010-11 in last five years.
- 2) Total amount mobilized through Book Building process of IPOs since last three years is 25264.21 crores. Bharti Infratel IPO mobilized highest amount through their IPO i.e 4155.8 crore other than two major FPOs of Power grid and Power Finance Corporation.
- 3) Majority of the IPOs (58%) were listed on premium prices but only 1/3 out of them could sustain this return till the end of one year whereas 35% IPOs listed on loss and half of them could revive and provide returns to investors at the end of 1<sup>st</sup> year.
- 4) Only 19% of the IPOs were highly oversubscribed by the investors' i.e. more than 5 times. Although they all performed well at the time of listing but in long term they could not offer any return.
- 5) IPO grading indicating fundamental value of company had its impact on returns offered by IPOs in long run along with on subscription status of IPO. During last three years IPO grading had highly positive relation with Demand schedule of QIBs and NIIs.
- 6) Market Index movement has direct impact on demand schedule of investors (subscription status) and listing day return (profit/loss) is positively correlated with subscription of IPO so whenever Market offers return, IPOs also has the same tendency to offer return but during market slump and downturn, investors sentiments get affected and so on demand for IPO subscription decreases which in turn affects the listing day return.

#### CONCLUSION

Capital market has seen many ups and downs in last decades. IPOs had been used by many investors for investing into market. Although IPOs are quite risky because their stock prices for previous years are not available so one had to go for Fundamental Analysis by studying their financial analysis. But one cannot totally after studying few factors can make fair judgment about IPOs post listing price movement. A detailed study along with market movement and impact of market variations on new stocks need to be considered.

**SCOPE OF FURTHER RESEARCH**

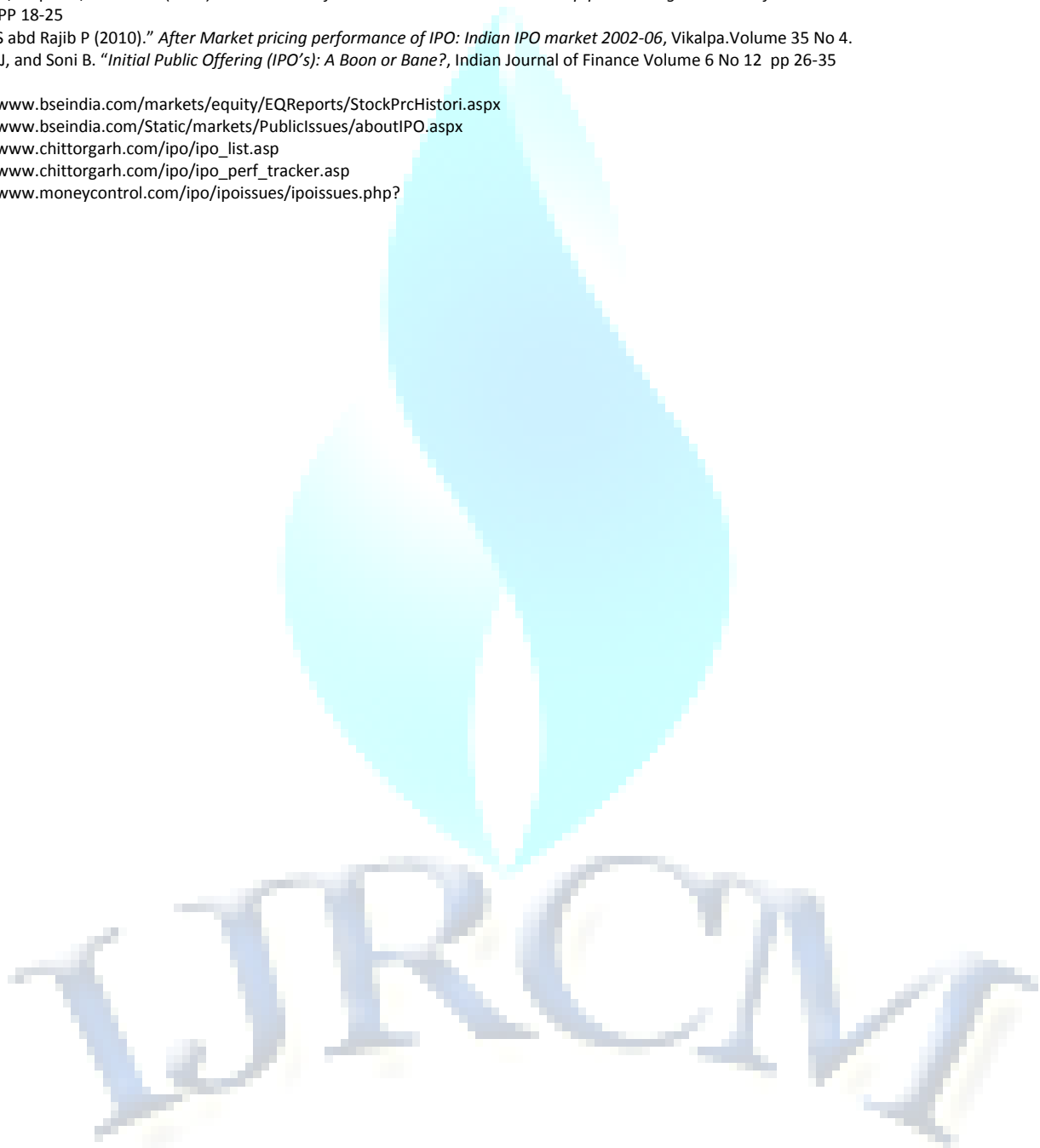
Many other factors like volume of trading, other companies of same sector and Market Tangible and Intangible factors have impact on performance of any IPO which can be covered in future study.

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**DETERMINANTS OF DIVIDEND PAYOUT RATIOS: A STUDY WITH REFERENCE TO INDIAN BANKING SECTOR**

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**ABSTRACT**

*Dividend policy decisions constitute one of the major areas in financial management decisions of a firm, yet more research is required to be conducted with special reference to Indian banking sector because of its significant role in the economy. The present study attempted to investigate the key determinants that influence the dividend payout ratios of banks using the data for a period of five years between 2009 and 2013. The study examined the influence of explanatory variables such as last year dividends, current earnings, cash flows, liquidity, profitability, capital expenditures and leverage on dividend payout ratios of public and private sector banks using Backward Linear Regression Analysis. The study provided evidence that last year dividend and profitability are the most important explanatory determinants on the dividend payout ratio of banks.*

**KEYWORDS**

Backward linear regression, Dividend Payout ratio, Last year dividends, Leverages, Profitability.

**INTRODUCTION**

Dividend policy decision is a key area in the field of corporate financial management. Firms view dividend policy very important because it determines that what funds flow to investors and what funds are retained by the firm for reinvestment. There are many theoretical Explanations as to factors influencing the dividend policy (Lintner 1956; Britain 1966, etc.). Financial Economists and analyzers of corporate dividend policies generally conclude with the two characteristics embedded in dividend decision process. These are long run payout ratio and stability of dividends. In order to find out an appropriate dividend payout ratio for the company, its management has a number of factors to consider. As revealed in the existing literature, these factors include earnings, investment opportunities in hand, difference in the cost of retained earnings and external equity, cash flow position, share holder preferences, corporate and other taxes, legal restrictions, etc. About the stability dimension of the dividends, we may state that a predictable dividend policy would satisfy the shareholder's current consumption demand and facilitates the management in the planning factors in long-term investment budget.

**CONCEPTUAL MODEL AND VARIABLES**

Analyzing the influence of various determinants of dividend payout ratios has been seminal area of research in basic finance for the decades. Various research studies conducted on the determining variables on dividend payouts at a firm level; still there is no unique answer as to the variable which has significant impact, especially in banking sector. Few studies at the firm level, including Lintner (1956), Miller and Modigliani (1961), Miller and Scholes (1982), Rao and Sarma (1971), Swamy and Rao's (1975), Rozeff (1982), Kevin (1992), Alli, Khan and Ramirez (1993), Mahapatra and Sahu (1993), Narasimhan and Asha (1997), Pandey (2001), Reddy (2002), Manoj Anand (2002), Anand (2004), Kanwal and Kapoor (2008) and Kamal Naser, Rana Museibeh and Wojoud Rashed (2013) depicted the significant relation between the dividend determinants and dividend pay out ratio in various contexts.

**KEY DETERMINANTS OF DIVIDEND PAYOUT RATIO IN BANKING SECTOR****a) LAST YEAR DIVIDENDS**

Lintner (1956) argued that the firms of developed markets target their dividend payout ratio considering the last year dividends as a predictor variable. Following Lintner (1956) theory Pandey (2001) conducted a study in Malaysian Companies observed that dividend payments behaviours were unstable to meet the targeted dividend payout ratio. However, Mahapatra and Sahu (1993) presented a contrasting view, stating that the past dividends have no significant impact on the dividend payout ratio. Hence it is proposed as

**Hypothesis-3: Last year dividend have no significant influence on the dividend payout ratio.**

**b) CURRENT EARNINGS**

Empirical studies reveal the dividends are shown as signals for earning capacity of the firm. Current earnings of the firm have prominent importance on the dividend payout (Mahapatra and Sahu, 1993). Skinner and Soltes (2009) found that the earnings are more persistent for the firms that pay dividends and that this relation does not depend on the magnitude of firm's dividend payouts. Therefore, it is hypothesized as

**Hypothesis-4: Current earnings have no significant influence on the dividend payout ratio.**

**c) CASH FLOWS**

Rao and Sharma (1971) conducted preliminary testing of Lintner's model based on aggregate time series with net cash flows and lagged dividends as explanatory variables. Similarly, Kanwal and Kapoor (2008) proved that cash flows that indicate liquidity and beta indicating risk are the foremost determinants of dividend payout ratio of a firm. The results of Rao and Sharma (1971) and Kanwal and Kapoor (2008) represent manufacturing companies and information technology companies. Thus, the findings need to be tested in the banking sector with the hypothesis,

**Hypothesis-5: Cash flows do not have significant influence on the dividend payout ratio.**

**e) PROFITABILITY:**

Many researchers in the past argued profitability have both the positive and negative influence on the dividend policy. Studies conducted by Rao and Sharma (1971) in four major industrial groups and Kanwal and Kapoor (2008) in Information technology sector proved that the profitability has a positive influence on the dividend policy of firm. Contrarily, Mehta (2008) proved that the profitability as measured in terms of ROE and EPS are negatively associated with the dividend payout ratio of a firm.

**Hypothesis-6: Profitability has no significant influence on the dividend payout ratio.**

**e) LIQUIDITY**

The extant literature on the relationship between liquidity and dividend policy revealed contrasting views. John and Muthuswamy (2010) proved the negative association between liquidity and dividend policy stating that more cash paid out to the investors will reduce the cash position of the firm. These views were

presented in supporting the hypothesis by Darlings (1957) and Baker, Veit and Powell (2001) Nonetheless, Mehta (2008) contrarily argued that the firms with high liquidity are more likely to pay dividends than those firms who face liquidity crunch.

**Hypothesis-7: Liquidity has a no significant influence on the dividend payout ratio.**

#### f) CAPITAL EXPENDITURE

Dividend policy was considered as an important component of financial policy of a firm in deciding about the net borrowings and capital expenditures. Alli, Khan and Ramirez (1993) and Desai, Foley and Hines Jr (2006) reported that inclusion of capital expenditures have inverse and insignificant effect on the dividend policy in the context of multinational firms. However, Swamy and Rao (1975) proved that investment expenditures have positive coefficient towards dividend payout ratio.

**Hypothesis- 8: Capital expenditures has no significant influence on dividend payout ratio.**

#### g) LEVERAGE

The empirical evidence from the research on leverage and dividend payout ratio provided mixed result. John and Muthusamy (2010) opined that higher leverage for firm means the firm is at risk in terms of cash flow. Rozeff (1982) opined that the leverage have negatively significance on the dividend payout ratios. However, supporting to the views of Mehta (2012) and John and Muthusamy (2010) found that the leverage has negatively association with the dividend payout ratio in the context of UAE exchange listed firms and Indian paper industry.

**Hypothesis- 9: Leverage has no significant influence on dividend payout ratio.**

### NEED AND SIGNIFICANCE OF THE STUDY

As banking sector generates profits by the difference between their lending and deposits. The difference between the interest income and operational expenses is the major contribution towards the profits of a bank, in turn, for dividends to be distributed. The factors affecting the dividend policy of banks are different from the companies or corporations because the profits of banks are generated by lending the loans while in case of companies' loans are the liabilities for them. To know how the banks manage to distribute its profits as dividends to its stakeholders is the need of the study that arises. Numerous studies were conducted on dividend policy of different firms/companies have been made but studies on dividend policies of banks have not been done as required. Banking sector is the most effluent sector of the Indian financial system, therefore the need to study dividend policy of banks arises as with the help of these studies the stakeholders can understand more of the information about dividend policy of banks which will be helpful for them to invest in banks as well.

### OBJECTIVES OF THE STUDY

The study is conducted with the following objectives.

- To study the significant difference among the banks towards the determinants of dividend payout ratio.
- To study the influence of dividend determinants on Dividend payout ratio of Banks.

### HYPOTHESES OF THE STUDY

Hypothesis -1: There is no significant difference among the public sector banks towards the dividend payout ratio.

Hypothesis -2: There is no significant difference among the private sector banks towards the dividend payout ratio.

Hypothesis-3: Last year dividend have no significant influence on the dividend payout ratio.

Hypothesis-4: Current earnings have no significant influence on the dividend payout ratio.

Hypothesis-5: Cash flows do not have significant influence on the dividend payout ratio.

Hypothesis-6: Profitability has no significant influence on the dividend payout ratio.

Hypothesis-7: Liquidity has a no significant influence on the dividend payout ratio.

Hypothesis- 8: Capital expenditures has no significant influence on dividend payout ratio.

Hypothesis- 9: Leverage has no significant influence on dividend payout ratio.

### RESEARCH METHODOLOGY

#### DATABASE AND SAMPLING

Currently, India has 88 scheduled commercial banks in which 27 public sector banks (which are owned by Government), 31 private sector banks (which are owned by private sectors and Government do not have any stake) and 38 foreign sector banks. They have a combined network of over 53,000 branches and 17,000 ATMs. So, in total, India is having 96 commercial banks which include 27 public sector + 31 private sector + 38 foreign banks. In this research, we have taken the sample of commercial banks which are listed in Bombay Stock Exchange where currently 42 banks are listed in the same and we have used Judgmental sampling by taking market capitalization as a criteria and have chosen 20 commercial banks (public and private) whose market capitalization is highest. Data is collected from secondary sources i.e., from official websites, annual reports and other research papers. We have chosen 10 public sector and 10 private sector banks and studied their dividend payout ratio for the period of 2009 to 2013 i.e., for 5 years.

**TABLE- 1: TABLE SHOWING THE LIST OF BANKS SELECTED FOR THE STUDY BASED ON HIGHEST MARKET CAPITALIZATION**

Public Sector Banks	Private Sector Banks
1. State Bank of India	1. ICICI Bank
2. Bank of India	2. HDFC Bank
3. Central Bank of India	3. Axis Bank
4. Oriental Bank of Commerce	4. Kotak Mahindra
5. Punjab National Bank	5. Federal Bank
6. United Bank of India	6. City Union Bank
7. Indian Overseas Bank	7. ING Vyas Bank
8. Allahabad Bank	8. Karnataka Bank
9. Dena Bank	9. Jammu and Kashmir Bank
10. Indian Bank	10. Karur Vyas Bank

#### TOOLS AND TECHNIQUES

One – way ANOVA has been applied to study the significant difference among the banks towards the determinants of dividend payout ratio. Back ward Linear Regression analysis has been applied to check whether the determinants of banks have significant influence on the dividend payout ratios.

**RESULTS AND ANALYSIS****Objective -1: To study the significant difference among the banks towards the determinants of dividend payout ratio****TABLE – 2: TABLE SHOWING THE RESULTS OF ONE – WAY ANOVA**

S. No	Public Sector Banks			Private Sector Banks		
	Variables	F- Value	Sig.	Variables	F- Value	Sig.
1	Last Year Dividends	75.435	0.000	Last Year Dividends	53.266	0.000
2	Current Earnings	33.179	0.000	Current Earnings	40.242	0.000
3	Cash flows	0.755	0.657	Cash flows	0.561	0.820
4	Profitability	55.944	0.000	Profitability	13.592	0.000
5	Liquidity	136.825	0.000	Liquidity	102.366	0.000
6	Capital Expenditures	51.198	0.000	Capital Expenditures	84.497	0.000
7	Leverage	56.817	0.000	Leverage	44.927	0.000
8	Dividend Payout Ratio	3.013	0.008	Dividend Payout Ratio	17.753	0.000

Source: Compiled data

One way ANOVA is applied to know the significant difference among the banks towards the determinants of dividend policy of banks. From the table, it is found that, among all the determinants of public sector banks except for cash flows of public sector banks, all the determinants are statistically significant at  $p < 0.005$ . The values from the table reflect that last year dividends, current earnings, profitability, liquidity, capital expenditures and leverages are significant at  $p < 0.001$ . Subsequently, it can be stated that the null hypothesis, Hypothesis-1, there is no significant difference among the banks towards the determinants of dividend payout ratio is rejected, except for cash flows. However, the significant difference among the private sector banks is also tested using one – way ANOVA. From the table, it is found that the except for cash flows of private sector banks, all the determinants are statistically significant at  $p < 0.05$ . Therefore, the null hypothesis ie hypothesis - 2 , there is no significant difference among the banks towards the determinants of dividend payout ratio is rejected, except for cash flows of private banks. The above results for both public and private sector banks indicate that except cash flows, all the determinants of dividend payout ratio have significant difference.

**Objective -2: To study the influence of dividend determinants on Dividend payout ratio of Banks**

Back ward linear regression method is applied to study the influence of dividend determinants on dividend payout ratio of public and private sector banks. Back ward linear regression has an advantage over the other regression methods as such it starts with all of the predictors in the model. The variable that is least significant--that is, the one with the largest P value--is removed and the model is refitted. Each subsequent step removes the least significant variable in the model until all remaining variables have individual P values smaller than some value, such as 0.05 or 0.10. The results of the back ward linear regression method applied on the determinants of dividend payout ratio as explanatory/ independent variables and dividend payout ratio as dependent variable are presented in Table-3, Table-4 and Table -5.

**TABLE – 3: TABLE SHOWING THE MODEL SUMMARY**

Model Summary <sup>a</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.637 <sup>a</sup>	.406	.060	.29923
2	.637 <sup>b</sup>	.406	.132	.28751
3	.637 <sup>c</sup>	.405	.193	.27726
4	.620 <sup>d</sup>	.385	.221	.27240
5	.588 <sup>e</sup>	.346	.223	.27209
6	.572 <sup>f</sup>	.328	.249	.26754
a. Predictors: (Constant), Leverage, Capital Expenditures, Cash Flows, Last Year Dividends, Profitability, Liquidity, Current Earnings				
b. Predictors: (Constant), Leverage, Capital Expenditures, Cash Flows, Last Year Dividends, Profitability, Liquidity				
c. Predictors: (Constant), Leverage, Capital Expenditures, Last Year Dividends, Profitability, Liquidity				
d. Predictors: (Constant), Leverage, Last Year Dividends, Profitability, Liquidity				
e. Predictors: (Constant), Leverage, Last Year Dividends, Profitability				
f. Predictors: (Constant), Last Year Dividends, Profitability				
g. Dependent Variable: DP Ratio				

Source: Compiled Data using SPSS 20.0

The results as depicted from the table- 3 shows the back ward linear regression model containing the determinants of dividend payout ratio. R- Value (0.572) from the table -3 depicts the strength of determinants of dividend payout ratio which could be characterized as moderate, after eliminating the insignificant determinants in back ward linear regression method. Adjusted R- Square (0.249) explains that the 24.9 per cent of variance of dividend payout ratio can be explained by determinants of dividend payout ratio. Thus it can be said that the predicting power of explanatory variables such as last year dividends and profitability has increased due to the elimination of insignificant variables which have low predicting power and insignificant at p value. Further, the F- Values, which is a measure of the overall significance of the estimated regression, from the table- 4 depict that the model is fit at F- Value = 4.143 at  $p < 0.05$ .

TABLE – 4: TABLE SHOWING THE RESULTS OF ANOVA

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.735	7	.105	1.173	.385 <sup>b</sup>
	Residual	1.074	12	.090		
	Total	1.810	19			
2	Regression	.735	6	.123	1.482	.259 <sup>c</sup>
	Residual	1.075	13	.083		
	Total	1.810	19			
3	Regression	.734	5	.147	1.909	.157 <sup>d</sup>
	Residual	1.076	14	.077		
	Total	1.810	19			
4	Regression	.697	4	.174	2.348	.101 <sup>e</sup>
	Residual	1.113	15	.074		
	Total	1.810	19			
5	Regression	.625	3	.208	2.816	.072 <sup>f</sup>
	Residual	1.185	16	.074		
	Total	1.810	19			
6	Regression	.593	2	.297	4.143	.034 <sup>g</sup>
	Residual	1.217	17	.072		
	Total	1.810	19			
a. Dependent Variable: DP Ratio						
b. Predictors: (Constant), Leverage, Capital Expenditures, Cash Flows, Last Year Dividends, Profitability, Liquidity, Current Earnings						
c. Predictors: (Constant), Leverage, Capital Expenditures, Cash Flows, Last Year Dividends, Profitability, Liquidity						
d. Predictors: (Constant), Leverage, Capital Expenditures, Last Year Dividends, Profitability, Liquidity						
e. Predictors: (Constant), Leverage, Last Year Dividends, Profitability, Liquidity						
f. Predictors: (Constant), Leverage, Last Year Dividends, Profitability						
g. Predictors: (Constant), Last Year Dividends, Profitability						

Source: Compiled Data

TABLE – 5: TABLE SHOWING THE COEFFICIENTS OF BACKWARD LINEAR REGRESSION

COEFFICIENTS <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.900	.125		7.213	.000
	Last Year Dividends	.351	.235	1.520	1.492	.161
	Current Earnings	-.117	2.595	-.466	-.045	.965
	Cash Flows	.014	.258	.070	.053	.959
	Profitability	-.444	.556	-1.829	-.799	.440
	Liquidity	-.374	1.031	-1.693	-.362	.723
	Capital Expenditures	.131	.298	.393	.440	.667
	Leverage	.540	1.450	2.240	.372	.716
2	(Constant)	.897	.109		8.258	.000
	Last Year Dividends	.347	.210	1.503	1.653	.122
	Cash Flows	.022	.163	.115	.137	.893
	Profitability	-.467	.233	-1.923	-2.006	.066
	Liquidity	-.405	.746	-1.832	-.542	.597
	Capital Expenditures	.122	.204	.365	.598	.560
	Leverage	.482	.687	2.003	.703	.495
3	(Constant)	.899	.104		8.629	.000
	Last Year Dividends	.338	.193	1.464	1.757	.101
	Profitability	-.467	.224	-1.923	-2.081	.056
	Liquidity	-.322	.430	-1.460	-.750	.465
	Capital Expenditures	.130	.188	.389	.693	.500
	Leverage	.422	.507	1.752	.832	.419
4	(Constant)	.938	.086		10.956	.000
	Last Year Dividends	.421	.148	1.824	2.848	.012
	Profitability	-.500	.215	-2.059	-2.321	.035
	Liquidity	-.400	.407	-1.811	-.981	.342
	Leverage	.540	.469	2.242	1.151	.268
5	(Constant)	.972	.078		12.395	.000
	Last Year Dividends	.403	.147	1.744	2.749	.014
	Profitability	-.484	.215	-1.993	-2.255	.038
	Leverage	.109	.165	.452	.661	.518
6	(Constant)	.976	.077		12.696	.000
	Last Year Dividends	.409	.144	1.769	2.842	.011
	Profitability	-.385	.151	-1.586	-2.547	.021
a. Dependent Variable: DP Ratio						

Source: Compiled Data

The table – 5 present the regression coefficients of the determinants of dividend payout ratios of banks are significant at  $p < 0.05$ . The regression coefficients of last year dividend 0.409 represent that one unit change in the last year dividend lead to 0.409 units positive change in the dividend payout ratio. However, one unit change in Profitability lead to -0.385 units change in dividend payout ratio. Therefore, the linear regression equation model can be written as per following: Dividend Payout Ratio =  $0.976 + (0.409) (\text{Last Year Dividends}) + (-0.385) (\text{Profitability})$



## DISCUSSION

The results of the study draw the following highlights. Firstly, last year dividends of banks are significantly influencing the dividend payout ratio rejecting the null hypothesis. Previous studies conducted by Linter (1956) in large scale companies in India are supported by the present study considering the banks with highest market capitalization. Thus it can be inferred that the large firms with high market capitalization has the capability for high dividend payout ratio.

Secondly, profitability is another explanatory variable with a predictive power stating the profitability has a significant influence on the dividend payout ratio, but it is negatively associated, rejecting the null hypothesis. However, the findings of the present study are consistent with the results of Mehta (2008) in UAE firms. Further, future studies can make an attempt to discriminate the influence of Non- Performing Assets on dividend payout ratio considering ROE and EPS as the mediating variables.

For the remaining determinants of dividend payout ratio such as current earnings, cash flows, liquidity capital expenditures and leverage, the results of the present study accept the null hypothesis i.e. current earnings, cash flows, liquidity, capital expenditures and leverage have no significant influence on dividend payout ratio. These results are in contrast to previous studies of Skinner and Soltes (2009), Rao and Sharma (1971) and Kanwal and Kapoor (2008), John and Muthuswamy (2010) and Swamy and Rao (1975) due to the pecuniary nature of the banking sector. Yet the present study support the results of Rozeff (1982), Mehta (2012) and John and Muthusamy (2010) for the association between the leverage and dividend payout ratio that support the proposition, higher the debt in the capital structure increase the obligation further, tighten the cash position of the business that reduce the funds to dividends payments.

## CONCLUSION

The study examined the influence of determinants of dividend payout ratio in banking sector in India. Based on the highest market capitalization of the banks, ten banks each in public and private sector were considered as a sample. The data pertaining to the selected determinants such as last year dividends, current earnings, cash flows, liquidity, profitability, capital expenditures and leverages were compiled for five years. The results of the study indicate that there is significant difference in the determinants of dividend pay out ratio among the public and private sector banks, except cash flows. The results of the study also proved that the dividend payout ratio is significantly influenced by last year dividends and profitability in the banking sector in India. The study has contrasting views with determinants such as liquidity, current earnings, cash flows and capital expenditures when compared with the sectors such as paper industry, information technology industry, manufacturing firms and banking industry. The present study has certain limitations as it has considered only five years of data between 2009 and 2013. In addition, the study has not considered other determinants such as risk, size of the firm and growth rate of the banks. Further, the determinants such as Non-performing assets, Capital adequacy and debt coverage ratios can be explored in the future research.

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## APPENDIX

### TABLES

**TABLE 6: LAST YEAR DIVIDEND OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA** (Rs. in Crores)

Public Sector Banks	2009	2010	2011	2012	2013
State Bank of India	1357.66	1841.15	1904.65	1905	2348.66
Bank of India	245.77	491.54	428.65	444.3	465.98
Central Bank of India	150.83	148.87	142	252.28	275.81
Oriental Bank of Commerce	117.75	182.89	227.99	303.43	230.49
Punjab National Bank	409.89	630.61	693.67	696.99	746.19
United Bank of India	45.97	0	78.29	134.43	162.64
Indian Overseas Bank	203.96	286.82	223.09	359.56	416.83
Allahabad Bank	134.01	111.68	245.69	285.73	300.02
Dena Bank	33.56	40.27	67.11	85.53	122.05
Indian Bank	163.93	252.39	319.35	362.33	362.33
Private Sector Banks	2009	2009	2010	2011	2012
ICICI Bank	1227.7	1224.58	1337.86	1612.58	1902.04
HDFC Bank	301.27	425.38	549.29	767.62	1009.08
AXIS Bank	251.64	420.52	567.45	573	658.24
Kotak Mahindra Bank	25.87	25.96	29.66	36.88	44.49
Federal Bank	34.24	68.41	85.52	85.52	145.39
City Union Bank	16	24	30	34.43	40.82
ING Vysya Bank	15.37	20.52	29.99	36.3	68.71
Karnataka Bank	60.67	72.94	53.63	56.46	65.9
J&K Bank	75.14	81.97	106.65	126.04	162.4
Karur Vysya Bank	64.74	64.74	65.32	128.63	150.05

Source: www.moneycontrol.com

**TABLE 7: CURRENT EARNINGS OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA** (Rs. in Crores)

Public Sector Banks	2009	2010	2011	2012	2013
State Bank of India	76479.78	85962.07	69324.78	120872.9	135691.94
Bank of India	19399.22	20494.63	24393.49	31801.84	35674.97
Central Bank of India	11525.16	13799.56	16485.61	20544.8	23527.98
Oriental Bank of Commerce	9927.79	11457.17	13047.88	17055.13	19359.49
Punjab National Bank	22245.85	25032.22	30599.06	40630.63	46109.25
United Bank of India	4802.73	5807.68	6078.51	8693.99	10318.06
Indian Overseas Bank	11354.47	11442.36	13379.49	19613.1	22649.63
Allahabad Bank	8620.3	9885.1	12386.34	16821.96	18912.6
Dena Bank	3877.63	4598.99	5567.37	7376.3	9554.85
Indian Bank	7865.77	6030.78	10542.92	13463.48	15180.58
Private Sector Banks	2009	2010	2011	2012	2013
ICICI Bank	39210.31	32999.36	32621.94	41045.41	48421.3
HDFC Bank	19802.89	19983.52	24263.36	32530.04	41917.49
AXIS Bank	13732.37	15583.8	19786.94	27414.87	33733.68
Kotak Mahindra Bank	3222.7	3676.59	4970.28	7157.59	9203.15
Federal Bank	2910.43	3831.16	4204.15	4568.84	6090.73
City Union Bank	928.08	1100.11	1375.81	1903.9	2462.39
ING Vysya Bank	2787.56	2853.11	3349.02	4526.57	5588.46
Karnataka Bank	2270.55	2354.68	2662.61	3447.27	4161.93
J&K Bank	3249.6	3473.12	4077.89	5169.7	6620.53
Karur Vysya Bank	1711.3	2004.93	2482.03	2620.52	4694.99

Source: www.moneycontrol.com

TABLE 8: CASH FLOWS OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA (Rs. in Crores)

Public Sector Banks	2009	2010	2011	2012	2013
State Bank of India	32925.18	-6926.18	35039.34	-25752.4	17657
Bank of India	4043.87	9468.87	6079.86	-2598.73	20124.6
Central Bank of India	-588	6965.7	-3934.21	-1156.2	-34.39
Oriental Bank of Commerce	2010.39	2374.76	4488.83	-2891.14	-137.33
Punjab National Bank	2582.42	2060.42	6217.65	-863.18	-1692.65
United Bank of India	538.06	-32.41	949.94	-50.49	1711.31
Indian Overseas Bank	580.58	-1097.26	2194.02	4242.44	-1002.68
Allahabad Bank	-405.33	2531.46	1859.15	2997.83	-954.47
Dena Bank	1819.46	-742.59	294.29	142.39	4270.21
Indian Bank	-89	1429.38	449.11	251.05	825.32
Private Sector Banks	2009	2010	2011	2012	2013
ICICI Bank	8074.57	8907.13	-5960.84	2139.23	5188.21
HDFC Bank	564.74	12435.78	-273.56	-8731.19	6342.44
AXIS Bank	2512.66	189.54	6204.75	-7474.74	6501.04
Kotak Mahindra Bank	-964.33	1159.59	170.72	163.57	1054.61
Federal Bank	691.61	-713.71	1024.91	-215.75	187.44
City Union Bank	68.16	215.07	186.12	-150.21	634.38
ING Vysya Bank	-902.51	754.42	-505.62	709.14	-397.09
Karnataka Bank	-160.7	344.81	180.51	-120.49	88.23
J&K Bank	837.52	-660.52	-1065.43	905.06	950.45
Karur Vysya Bank	187.59	-139.1	539.4	260.99	-259.43

Source: www.moneycontrol.com

TABLE 9: CAPITAL EXPENDITURE OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA (Rs. in Crores)

Public Sector Banks	2009	2010	2011	2012	2013
State Bank of India	3574.41	4117.73	4764.19	5133.87	6595.71
Bank of India	2421.48	2286.74	2365.93	2722.96	2778.93
Central Bank of India	2277.99	2343.29	2425.38	2473.91	2684.75
Oriental Bank of Commerce	1382.94	1381.97	1373.69	1399.28	1210.5
Punjab National Bank	2397.11	2513.47	3105.6	3168.86	3357.68
United Bank of India	623.35	650.42	817.03	791.72	857.05
Indian Overseas Bank	1696.79	1691.9	1676.1	1729.1	1847.04
Allahabad Bank	1109.75	1118.27	1148.23	1197.73	1251.52
Dena Bank	405.07	407.06	403.6	405.16	112.12
Indian Bank	1589.65	1557.55	1550.73	1625.42	1689.99
Private Sector Banks	2009	2010	2011	2012	2013
ICICI Bank	3801.62	3212.69	4744.26	4614.69	4647.06
HDFC Bank	1706.73	2122.81	2170.65	2347.19	2703.08
AXIS Bank	1015.41	1165.19	2273.15	2259.33	2355.64
Kotak Mahindra Bank	213.36	427.65	425.61	449.97	464.42
Federal Bank	232.84	280.78	289.77	289.82	326.14
City Union Bank	41.29	63.04	68.53	97.73	141.28
ING Vysya Bank	285.32	288.33	489.26	490.21	483.74
Karnataka Bank	138.49	148.008	145.53	152.23	166.96
J&K Bank	196.29	202.81	391.63	415.1	456.18
Karur Vysya bank	115.7	135.06	196.66	244.37	320.41

Source: www.moneycontrol.com

TABLE 10: TOTAL DEBT OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA (Rs. in Crores)

Public Sector Banks	2009	2010	2011	2012	2013
State Bank of India	795786.81	907127.83	1053501.8	1170652.93	1371922.3
Bank of India	199195.46	252161.84	320907.19	350330.26	417207.17
Central Bank of India	132076.1	169434.11	192244	209092.93	244343.82
Oriental Bank of Commerce	99090.81	125144.62	144693.47	161223.97	183576.85
Punjab National Bank	214134.86	268592.17	344488.42	416852.75	431180.98
United Bank of India	54992.97	69095.66	80731.34	94036.45	105594.24
Indian Overseas Bank	106664.17	119776.91	164584.15	202048.03	225458.21
Allahabad Bank	85908.83	111491.23	138805.34	198687.56	188839.19
Dena Bank	43102.74	52906.2	65901.28	81047.75	105620.81
Indian Bank	73112.61	89185.02	107904.55	125676.66	144842.72
Private Sector Banks	2009	2010	2011	2012	2013
ICICI Bank	285671.51	296280.17	335156.39	395664.87	437955.12
HDFC Bank	145497.42	180320.13	222980.47	270552.96	329253.58
AXIS Bank	127559.59	158469.77	215505.68	254175.97	296564.69
Kotak Mahindra Bank	21549	30026.98	40984.92	55132.04	71439.39
Federal Bank	26705.31	32947.13	37604.71	44903.14	53178.15
City Union Bank	8206.77	10324.62	13100.44	16689.46	20781.5
ING Vysya Bank	27042.34	29536.69	34341.16	40891.91	47845.26
Karnataka Bank	20337.26	24072.29	28422.78	32755.39	37635.98
J&K Bank	34000.73	38337.37	45780.59	54587.86	65295.62
Karur Vysya bank	15124.43	19747.73	25251.74	34084.15	42652.32

Source: www.moneycontrol.com

**TABLE 11: LIQUIDITY OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA (Rs. in Crores)**

Public Sector Banks	2009	2010	2011	2012	2013
State Bank of India	104403.8	96183.85	122874.15	97163.17	114820.16
Bank of India	21761.25	31230.13	37309.99	34714.45	54835.86
Central Bank of India	12252.25	19217.02	15282.8	14126.6	19092.21
Oriental Bank of Commerce	12225.13	14599.9	19088.73	8726.95	8589.62
Punjab National Bank	21413.14	23473.57	26961.22	28828.04	27135.38
United Bank of India	6410.21	6377.8	7327.74	7277.25	8988.55
Indian Overseas Bank	10921.9	9825.44	12018.65	16261.1	15258.41
Allahabad Bank	6636.76	9168.23	11027.38	14025.21	13070.73
Dena Bank	5857.12	5114.52	5407.81	5551.18	9821.41
Indian Bank	6683.82	8113.2	8562.31	8813.36	9638.68
Private Sector Banks	2009	2010	2011	2012	2013
ICICI Bank	29966.56	38873.69	34090.08	36229.31	41417.46
HDFC Bank	17506.62	29942.39	29668.84	20937.72	27280.17
AXIS Bank	15016.9	15206.44	21408.65	13933.91	20434.96
Kotak Mahindra Bank	1140.46	2300.26	2370.98	8197.55	3689.16
Federal Bank	2745.48	3437.1	2723.39	5748.3	3532.55
City Union Bank	885.08	1100.16	1286.32	1136.11	1770.49
ING Vysya Bank	2282.25	3027.05	2521.42	3230.56	2833.47
Karnataka Bank	1460.73	1805.55	1986.06	1865.57	1953.44
J&K Bank	5274.76	4614.24	3548.81	4453.86	5674.33
Karur Vysya bank	1374.17	1235.06	1774.46	2035.45	1796.02

Source: www.moneycontrol.com

**TABLE 12: PROFITABILITY OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA (Rs. in Crores)**

Public Sector Banks	2009	2010	2011	2012	2013
State Bank of India	9121.23	9166.39	7370.35	11707.29	14104.98
Bank of India	3007.35	1741.07	2488.71	2677.52	2749.35
Central Bank of India	571.24	1058.23	1252.41	533.04	1014.96
Oriental Bank of Commerce	905.42	1135.51	1503.45	1142.35	1328.44
Punjab National Bank	3090.88	3905.36	4433.5	4884.2	4747.67
United Bank of India	184.71	322.36	523.97	632.53	391.9
Indian Overseas Bank	1325.79	706.69	1072.54	1054.93	567.23
Allahabad Bank	768.6	1206.33	1423.11	1866.79	1185.21
Dena Bank	422.66	511.25	611.63	803.14	810.38
Indian Bank	405.75	408.49	504.48	759.77	1008.74
Private Sector Banks	2009	2010	2011	2012	2013
ICICI Bank	3758.13	4024.98	1551.38	6465.26	8325.47
HDFC Bank	2244.94	2948.7	3926.4	5167.09	6726.28
AXIS Bank	1815.36	2514.53	3388.49	4242.21	5179.43
Kotak Mahindra Bank	276.1	561.11	818.18	1085.05	1360.72
Federal Bank	368.05	500.49	464.55	587.08	776.8
City Union Bank	122.13	152.76	215.05	280.25	322.02
ING Vysya Bank	188.78	242.22	318.65	456.3	612.96
Karnataka Bank	266.71	167.12	204.61	246.07	340.08
J&K Bank	409.84	512.38	615.2	803.25	1055.1
Karur Vysya bank	235.84	336.03	415.59	501.72	550.32

Source: www.moneycontrol.com

**TABLE 13: DIVIDEND PAYOUT RATIOS OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA (in %)**

Public Sector Banks	2009	2010	2011	2012	2013
State Bank of India	18.09	17.04	18.69	16.36	17.02
Bank of India	15.56	22.6	16.53	16.07	23.17
Central Bank of India	16.28	9.7	15.31	30.49	30.05
Oriental Bank of Commerce	21.7	21.84	19.02	18.5	18.49
Punjab National Bank	22.47	19.62	14.86	14.41	22.03
United Bank of India	0	18.86	13.39	13.83	20.45
Indian Overseas Bank	20.1	27.24	30.53	35.89	26.63
Allahabad Bank	15.83	22.65	19.18	15.46	23.84
Dena Bank	8.95	12.45	13.31	14.55	22.6
Indian Bank	19.94	20.79	18.46	18.02	17.34
Private Sector Banks	2009	2010	2011	2012	2013
ICICI Bank	31	32.33	28.61	29.22	26.17
HDFC Bank	19.1	19.15	17.35	17.67	17.74
AXIS Bank	20.98	20.64	15.57	14.35	15.25
Kotak Mahindra Bank	8.04	4.55	4.02	3.7	3.5
Federal Bank	18.41	19.37	22.66	18.47	0
City Union Bank	20.33	21.03	14.84	13.89	13.68
ING Vysya Bank	10.45	12.39	9.9	13.57	12.82
Karnataka Bank	29.78	33.13	24.8	24.59	20.25
J&K Bank	21.67	22.71	19.29	19.16	21.93
Karur Vysya bank	29.54	21.3	28.86	27.77	24.73

Source: www.moneycontrol.com

## OPERATIONAL EFFICIENCY OF PUBLIC SECTOR BANKS IN INDIA: AN ANALYTICAL STUDY

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### ABSTRACT

*The Growth and Financial Stability of a country depends on financial soundness of its banking sector. The banking sector in India had undergone a plethora of shifts including nationalization of banks and LPG Policy of Govt. of India. The year 2008-2009 was a difficult year for Indian Banks due to global financial crisis. Now, it's time for the banks to move from per employee business to more realistic method in measuring efficiency. This paper focuses on operational efficiency of Public Sector Banks in India, which measures efficiency as ratio of output index to an index of inputs used. The findings reveal that, out of the 28 PSBs in India, 13 banks achieved High Level of Efficiency in its operation with IDBI Bank Ltd at the top. Further, factors such as Size of Assets, network of branches and staff strength do not have much influence over operational efficiency of the PSBs.*

### KEYWORDS

public sector banks, financial stability, LPG policy.

### INTRODUCTION

During the 20<sup>th</sup> century, in most of the nations, domestic banking was generally subjected to heavy regulations and financial repression. The growth and financial stability of the country depend on the financial soundness of its banking sector. It is also a fact that the rate of economic growth of any country has a direct link with the efficiency of its financial sector.

India being developing country largely depends on banking system for economic growth as it forms an integral and dominant part of financial system. The financial sector particularly the banking sector in India had already undergone a plethora of paradigm shifts since independence in tune with changing thrust on economic policy initiated in the country. The first phase of banking policy regime named financial repression was marked by various kinds of strict regulatory framework such as socialization of commercial banks in 60s, first phase of nationalization in 1969, second phase of nationalization of banks in 1980, etc. and therefore PSBs acquired prominent place in the financial sector of the economy. Since nationalization PSBs have achieved phenomenal and unparalleled progress in expanding geographical coverage, in mobilizing savings and providing funds for investment.

By 1991, these banks were plagued with poor profitability and undercapitalization with a high proportion of NPA. The quality of customer service was unsatisfactory and PSBs significantly lagged behind international standards in terms of introducing new technologies and product innovations. The poor financial condition of banks had an adverse effect on the investment climate in the country. Even, the state regulations over PSBs made them economically unviable, inefficient, uncompetitive, less profitable and technologically backward. In 1991, Govt. of India set up Narasimham Committee. The committee brought First Phase of Banking Reforms in 1991 and Second Generation Reforms in 1998. LPG policy of Govt. of India transformed Indian Banking from highly regulated to more market oriented system and thrown open many challenges to Indian Financial Sector.

The year 2008-09 was a year that witnessed the greatest global financial crisis and it was a very difficult year for the Indian Banks. Many large Indian banks were facing the problem of achieving a satisfactory financial performance.

Enhancing efficiency and performance of PSBs is a key objective of economic reforms in many countries including India. It is believed that private ownership helps to improve efficiency and performance. Accordingly, the Indian Govt. started diluting its equity in PSBs from early 1990s in a phased manner. Commercial Banks in India use Business per employee as a measure of their Operational Efficiency. Human Resource is not the only factor which affects efficiency; there are other resources to accomplish the organizational goals. In the post-reform banking scenario many other parameters have come into light to judge the Productivity or Operational Efficiency of banks. Productivity or efficiency of units can be measured as the ratio of output index to an input index. But there has been little research on Operational Efficiency of PSBs; hence an attempt has been made in this study to measure the Operational Efficiency of PSBs in India.

### OBJECTIVES OF THE STUDY

The major objective of the study is to analyze the operational efficiency of PSBs in India. The specific objectives of the study are;

- a) To measure the operational Efficiency of PSBs in India.
- b) To Rank the banks based on Operational Efficiency.
- c) To identify the factors influencing Operational Efficiency of PSBs.

### LITERATURE REVIEW

In the past, various studies relating to Operational Efficiency of banks have been conducted by researchers.

Sathyanarayan K, (1996 and 2000) has measured the Operational Efficiency of banks. In the study, he has identified the various factors as inputs and outputs of bank.

C. Gunjan M. Sanjeer (2009) conducted a study on efficiency of Indian PSBs and founds that the efficiency of PSBs did not increased during the period 2003- 07.

V.K. Shobhana (2010) in her study on "Operational Efficiency of PSBs in India" concluded that the Operational Efficiency of banks assumed greater significance in the prevailing financial and economic scenario. Of the 27 PSBs in India, only 9 banks had achieved High Level of Efficiency and 11 banks' efficiency level is found to be low. Oriental Bank of Commerce stood at the top in Operational Efficiency and Indian Bank secured the lowest ranking of 27. There is no relationship between bank's efficiency level and factors such as Size of Assets, Branch Network and Staff Strength.

### RESEARCH METHODOLOGY

The data collected for the study pertains to a period of eight years from 2003-04 to 2010-11. The study is based on secondary data. The required information relating to the banks under study were collected from the database of Reserve Bank of India website. The numbers of PSBs in India are 27 as on 31<sup>st</sup> March 2011 comprising of 20 Nationalized Banks, SBI and seven SBI associates. But the study covers 28 banks since State Bank of Saurashtra merged with SBI in the year 2009-10 and IDBI Bank Ltd.(Financial Institution) converted into IDBI Bank from 2005-06. All these banks were included in the study.

EXHIBIT 1: ABBREVIATIONS OF BANK NAMES USED IN THE STUDY

Abbrvn.	Name of the Bank	Abbrvn.	Name of the Bank
SBI	State Bank of India	CBI	Central Bank of India
SBBJ	State Bank of Bikaner & Jaipur	COB	Corporation Bank
SBH	State Bank of Hyderabad	DB	Dena Bank
SBIN	State Bank of Indore	IB	Indian Bank
SBM	State Bank of Mysore	IOB	Indian Overseas Bank
SBP	State Bank of Patiala	OBC	Oriental Bank of Commerce
SBT	State Bank of Travancore	PSB	Punjab & Sind Bank
SBS	State Bank of Saurashtra	PNB	Punjab National Bank
ALB	Allahabad Bank	SB	Syndicate Bank
AB	Andhra Bank	UCOB	UCO Bank
BOB	Bank of Baroda	UBI	Union Bank of India
BOI	Bank of India	UNBI	United Bank of India
BOM	Bank of Maharashtra	VB	Vijaya Bank
CB	Canara Bank	IDBI	IDBI Bank Ltd.

## ANALYSIS

In this study, the Operational Efficiency of PSBs is measured as ratio of output index to an index of input used. (Sathyanarayan K, 2000)

Input factors:

1. Network of Branches
2. No. of Staff
3. Wage Bill
4. Non-wage Operating Expenses

Output factors:

1. Deposits
2. Non-Deposits working funds
3. Advances
4. Investments
5. Interest Spread (Int. earned-Int. Expenses)
6. Non-Interest Income
7. Net profits

In order to facilitate the comparison of one bank to other, irrespective of size, location etc., the market share of each factor in percentage terms is taken into account instead of absolute levels. All the PSBs are considered as market for this study. Similarly, all the incorporated input and output factors are represented in the model for measuring Operational Efficiency.

### AVERAGE INDEX OF INPUT BASKET SHARE

One of the Components of Efficiency / productivity Ratio is the average index of input basket share. The average index of input basket share has been calculated considering the mean market share of all the input factors such as number of branches, number of staff, Wage Bill and non-wage operating expenses.

TABLE NO. 1: INPUT BASKET SHARE OF NATIONALIZED BANKS (In percentage)

Name of the Bank	Branches	No. of Staff	Wage bill	Non-wage op. Expenses	Avg. Index - All input factors
ALB	4.06	2.62	2.47	2.83	3.00
AB	2.42	1.74	1.91	2.33	2.10
BOB	5.49	5.14	5.88	5.77	5.57
BOI	5.33	5.48	5.43	5.63	5.47
BOM	2.61	1.84	1.69	1.77	1.98
CB	5.20	7.77	5.55	5.83	6.09
CBI	6.44	4.89	4.44	3.08	4.71
COB	1.70	1.52	1.39	2.62	1.81
DB	2.09	1.36	1.41	1.47	1.58
IB	2.90	2.78	3.09	2.16	2.73
IOB	3.34	3.30	3.54	2.84	3.26
OBC	2.42	1.92	1.93	2.97	2.31
PSB	1.58	1.23	1.52	0.88	1.30
PNB	8.16	7.55	8.12	6.39	7.56
SB	4.01	3.36	3.50	2.90	3.44
UCOB	3.66	3.23	3.01	2.14	3.01
UBI	4.48	3.58	3.20	4.18	3.86
UNBI	2.67	2.22	2.03	1.49	2.10
VB	1.96	1.52	1.41	2.08	1.74
IDBI	0.76	1.04	1.44	3.98	1.81

Source: - Compiled and Computed from RBI website.

Table No.1 shows that Average index of input factors stood at the maximum of 7.56% for Punjab National Bank. Average market share of the component of the overall index namely branches, No. of staff, wage bill were greater than 7% for this bank with factor contributed to the higher input share of the bank. The next higher indices were registered by Canara Bank (6.09%), Bank of Baroda, (5.57%), Bank of India (5.47%) and Central Bank of India (4.71%). Bank with market share lower than four were: - Union Bank of India (3.86%), Syndicate Bank (3.44%), Indian Overseas Bank (3.26%), UCO Bank (3.01%). Punjab and Sind Bank operated the lowest average market share of index of all input factors at 1.30%.



TABLE NO. 2: INPUT BASKET SHARE OF SBI AND ASSOCIATES (In percentage)

Name of the Bank	Branches	No. of. Staff	Wage bill	Non-wage op. Expenses	Avg. Index - All input factors
SBI	19.34	26.36	28.65	27.06	<b>25.35</b>
SBBJ	1.63	1.61	1.52	1.64	1.60
SBH	1.90	1.74	1.62	1.84	1.78
SBIN	0.89	0.86	0.75	1.08	0.90
SBM	1.21	1.29	1.14	1.32	1.24
SBP	1.53	1.54	1.29	1.64	1.50
SBT	1.36	1.54	1.39	1.42	1.43
SBS	0.85	0.97	0.68	0.66	0.79

Source: - Compiled and Computed from RBI website.

Table No. 2 indicates the average index of input basket share of State Bank of India and SBI associates. It shows that, of all the factors in the State Bank of India's input basket share, Wage Bill stood at the highest of 28.65%. The mean value of average index of input factors stood at 25.35%. As regards the avg. index of all input factors of the associates of SBI, Banks with market share greater than 1% and lower than 2% were State Bank of Hyderabad (1.78%), State bank of Bikaner and Jaipur (1.60%), State Bank of Patiala (1.50%), State Bank of Travancore (1.43%) and State Bank of Maharashtra (1.24%). State Bank of Saurashtra (0.79%) and State Bank of Indore (0.90%) recorded average index of all input factors lower than one.

#### AVERAGE INDEX OF OUTPUT BASKET SHARE

The average index of output basket share has been calculated considering the mean market share of all the output factors such as Deposits, Non-Deposit, Working Funds, Advances, Investment, Interest spread, Non-Interest Income and Net Profit.

TABLE NO. 3: OUTPUT BASKET SHARE OF NATIONALIZED BANKS (In percentage)

Name of Bank	Deposits	Non Deposit Funds	Working Advances	Investment	Interest spread	Non-interest Income	Net Profit	Average index all output factors
ALB	2.71	2.70	2.60	2.82	3.52	2.08	3.05	2.78
AB	2.05	1.77	1.97	1.62	7.13	2.02	2.57	2.73
<b>BOB</b>	6.30	6.62	5.93	4.72	5.66	4.98	6.02	<b>5.75</b>
BOI	6.13	5.57	6.24	4.97	4.98	5.64	5.90	5.63
BOM	1.82	1.08	1.47	1.85	1.40	1.65	1.19	1.49
<b>CB</b>	6.70	6.54	6.44	5.85	5.16	6.27	7.05	<b>6.29</b>
CBI	4.43	2.54	3.70	4.34	3.18	2.51	2.31	3.30
COB	2.48	2.83	2.16	2.13	1.88	2.29	2.79	2.37
DB	1.45	1.02	1.29	1.35	1.13	1.38	1.07	1.24
IB	2.47	2.51	2.17	2.61	2.51	2.63	3.33	2.60
IOB	3.30	2.78	3.12	3.19	3.14	2.66	3.62	3.12
OBC	3.22	3.75	2.99	2.81	2.45	1.77	2.95	2.85
PSB	1.14	0.69	1.00	1.17	1.02	0.88	0.87	1.00
<b>PNB</b>	7.08	7.72	6.77	6.57	7.23	6.62	8.42	<b>7.20</b>
SB	3.57	2.18	3.37	3.00	2.74	2.25	2.74	2.86
UCOB	3.33	1.43	3.08	3.01	2.11	2.14	1.90	2.43
UBI	4.48	4.05	4.35	4.02	3.75	2.79	4.75	4.03
UNBI	1.94	0.76	1.48	2.13	1.40	1.22	1.21	1.45
UB	1.87	1.20	1.59	1.77	1.39	1.18	1.41	1.49
IDBI	3.59	5.80	5.61	4.98	7.87	3.69	3.01	4.94

Source:- Compiled and Computed from RBI website.

Table No. 3 Shows the Average Index of output factors at the highest of 7.20% for Punjab National Bank. The average market share of the components of the overall Index were greater than 7 % for this Bank which factors contributed to the higher output share. The next higher indices were registered by Canara Bank (6.29%), Bank of Baroda (5.75%), Bank of India (5.63%). Punjab and Sind Bank presented the lowest index of all output factors at 1 %.

TABLE NO. 4: OUTPUT BASKET SHARE OF SBI AND ASSOCIATES (In Percentage)

Name of Bank	Deposits	Non Deposit Funds	Working Advances	Investment	Interest spread	Non-interest Income	Net Profit	Average index all output factors
<b>SBI</b>	20.46	28.14	23.34	26.04	22.18	33.34	24.65	<b>25.45</b>
SBBJ	1.34	1.19	1.34	1.23	1.27	1.76	1.28	1.34
SBH	2.06	1.88	1.90	2.11	1.83	2.06	2.11	1.99
SBIN	0.95	0.88	1.04	0.85	0.79	0.95	0.94	0.91
SBM	1.05	0.96	1.08	0.97	0.96	1.31	1.13	1.07
SBP	1.92	1.80	1.88	1.71	1.42	1.75	1.76	1.75
SBT	1.51	1.18	1.54	1.45	1.34	1.59	1.60	1.46
SBS	0.64	0.43	0.56	0.72	0.58	0.59	0.37	0.55

Source:- Compiled and Computed from RBI website.

Table No. 4 indicate the average index of output basket share of SBI and associates of SBI. It shows that SBI's output Basket share of average index of all output factors stood at 25.45%. All the output factors of this bank contributed to this higher index.

As regard the average Index of all output factor of the associates of SBI, it was found that a greater than 1% average Index was registered by State Bank of Hyderabad (1.99%) , State Bank of Patiala (1.75%) , State Bank of Travancore (1.46%), State Bank of Bikaner and Jaipur (1.34%), and State Bank of Mysore (1.07%). State Bank of Indore recorded lower output factor Index at 0.91% and State Bank of Saurashtra recorded the lowest average output index at 0.55 %.

#### OPERATIONAL EFFICIENCY OF PUBLIC SECTOR BANKS

Operational Efficiency of 28 PSBs has been determined by computing the Efficiency Ratio by using the following formula.

$$\text{Efficiency Ratio} = \frac{\text{Average Index of All Output Factors} \times 100}{\text{Average Index of All Input Factors}}$$

TABLE NO. 5: OPERATIONAL EFFICIENCY RATIOS AND RANKINGS

Name of the Bank	Efficiency / Productivity Ratio	Rank	Name of the Bank	Efficiency / Productivity Ratio	Rank
IDBI	272.93	01	PNB	95.24	15
COB	130.94	02	IB	95.24	15
AB	130.00	03	ALB	92.67	17
OBC	123.38	04	SBM	86.29	18
SBP	116.67	05	VB	85.63	19
SBH	111.79	06	SBBJ	83.75	20
UBI	104.40	07	SB	83.14	21
CB	103.28	08	UCOB	80.73	22
BOB	103.23	09	DB	78.48	23
BOI	102.93	10	BOM	75.25	24
SBT	102.10	11	PSB	74.62	25
SBIN	101.11	12	CBI	70.06	26
SBI	100.40	13	SBS	69.62	27
IOB	95.71	14	UNBI	69.05	28

As per Table No. 5 the Operational Efficiency of IDBI stood at the top with the highest Productivity Ratio of 272.73% followed by Corporation Bank ranking number 2 with Efficiency Ratio 130.94%. At the bottom level, United Bank of India with Operational Efficiency 69.05% secured the lowest ranking of 28.

#### LEVEL OF EFFICIENCY RATIOS OF SBI AND NATIONALIZED BANKS

The 28 PSBs were classified into three categories based on their Operational Efficiency such as High, Medium, & Low Level of Efficiency. Banks with Operational Efficiency at and above 100% were classified under High Level of Efficiency; banks with productivity ratio below 85% were classified under Low Level of Efficiency and banks with ratio above 85% but below 100% under Medium Level of Efficiency. This classification shows 13 banks under High Efficiency, 6 banks under Medium Efficiency and 9 banks under Low Efficiency groups.

#### FACTORS INFLUENCING OPERATIONAL EFFICIENCY

In order to understand the influence of factors such as size of assets, network of branches & number of staff over the Operational Efficiency of PSBs, the further analysis has been conducted as follows:

$$\text{Mean Productivity Ratio} = \frac{\text{Productivity Ratio of Bank}}{\text{No. of Banks}}$$

#### SIZE OF ASSETS AND OPERATIONAL EFFICIENCY

Based on the size of assets, the 28 PSBs were classified into three categories such as those with assets above Rs. 50,000 crore as large, assets of Rs. 25,000 crore to Rs. 50,000 crore as medium and those with assets value below Rs.25000 crore as small banks. 16 banks have large size of assets, 10 banks have medium size of assets & 2 banks have small size of assets.

TABLE NO. 6: SIZE OF ASSETS AND OPERATIONAL EFFICIENCY

Size of Asset	No. of Banks / Level of Productivity				Mean Productivity Ratio
	Low	Medium	High	Total	
Small	1 (50)		1 (50)	2 (100)	85.37
Medium	5 (50)	2 (20)	3 (30)	10 (100)	90.79
Large	3 (18.75)	4 (25)	9 (56.25)	16 (100)	110.08
<b>Total</b>	<b>9</b>	<b>6</b>	<b>13</b>	<b>28</b>	

**Note:** - All the figures in parentheses show in percentage.

As per Table No. 6, among the large sized assets groups 18.75% depicted Low Level of Efficiency and 50% of the small asset group banks have Low as well as High Level of Efficiency. Majority (56.25%) of the large size group of PSBs has High Level of Efficiency. While, higher percentage (50%) of the medium size assets groups presented Low Level of Efficiency. Large assets group bank presented highest Mean Productivity Ratio and the small assets group had lowest ratio.

#### NETWORK OF BRANCHES AND OPERATIONAL EFFICIENCY

The 28 PSBs were classified under three categories based on their network of branches such as large, medium and small level of branches. The banks with branches at and above 5000 were classified under large size of network of branches i.e. State Bank of India, banks with medium size of network of branches are 17 (>1000 up to 5000 branches), under small size of network of branches are 10 (<1000 branches)

TABLE NO. 7: NETWORK OF BRANCHES AND OPERATIONAL EFFICIENCY

Network of Branches	No. of Banks / Level of Productivity				Mean Productivity Ratio
	Low	Medium	High	Total	
Small	3 (30)	1 (10)	6 (60)	10 (100)	115.63
Medium	6 (35.29)	5 (29.42)	6 (35.29)	17 (100)	93.5
Large			1 (100)	1 (100)	100.23
<b>Total</b>	<b>9</b>	<b>6</b>	<b>13</b>	<b>28</b>	

**Note:** - All the figures in parentheses show in percentage.

It is evident from Table No. 7 that among the PSBs with small network of branches 60% each revealed High Level of Efficiency. With the medium network of branches 35.29 % each depicted low as well as High Level of Efficiency. High percentage of the large network PSBs 100% had High Level of Efficiency. Banks with small network of branches had High Mean Productivity Ratio.

#### STAFF STRENGTH AND OPERATIONAL EFFICIENCY

The 28 PSBs were classified into three categories based on their number of staff such as large, medium and small size of staff strength. Bank with size of staff strength at and above 25000 were classified as large, banks with medium size of staff strength are > 13000 up to 25000 and small size of staff strength are <13000. This classification shows 8 banks of large size of staff strength, 9 banks of medium size and 11 banks of small size of staff strength.

TABLE NO. 8: STAFF STRENGTH AND OPERATIONAL EFFICIENCY

Size of Strength	No. of Banks / Level of Productivity				Mean Productivity Ratio
	Low	Medium	High	Total	
Small	4 (36.36)	2 (18.18)	5 (45.46)	11 (100)	109.72
Medium	3 (33.34)	3 (33.33)	3 (33.33)	9 (100)	107.46
large	2 (25)	1 (12.5)	5 (62.5)	8 (100)	95.17
<b>Total</b>	<b>9</b>	<b>6</b>	<b>13</b>	<b>28</b>	

**Note:** - All the figures in parentheses show in percentage.

Table No. 8 shows that large percentage (62.5%) with large staff had High Level of Efficiency. Majority of the public sector banks (45.46%) with small staff strength had high level of Operational Efficiency. Banks with small staff strength presented High Mean Productivity Ratio and bank with large staff strength had a lowest ratio.

#### FINDINGS

Among the Nationalized Banks, Punjab National Bank presented the maximum average market share of index of all input factors at 7.56% and highest average index of all output factors at 7.20%. SBI's basket share of average index of input factors stood at 25.35% and basket share of average index of all output factors stood at 25.45%.

Large assets group bank achieves Highest Mean Productivity Ratio and the small assets group bank have lowest ratio. . Banks with small network of branches achieves Highest Mean Productivity Ratio. Banks with small staff strength achieves High Mean Productivity ratio and banks with large staff strength had a lowest ratio.

#### CONCLUSION

Operational Efficiency of banks assumes greater significance in the prevailing financial and economic scenario. Of the 28 PSBs in India 13 banks achieved High Level of Efficiency, 6 banks had Medium Level of Efficiency and 9 bank's efficiency is found to be low. IDBI Bank stood at the top in Operational Efficiency and United Bank of India secured 28<sup>th</sup> rank.

To conclude, there is no relationship between bank's efficiency and factors such as Size of Assets, Branch Network and Staff Strength. Thus, it may be a paradox for the policy-makers so as to what should be the ideal size of banks.

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**IMPACT OF SOCIAL RESPONSIBILITY PARTICIPATION IN SOCIETY**

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**ABSTRACT**

*Social responsibility entails developing businesses with a positive relationship to the society which they operate in. It is an ethical theory that an entity, be it an organization or individual, has an obligation to act to benefit society at large. Social responsibility is a duty of every individual has to perform so as to maintain a balance between the economy and the ecosystems. Businesses can use ethical decision making to secure their businesses by making decisions comfortable for society well being. Social responsibility focus areas are healthcare, education, sustainable livelihood, infrastructure and espousing social causes. This paper will focus the society well being, necessary service to the needy people and sense of awareness of social issues.*

**KEYWORDS**

Social Responsibility, Initiatives, Impact, Social, Cultural, Environmental, Welfare.

**INTRODUCTION**

 Social responsibility is a form of self-regulation that businesses adopt as a part of their corporate conscience and citizenship. The business goal of social responsibility is to encourage the company's actions toward the positive impact of consumer, community and employee responsibility. Many companies believe they have a responsibility to "give back" to society. This focus includes contributions of time and money, a duty to provide environmentally friendly products and services, and a desire to improve the lives of individuals here and around the globe. Such socially responsible companies see to it that this "consciousness" permeates everything they do. As such, socially conscious companies have stepped up their efforts with increasing effectiveness and productivity. It is an impressive movement and one that invites society at large to do even more. The individual social responsibility includes the engagement of each person towards the community where he lives, which can be expressed as an interest towards what's happening in the community, as well as in the active participation in the solving of some of the local problems. Each community lives its own life that undergoes a process of development all the time, making donations for significant for the society causes – social, cultural or ecological. Being socially responsible not only requires participating in socially responsible activities like recycling, volunteering and mentoring, but to actually make it a lifestyle. Only through a commitment to embrace and embed social responsibility into your personal value and belief system can you truly become socially responsible in all you do. This paper emphasizes the requirement of social responsibility initiatives and activities into various communities in this world.

**STATEMENT OF THE PROBLEM**

Running a business in a socially responsible way is a challenging task. The businesses of today have to consider more than just profitability if they are to keep their customers, employees, shareholders and communities happy. The balancing act of effecting positive social change while exceeding strategic company objectives is one that many companies are still trying to master. One of the serious challenges that businesses face when becoming involved in corporate social responsibility is growing consumer cynicism. Consumers now recognize that for many organizations, social responsibility is simply a public relations campaign in disguise. Even businesses that are genuine in their commitment to social responsibility face the challenge of winning over customers. Businesses need to be careful to not be seen boasting about their socially responsible endeavors. Sustainability practices have to be employed company-wide and then tracked or measured. Corporate social responsibility refers to a business practice that involves participating in initiatives that benefit society by the way consumers' awareness about global social issues continues to grow.

**OBJECTIVES**

1. To make the society living in a comfortable manner
2. To provide necessary service to the needy people
3. To make a sense of awareness of social issues.

**METHODOLOGY**

Secondary data has been used for this study. The data sources for this study like reports, magazines, bulletins, papers, journals, dissertation and thesis.

**NEED FOR THE STUDY**

Social responsibility is an obligation to act to benefit society at large. It is a duty of every individual has to perform the same so as to maintain a balance between the economy and the ecosystems. Social responsibility to employees extends beyond terms and conditions of the formal contract of employment and gives recognition to the workers as a human being. People today have wider expectations of the quality of working life which is included justice, treatment, opportunities for consultation and participation, training in new skill and technologies, effective personal and industrial relations policies, and provision of social and leisure facilities.

**SIGNIFICANCE OF THE STUDY**

Every business operates within a society. It uses the resources of the society and depends on the society for its functioning. This creates an obligation on the part of business to look after the welfare of the society. So all the activities of the business should be such that they will not harm, rather they will protect and contribute to the interests of the society. Social responsibility of business refers to all such duties and obligations of business directed towards the welfare of society. These duties can be a part of the routine functions of carrying on business activity or they may be an additional function of carrying out welfare activity.

**PROMOTE AND IMPROVE THE COMMUNITIES**

Organization is the part of the society and it needs to connect the society to deliver fantastic service for its existence. It is the ethical thing to do by the business organizations to protect the welfare of the society. A dynamic organization need to ensure to perform such activities like producing goods and services that people need, creating jobs for society, paying fair wages, and ensuring worker safety. A number of leading companies have taken steps to develop more ethical cultures and system by involving individual employees in corporate affairs. To provide or support some benefits to the workers will lead to a good community in the business organizations. Good communication in the internal business would be leads to avoid conflicts of each other, workers enjoy their work and work out

more efficiency. The quality of goods and services of the organization therefore increase. This will lead to profitable to the organization's business. Therefore, the social responsibility is important in internal environment of the business too.

Social responsibility includes providing good value for money, the safety and durability of products or services, standard of after-sales service, prompt and courteous attention to queries and complaints, long-term satisfaction, adequate supply of products or services, and spare and replacement parts, fair standards of advertising and trading, full and unambiguous information to potential customers. Increasing concern for social responsibilities to consumers can be seen by the activities of such bodies as the Consumers Association, and the number of Television and Radio Programmed devoted to this subject. Social initiatives taken by organizations tend to promote goodwill, public favor, and corporate trust, and these may contribute well enough for the value of the organization. Therefore, socially responsible would acts enhance an organization's image and business in general.

### IMPACT OF SOCIAL RESPONSIBILITY

Some organizations extend the range of social responsibilities in terms of giving recognition to the needs of developing countries, limiting the extent of political involvement or campaigning, donations or sponsorship to arts, educational, research institutions, sporting organizations and charities. Organizations have a responsibility not to misuse the scarce factors of production upon which the wealth of the country depends. Organizations have a responsibility to society, to respect environmental considerations and take care of amenities like the effects and potential dangers of pollution, noise, disposal of waste, appearance of new buildings, transportation policies such as the routing of heavy vehicles through narrow village roads and avoidance of excessive packaging and more use of biodegradable materials. All of that must be think off since the decision making of the organizations to have their process of production. Organizations should, of course, respect and obey the law which is set up of government even where they regard it as not in their best interests. But what is debatable is the extent to which organizations should co-operate voluntarily with actions requested by the government. Actions such as Restraint from trading with certain overseas countries, and the acceptance of controls over imports or exports and actions designed to combat inflation.

### SENSE OF AWARENESS OF SOCIAL ISSUES

#### • COMMUNITY DEVELOPMENT

Companies, businesses and corporations concerned with social responsibility align with appropriate institutions to create a better environment to live and work. Actions like corporation or business may set up a foundation to assist in learning or education for the public. This action will be viewed as an asset to all of the communities that it serves, while developing a positive public profile.

#### • PHILANTHROPY

Businesses involved in philanthropy make monetary contributions that provide aid to local charitable, educational and health-related organizations to assist under-served or impoverished communities. This action can assist people in acquiring marketable skills to reduce poverty, provide education and help the environment. Today corporate focuses on global initiatives for education, agriculture and health issues, donating computers to schools and so on.

#### • CREATING SHARED VALUE

Corporate responsibility interests are often referred to as creating shared value or CSV, which is based upon the connection between corporate success and social well-being. Since a business needs a productive workforce to function, health and education are key components to that equation. Profitable and successful businesses must thrive so that society may develop and survive. An example of how CSV works could be a company-sponsored contest involving a project to improve the management and access of water used by a farming community, to foster public health.

#### • SOCIAL EDUCATION AND AWARENESS

Companies that engage in socially responsible investing use positioning to exert pressure on businesses to adopt socially responsible behavior themselves. To do this, they use media and Internet distribution to expose the potentially harmful activities of organizations. This creates an educational dialogue for the public by developing social community awareness. This kind of collective activism can be affective in reaching social education and awareness goals. Integrating a social awareness strategy into the business model can also aid companies in monitoring active compliance with ethical business standards and applicable laws.

### CONCLUSION

Social responsibility is a voluntary effort on the part of business to take various steps to satisfy the expectation of the different interest groups such as owners, investors, employees, consumers, government and society or community. The activities of business towards the welfare of the society earn goodwill and reputation for the business. Business utilizes the available resources like power, water, land, roads, etc. of the society. So it should be the responsibility of every business to spend a part of its profit for the welfare of the society. The business goal of social responsibility is to encourage the company's actions toward the positive impact of consumer, community and employee responsibility. To actively contribute to the social and economic development of the communities in which we operate. Social responsibility always nurtures the way to build a better, sustainable way of life for the weaker sections of society and raises the country's human development index.

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**FOOD SECURITY IN WEST BENGAL, INDIA: IN TERMS OF BALANCE DIET****UTTAM HALDAR****ASST. PROFESSOR****BARRACKPORE RASTRAGURU SURENDRANATH COLLEGE****BARRACKPORE****ABSTRACT**

*The green revolution resulted in the attainment of self-sufficiency in food-grains at the national level is one of the India's major achievements in the post-independence period. Surplus stock of food grains and food grains export/import are two major indicators to claim attainment of self-sufficiency. As a result India was overcoming transitory food insecurity though chronic food insecurity at micro level exists in various parts of India despite mounting buffer stock. Existence of Chronic food insecurity is reflected in Global Hunger Index and National family and health survey 3. In this background the study is revisiting the thought that our country has overcome transitory food insecurity or not? To do this the estimated requirement of food-grains has compared with the net domestic production of Cereal in West Bengal. Food grain requirement has estimated with the help of dietary recommendation of Balance diet of ICMR and distribution of population by age and sex. The study shows that there was an excess requirement of food grains over the domestic production in the post liberalization period 1991, 2001, 2006 and 2011. Food gap as a percentage of total requirements in respective years was 37.99%, 43.70%, 33.34%, 46.20% in the above period. Hence in the sense of balance diet west Bengal (highest rice producing state in India) did not achieve self-sufficiency in cereal production. Study projected that cereal requirement in west Bengal will be 15577.2, 16223.7, 16853.68 thousand tone in the years 2016, 2021, 2026 respectively.*

**JEL CODES****I12, Q18, Q11, I39,****KEYWORDS**

Balance Diet, Cereal Requirement, Cereal Supply, Food Gap, Food Security.

**INTRODUCTION**

At the time of independence, the main problem that India had faced was to supply food grains to feed all Indians. Food crisis became more severe during initial years of third five year plan. Government of India signs a contact with United States government, with the law PL-480 to import wheat. Government then supplied food grains through Food Corporation Of India (FCI). To solve the food crisis it became necessary to attain food security at macro level. Government of India gave importance to attain self sufficiency in food grain and to increase purchasing power of all section of people through distribution of land and non land asset, employment generation etc. To attain self sufficiency in food grain governments of India introduced new and improve method of cultivation which contains HYV seeds, chemical fertilizer, pesticides, insecticides and deep-tube-well irrigation. India became more or less self-sufficient in cereals mainly in rice and wheat but deficit in pulses and oilseeds. The green revolution resulted in the attainment of self-sufficiency in food-grains at the national level is one of the India's major achievements in the post-independence period. It enhanced capacity to cope with inter year fluctuation in production (Giri 2006, Dev et.al 2010, Golait et.al 2006, Nasurudden et.al 2006). Table 1 shows surplus stock of food grains and food grains export/import are two major indicators to claim attainment of self-sufficiency.

Production and stock of food-grains has increased in India. It has enhanced capacity to cope with inter year fluctuation in production. As a result there has been a paradigmatic shifting in the concept of food security, from food availability and stability to household food security, and from assessment of input measures like comparing per capita consumption of food, per capita food energy intake with required norms to output indicators such as anthropometric measures and clinical signs of malnutrition like weight of newborn babies, weight under five years, weight and height because nutrition depends not only on the nutrient intake but also non-nutrient food attributes, privately and publicly provided inputs and health status. (Radhakrishna 2002)

Existence of chronic food insecurity at micro level in many parts of India has illustrated in various studies. The Global Hunger Index(GHI) 2009 ranks India at the bottom with 65th position (out of 84 countries) with a GHI of 23.90 and which the index characterizes as "alarming" food insecurity situation. About 50% of Indians children below three years of age are malnourished. India has largest number of malnourished children in the world. One third of India's adult population has a body mass index of less than 18.5. (IFPRI. 2009)

National family and health survey-3 (NFHS-3) reported that average percentage of undernourished children under five years for 26 sub-Saharan African countries was 25% about half of the Indian average of 46%. Weight and height of Indians have not shown significant improvement. 21.5% babies in India born with low weight, a problem begins at womb. Child malnutrition is higher in rural compare to urban implying a lower food intake. Majority of socially marginalized people lives in rural areas. Highest percentage of underweight and stunted children among social group was recorded for STs followed by SCs and among religious group was recorded for Muslim.

In this background the study will revisiting the thought that our country has overcome transitory food insecurity which is associated with the risk related to either access or availability of food. That means sufficient amount of food is available in contrast to the requirement at macrolevel.

**LITERATURE SURVEY**

The Literature Survey of the study has concentrated on the demand side matching with the objective i.e.to compare the estimated food requirement with the net domestic supply. In the literature of food security many demand systems is found with varying scales and assumption. Scholars in the past have projected India's food grain demand for 2020 (Bhalla et al. 2001, Kumar, 1998; Rosegrant et al., 1995 and 2002; Radhakrishna and Reddy 2004). These studies, in varying degrees have accounted the emerging trends of increasing animal product consumption and the resulting feed demand. However, most of the studies concentrated only on the grain demand. Demand elasticities are an important parameter in predicting food demand. The magnitude of these elasticities depends largely on the methodology used in computing the price and expenditure elasticity. Dyson and Hantche (2000) based on the spatial and temporal trends between 1987 and 1988 and between 1993 and 1994, have projected the grain and non-grain crop demand at the state level up to 2020. A two-stage budgeting framework is used in Mittal (2006) to model the consumption behavior of households. The model assumes that there is a non-linear relationship between income and expenditure. Quadratic equation is used as a specific case to nonlinear function. Since the model is quadratic in per capita expenditure it is named as the quad-AIDS (QUAIDS) model. The demand projections are made using the demand elasticities as derived from the QUAIDS model. Demand projection of cereal in India is 159.9 mt, 182.2 mt, 196 mt for the year 2011, 2021, 2026 respectively. Rosegrant et.al (1995), based on IMPACT model, used demand elasticity and technical coefficients synthesized from other sources, primarily from past studies, and have projected demand for total cereals in India at 237.3 million tons for the year 2020. Kumar (1998) computed the expenditure and price elasticities for food and non-food commodities using various econometric (Transcendental Logarithmic Demand System (TLDS), Normalized Quadratic Demand System (NQDS) and Linear Expenditure Demand System (LEDS) and non-econometric (Food Characteristic Demand System (FCDS) techniques. The total demand for cereals is projected to be 223.7 mt in 2010 and 265.7 mt in India for 2020 in Kumar's study. Praduman Kumara (2010) used translog cost function model and the system of factor demand equations has been derived. Using factor demand parameters, the output supply elasticities has been derived. Bhalla and Hazell (2001) computed demand for total cereals in 2020 as 374.7 million tonnes. This study used new estimates on livestock growth. These estimates are based on the IMPACT model and based on the assumptions of GDP

growth of 7.5-7.7 per cent. In Chand (2009) Per capita demand projections for year 2011-12 and 2020-21 were prepared separately for rural and urban population and for rice, wheat and coarse cereals based on the changes observed in consumption between 1993-94 and 2004-05, and by using income elasticity of demand for various foodgrains, growth rate in per capita income and rate of change in demand due to shift in preferences and taste. The basis of demand analysis in the paper of Seale et.al (2003) is the maximization of utility subject to budget constraint. Thamarajakshi (2001) estimated the total demand for cereals 2020 to be 274 million tones under different assumptions of population and growth in urbanization. To study the urban Ethiopian, Worako (2009) employed Working-Leser expenditure share model to estimate income elasticity of demand and determinants of urban household consumption for Addis Ababa city and six major towns. The study also extended its analysis by running simulations for rise in per capita income.

Existing literature focused their analysis based on changing food consumption pattern using price, income and expenditure elasticities; budget constraint; GDP growth; aggregate national population, population growth and livestock growth.

## RESEARCH GAP

Average does not measure requirement of specific group of the people. Most of the demand model for Food grains does not capture the Impact of intra-household food distribution (men, women, boys, girls,). It is well known that women and girls in poor household receive poorer quality food and less food in a normal household. Hence estimation of food grain requirement incorporating balance diet, population by age and sex is much urgent.

## OBJECTIVE OF THE STUDY

Attempt of the study is to find out whether the West Bengal, an eastern state of India is self-sufficient in food grains at macro level or not? In other words, objective of the study is to verify that West Bengal has been producing enough food-grains to meet the requirement of dietary recommendation of balance diet of ICMR for all the people distribution by age and sex in West Bengal.

## DATA AND METHODOLOGY

### METHODOLOGY

**Total requirement of cereal** in the period  $t$  in West Bengal is estimated as under:

$$C_t^c = \sum_{i=1} p_{to} c_{jo}^i + \sum_{i=1} p_{tm} c_{jm}^i + \sum_{i=1} p_{tf} c_{jf}^i$$

Where,  $C_t^c$  = requirement of cereal in the year  $t$ ,  $t = \sum i, i=1,2,\dots,365$ ;  $j$ =age group;  $o$ = children;  $m$ =male;  $f$ =female;  $c_{jo}^i$  = per capita per day requirement of cereal of  $j$  age group of children;  $c_{jm}^i$  = per capita per day requirement of cereal of  $j$  age group of male;  $c_{jf}^i$  = per capita requirement of cereal of  $j$  age group of female;  $pt$  = No of population in the year  $t$ .

$\sum_{i=1} p_{to} c_{jo}^i$  = Total requirement of cereal of  $j$ th age group of children in year  $t$

$\sum_{i=1} p_{tm} c_{jm}^i$  = Total requirement of cereal of  $j$ th age group of male in the year  $t$

$\sum_{i=1} p_{tf} c_{jf}^i$  = Total requirement of cereal of  $j$ th age group of female in the year  $t$

**Net domestic production of cereal** in a given year in West Bengal ( $Y_t$ ) is estimated as

Net domestic production of (Rice + Wheat + Coarse Cereal)

$$\text{Net domestic production of cereal } Y_t^c = Y_t^R + Y_t^W + (1 - 0.125) Y_t^{CC}$$

Production of rice in period  $t$  ( $Y_t^R$ ) =  $(1 - 0.125) * (0.65) Y_t^P$ ;  $Y_t^P$  = production of Paddy in period  $t$

Flour production ( $Y_t^F$ ) =  $(1 - 0.125) Y_t^W$ ;

production of Wheat in period  $t$  =  $Y_t^W$

Production of Coarse Cereal in period  $t$  =  $Y_t^{CC}$

**Food gap** is defined as the excess requirement of cereal over net domestic production (thousand tonne) in a particular year in West Bengal.

### SOURCES OF DATA

The study has used secondary data from following sources i) recommended balance diet of Indian Council of Medical Research (ICMR) for Indian people in different age, sex from Parks Text Book of preventive and social medicine, seventh edition 2002 pp 456. ii) Number of population by age and sex in different years (actual population of 1991, 2001 and projected population of 2006, 2011, 2016, 2021, and 2026) from the Census of India. iii) Data on production of food grains is extract as available in Economic Survey, Government of India; Economic review, Government of West Bengal; Statistical Abstract of West Bengal; Hand Book of the Economy, RBI. iv) Consumption pattern as available in various rounds of 27th (1972-73), 28th (1973-74), 32th (1977-78), 38th (1983), 43rd (1987-88), 50th (1993-94), 55th (1999-2000), 61st (2004-05), 66th (2009-10) in NSSO reports.

## SOME OBSERVATIONS

### POVERTY DECLINING

Using minimum dietary energy requirement norm Planning Commission has defined poverty line as monthly per capita income of Rs 350.17 in village and Rs 409.22 in urban areas. In 1996-97 west Bengal government define poverty line as Rs 274.35. Using index number of Indian Labor journal Feb 2006 poverty line in west Bengal was Rs 387.64. According to the above measurement poverty has reduced from 56.44% in 1973-74 to 27.09% in 1999-2000 in India and 73.16% to 31.85% in west Bengal in the same period.

Tendulkar Committee for the first time, have developed a methodology using implicit price indices (Fisher Price Index) derived from quantity and value data collected from 66th Round NSS (2009-10) data on Household Consumer Expenditure Surveys (based on mixed reference period (MRP)) for computing state wise poverty lines for the year 2004-05 and updating for 2009-10. Population as on March 1, 2010 has been used for estimating the number of persons below the poverty line.

As per Tendulkar Committee recommendations, anyone earning Rs. 672.8 monthly that is earning Rs. 22.42 per day in the rural area and Rs. 859.6 monthly or Rs. 28.35 per day in the urban area is lie above the poverty line at the national level. Where as in west Bengal the poverty line estimated as monthly income of Rs 643.2 in rural and Rs 830.6 in urban areas (though World Bank criterion of poverty line is \$1.25 per day). According to this estimate 29.8 per cent of the Indian population alone was below poverty line (BPL) in 2009-10 which was 37.2 per cent in 2004-05, where as in West Bengal, BPL population declined from 34.2% in 2004-05 to 26.7% in 2009-2010.

In all-India level Head Count Ratio (HCR) has declined by 7.3 percentage points from 37.2% in 2004-05 to 29.8% in 2009-10, with rural poverty declining by 8.0 percentage points from 41.8% to 33.8% and urban poverty declining by 4.8 percentage points from 25.7% to 20.9%.

(Source: [http://planningcommission.nic.in/news/press\\_pov1903.pdf](http://planningcommission.nic.in/news/press_pov1903.pdf) retrieved dated 23.10.13)

### DECREASE IN CALORIE INTAKE

Data on calorie intake as revealed by various round of National Sample Survey Organization (NSSO) shows that average per capita calorie intake has been declining in India both in Rural and Urban areas over four decades. Table 2 has shown that, in the period 1972-73 to 2009-2010 per day per capita calorie intake was decreases from 2266 Kcal to 2020 Kcal per day i.e. 246 Kcal in absolute and 11 percentage in rural India where as in urban India it has decreased from 2107 Kcal to 1946 Kcal in absolute and 10% in percentage term. In Rural India calorie intake has been decreased gradually in all the NSS round. Over the period 1993-94 to 1999-2000 decreasing calorie was lowest in absolute term as well as in percentage term, where as in that period urban India shows an exceptionally increase in calorie intake. In the period 1900-2000 to 2004-05 decreasing calorie intake was highest both in rural and urban. In last 37 year period average calorie intake in Rural India did not touch recommended calorie norms, where as in urban India, only in 27th round and in 55th round touch the calorie requirement at recommended level.

The share of food in consumption expenditure has decreased from 72.9% to 53.6% in rural areas and 64.5% to 40.7% over the 37 year period (1972-73 to 2009-10). The share of cereal in total expenditure shows a decline trend, both in urban and rural areas. The share of pulses also follows the same trend. Percentage share of egg, fish meat in total expenditure has raised from 2.5% to 3.3% in rural and 2.5% to 3.6% in urban in the period of 1972-73 to 1983-88.

Table 3 has shown that, in absolute term monthly per capita consumption of cereal has been declining gradually over the period of 1972-73 to 2009-10. The fall in cereal consumption is sounder in rural areas than urban. But the rate of decline had decrease significantly between the periods 1993-94 and 1999-2000 NSSO rounds compare to previous rounds. The cereal consumption per person per day before and after 1993-94 NSSO rounds has declined by 1.19 percents and 0.74 percents annually in the rural areas, and 0.91 percents and 0.24 percents in the urban areas.

Declining poverty, increasing of buffer stock and increasing export of food grain have shown India's progress on food security. The bright picture of food security shall be blunt when we noticed that average calorie intake has been declining. Side by side the decrease in percentage share of cereal (major and cheapest source of energy) on Monthly Per Capita Expenditure (MPCE) and monthly per capita consumption of cereal in absolute term (Kg) both in rural and urban population raise the question of food security in India.

#### FOOD SECURITY

According to the Food and Agriculture Organization (FAO) food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Food security has three components, viz., availability, access, and absorption. These three are interconnected. It has many dimensions that extend beyond the production, availability, and demand for food. At the household level, food security refers to the ability of a household to secure adequate food to meet the dietary needs of all the members of the household. Food security is conceptualized here as foodgrains (cereal) available for human consumption at the macro level from net domestic production of Cereal.

#### ESTIMATION OF CEREAL REQUIREMENT

Despite the shift in dietary pattern from cereal to non cereal and animal product, food-grains are considered to be of paramount importance for household food and nutrition security. This is because of four reasons. **One**, cereal and pulses are staple foods and there is no perfect substitution between staple foods and other foods. **Two**, due to inadequate level of intake of almost all foods, increased consumption of other foods, in most cases, fill dietary deficiency. **Three**, food-grains are the major and the cheapest source of energy and protein as compared to other foods and are thus vital for food and nutrition security of low income masses. **Four**, increased production and consumption of livestock products resulting from rising per capita income require high growth in use of grain as feed for livestock. Because of these reasons, food-grains continue to be the main pillars of food security in the country and any slack in their production translates into persistent price shock and adverse impact on common people.

The eleventh plan observes that cereals are a major source of energy intake for the Indian population. Percentage breakup of calorie consumption over nine food group over the period 1993-94 to 2009-10 shows that cereal is the major source of calorie intake of Indian people. 64.16% of calories come from cereal in rural India and 55.01% of calorie comes from cereal in urban India in 2009-10. Average per capita cereal consumption has decline in both rural and urban areas. Consumption of non-cereal has not been able to make up for this decline. That means decrease in cereal consumption is the major reason of decline in calorie intake over time. With increasing price coarse cereal, cereal become still cheapest source of calorie but both rich and poor reduced consumption of coarse cereal with a difference that poorer section substitute coarse cereal by superior cereal resulted in increase in total cereal consumption by poorest decile group (Suryanarayana 2011).

The present study is doing a preliminary exercise to estimate direct requirement of cereal at state level to meet the recommended balance diet of the population of West Bengal (highest rice producing state) in post liberalization period. Requirement of cereal for industrial use, livestock feeding and industrial use like production of bio-diesel are excluded. As providing sufficient food-grains to all people is primary importance, an attempt is made to know how much food grains mainly cereal is required for direct human consumption in West Bengal. As the estimation is based on balance diet, the estimated cereal requirement for direct consumption is differ from the demand of cereal as market demand needed purchasing power and other uses.

The study has taken recommended balance diet of Indian Council of Medical Research (ICMR) for Indian people in different age, sex from Parks Text Book of preventive and social medicine, seventh edition 2002 pp 456. The recommended dietary allowance is given in table-4. Here is some adjustment in the age-sex distribution in table-4 to match with the age sex distribution in population data. Cereal consumption of adults with moderate, heavy and sedentary work has taken as an average of all these three categories.

Table-5 gives the actual population of the year 1991, 2001, and projected population of the year 2006, 2011, 2016, 2021, 2026 distribution by age and sex. Population statistics is collected from the census report of government of India. As distribution of population by age and sex are unavailable the study has taken projected population of 2011. All the age group above 19 has clubbed in to one i.e adult.

Incorporating these statistics, shown in table-4 and table-5, the study has calculated how much cereal is required for all person of West Bengal to meets its balance diet and live healthy. Using the methodology given in Methodology Section of the study has estimated the total cereal requirement. The estimated requirement of cereal both at aggregate and disaggregates level in West Bengal in the respective years of post liberalization period has shown in table 6.

The chart1 and chart 2 displays the comparative cereal consumption across sex in different years. In both the age group the cereal requirement of female is less than compare to male. Chart 3 and chart 4 represents the requirement of cereal of male and female respectively across age group 10-14 and 15-19 in different years. In both age group upper age groups require more cereal than lower with an exception in 1991 in male and 1991, 2001 in female.

#### ESTIMATION OF PRODUCTION OF FOODGRAINS

In the supply side the production statistics of cereal (Rice, wheat, coarse cereal) has taken from the Economic review 2004-05, 2009-10, Government of West Bengal. Using the methodology given in Methodology Section of the study has estimated the net availability of Rice, Wheat, Coarse Cereal and total Cereal. The production figures of Rice Wheat, Coarse Cereal and total Cereal of West Bengal in different years are represents in Table-7. 12.5% of paddy produced has been deducted for seed preservation and wastage due to transportation, pest, rodent and others. From the available paddy, on an average we obtained 65% rice. Second column of table 7 has shown the net availability of paddy ( $Yt^p$ ) from production. Similarly available wheat and coarse cereal is the 87.5% of total wheat and coarse cereal produced. 3rd column has presented the production of net availability of wheat in West Bengal. There is negligible wastage during processing of wheat to flours. The estimated flour ( $Yt^f$ ) produced from available paddy has shown in column 5. Seventh column has presented the production of net availability of Coarse Cereal ( $Yt^{cc}$ ) in West Bengal. Last column has presented the total cereal available from domestic production from rice, wheat and coarse cereal in West Bengal in corresponding year.

#### FOOD GAP

Food gap is defined as the excess requirement of cereal over net domestic production of Cereal (thousand tonne) in a particular year in West Bengal.

Table-8 has represented the excess requirement of cereal over domestic production in West Bengal for the year 1991, 2001, 2006, and 2011. Column 2 has represented total cereal requirement from table 6. Column 3 has represented net cereal production from table 6. The difference between the column 2 and column 3 determines the Food Gap which has presented in column 4. It has shown that in the post liberalization period total cereal requirement is higher compare to corresponding net cereal production. That means there was deficiency of cereal compare to requirement. The deficit was 3989.23, 5514.9, 4582.6, 6750.3 thousand tone in the year 1991, 2001, 2006, 2011 respectively. The figure in the last column i.e. column-5 indicate food gap as a percentage of total requirement of cereal in the study period.

This implies that, West Bengal's agricultural production has not ready to produce sufficient cereal to all people for their balance diet. As a result, a large section of people remains hungry day after day. Simply those who have capability in collecting cereal are getting their required cereal.

#### CONCLUSION

In a simple exercise West Bengal's cereal requirement is far from the domestic production in the post liberalization period. In the sense of balance diet West Bengal did not achieve self-sufficiency in cereal production though it is highest rice producing state in India. Excess requirement of food grain (Cereal) over domestic production i.e Food Gap was 3989.23, 5514.9, 4582.6, 6750.3 thousand tone in the year 1991, 2001, 2006, 2011 respectively. Food gap as a percentage



of total requirements of the respective year was 37.99%, 43.70%, 33.34%, 46.20% in the above period. If we noticed food gap of the census years i.e 1991, 2001 and 2011, it shows an increasing trend. In any age group the cereal requirement of female is less than compare to male. With increase in population the cereal requirement gradually increase. Study has projected that cereal requirement in West Bengal will be 15577.2, 16223.7, 16853.68 thousand tone in the years 2016, 2021, 2026 respectively.

## POLICY PRESCRIPTION

To combat food security required multi dimensional program consisting environment friendly new technological progress in cultivation, reduction of wastage of food grains, efficiently disbursement of fresh cereal to the needy.

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## ANNEXURE

TABLE 1: INDIA'S FOODGRAINS STOCK AND NET IMPORT (Million Tonne)

	1951	1961	1971	1981	1991	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Procurement	3.8	0.5	8.9	13.0	19.6	35.6	42.6	40.3	34.5	41.1	41.5	37.0	35.8	54.2	60.5	56.1
PDS Supply	8.0	4.0	7.8	13.0	20.8	13.0	13.2	18.2	23.2	28.3	31.0	31.8	32.8	34.7	47.3	43.7
Buffer Stock	-4.2	-3.5	1.1	00	-1.2	22.6	29.4	22.1	11.3	12.8	10.5	5.2	3.0	19.5	19.2	12.4
Net import	4.8	3.5	2.0	0.5	-0.6	-1.4	-4.5	-8.5	-7.1	-7.7	-7.2	-3.8	-7.0	-14.4	-7.2	-4.7

Source: Das et.al 2005, <http://indiabudget.nic.in>

TABLE-2: PER-CAPITA INTAKE OF CALORIES IN INDIA, 1972-73 TO 2009-2010

	Kcal/day		Change over previous year			
	Rural	urban	Rural		urban	
			absolute	%ge	absolute	%ge
1972-73(27th round)	2266	2107				
1983(38th round)	2221	2089	-45	-1.099	-18	-0.85
1993-94(50th round)	2153	2071	-68	-3.061	-18	-0.86
1999-00(55th round)	2149	2156	-4	-0.100	+85	+4.10
2004-05(61th round)	2047	2020	-102	-4.740	-136	-6.30
2009-10(66th round)	2020	1946	-27	-1.320	-74	-3.66
Percentage change between 1972-73 and 2009-10	-10.9	-9.5				

Source: NSS 66th round, computed from p70

TABLE: 3 MONTHLY PER CAPITA CONSUMPTION OF CEREAL (Kg) IN DIFFERENT NSS ROUND

	27th	32th	38th	43rd	50th	55th	56th	57th	58th	59th	60th	61st	66th
rural	15.26	15.68	14.8	14.40	13.40	12.70	12.40	12.20	12.10	12.30	12.40	12.12	11.35
urban	11.24	11.62	11.30	11.20	10.60	10.40	10.00	9.80	9.80	9.90	10.00	9.94	9.39

Source: Source: computed from various round of NSSO

TABLE 4: PER CAPITA REQUIREMENT OF CEREAL PER DAY BY AGE, SEX

TABLE 4. PER CAPITA REQUIREMENT OF CEREAL PER DAY BY AGE, SEX										
Age	0-4		5-9		10-14		15-19		Above 19 (adult)	
Sex	M+F	M+F	male	female	male	female	male	female	male	female
Cereal Requirement (Gm)	175	270	420	300	500	400	550	475		

Source: Parks Text Book of preventive and social medicine, seventh edition 2002 pp 456.

TABLE 5: POPULATIONS (THOUSANDS) OF WEST BENGAL BY AGE, SEX

TABLE 3: POPULATIONS (THOUSANDS) OF WEST BENGAL BY AGE, SEX									
Age	0-4	5-9	10-14		15-19		Above 19(adult)		total
Sex	M+F	M+F	male	female	male	female	male	Female	
Population 1991	8170	8850	4261	3908	3196	2931	19176	17586	68078
Population 2001	8573	9047	4695	4368	4162	3817	23642	21872	80176
Projected Population2006	7366	8473	4601	4389	4659	4328	26635	24764	85216
Projected Population2011	6890	7286	4264	4160	4568	4351	29966	28015	89499
Projected Population2016	6945	6819	3703	3542	4233	4124	33036	31148	933550
Projected Population2021	7032	6879	3469	3313	3675	3509	35586	33919	97383
Projected Population2026	6715	6968	3501	3342	3443	3282	37362	35921	100534

Source: Computed from Census Report

TABLE 6: REQUIREMENT OF CEREAL ('000 tonne) IN WEST BENGAL, 1 TONNE=10 QUINTAL

Age Sex year	0-4	5-9	10-14		15-19		Above 19		Total cereal requirement
	M+F	M+F	male	female	male	female	male	female	
1991	521.8	872.2	653.2	542.0	583.3	427.9	3849.6	3049.0	10499.0
2001	547.6	891.6	719.7	605.8	759.6	557.3	4746.1	3792.1	12619.8
2006	470.5	835.0	750.0	608.8	850.3	631.9	5347.0	4293.5	13742.3
2011	440.1	718.03	653.67	455.52	833.66	635.24	6015.67	4857.1	14608.9
2016	443.6	672.01	567.7	487.1	772.52	602.1	6631.97	5400.28	15577.2
2021	449.1	672.92	531.80	362.77	665.21	512.31	7143.89	5880.70	16223.70
2026	428.9	686.7	536.7	365.95	628.34	479.17	7500.42	6227.80	16853.68

Source: computed by author

TABLE: 7 PRODUCTION OF RICE, WHEAT, COARSE CEREAL IN WEST BENGAL ('000tonne)

year	Paddy production $Y_t^p$	Wheat production $Y_t^w$	Rice produced from paddy in col-2 $Y_t^r$	Flour produced from wheat in col-3 $Y_t^f$	rice +flour $Y_t^r + Y_t^f$	Coarse cereal $Y_t^{cc}$	Total cereal Produced in W.B $Y_t^c$
1	2	3	4	5	6	7	8
1990-91	10435.5	530.2	5935.75	463.92	6399.67	110.10	6509.77
2000-01	12428.0	1058.6	7068.42	926.28	6994.70	109.4	7104.1
2005-06	14510.8	773.5	8253.01	676.81	8929.82	229.92	9159.74
2006-07	14745.9	799.9	8386.73	699.91	9086.64	274.7	9361.34
2007-08	14719.5	917.3	8371.71	802.63	9174.34	265.8	9440.14
2008-09	15037.3	764.5	8552.46	668.93	9221.39	375.3	9596.69
2009-10	14606.8	901.0	8307.61	788.37	9095.98	354.7	9450.68
2010-11	12332.7	842.0	7014.22	736.75	7750.97	407.9	8158.87
2011-12	14853.0	884.0	8206.28	773.5	8979.78	364.9	9334.68

Source: computed from statistical abstract-2003-04, 2009-10 WB government, RBI hand Book of Economy 2011-12, pp74



**TABLE 8: TOTAL REQUIREMENT OF CEREAL, NET PRODUCTION OF CEREAL AND FOOD GAP (thousand tonne)**

year	Total cereal requirement in W.B	Total cereal Produced in W.B	food gap = requirement – domestic production	food gap as a percentage of requirement
1	2	3	4	5
1991	10499.0	6509.77	+3989.23	37.99
2001	12619.8	7104.1	+5514.9	43.70
2006	13742.3	9159.74	+4582.6	33.34
2011	14608.9	8158.87	+6750.03	46.20

Source: Calculated by author from table 6 &amp; 7

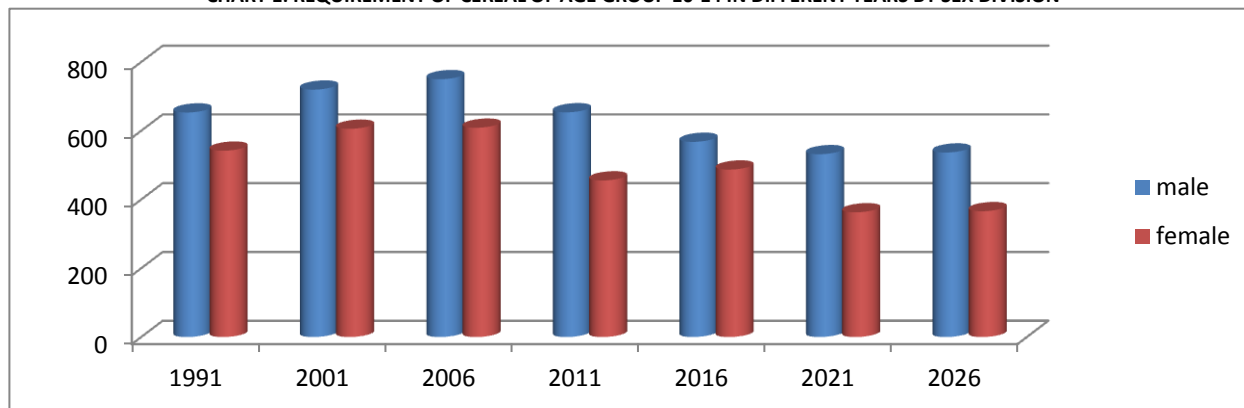
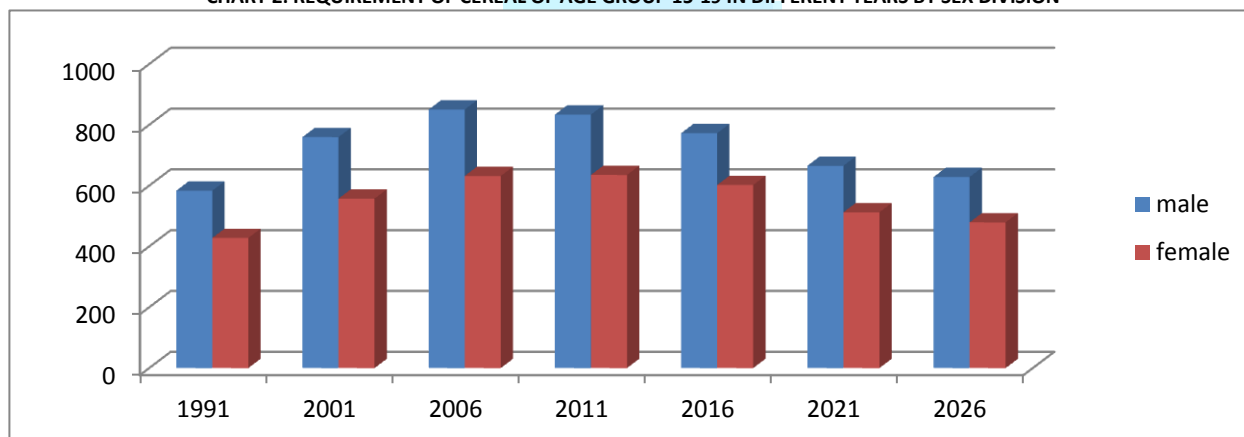
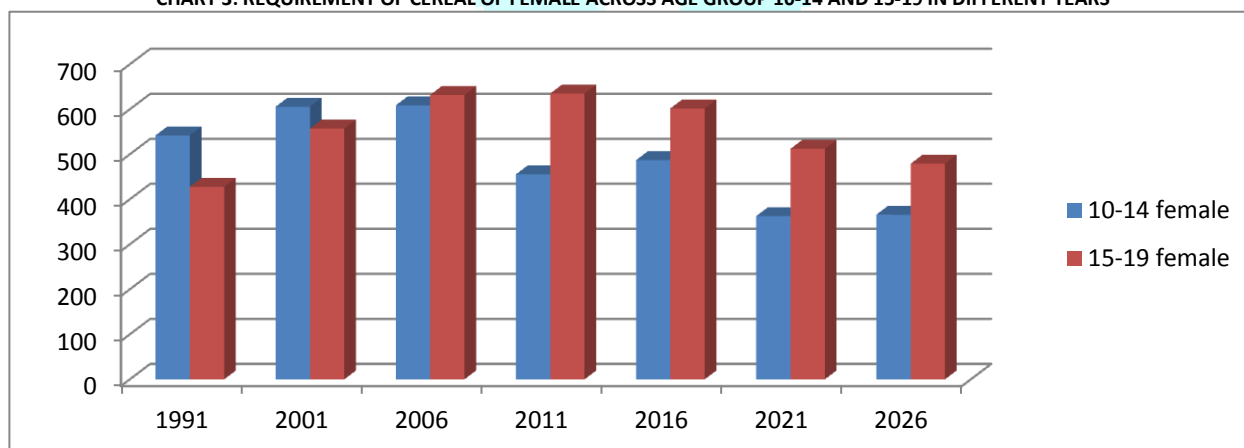
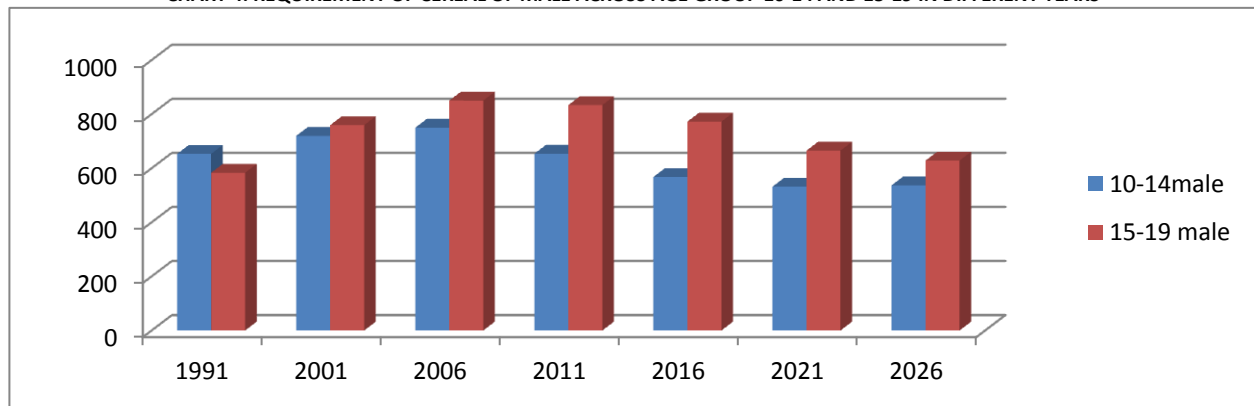
**CHART 1: REQUIREMENT OF CEREAL OF AGE GROUP 10-14 IN DIFFERENT YEARS BY SEX DIVISION****CHART 2: REQUIREMENT OF CEREAL OF AGE GROUP 15-19 IN DIFFERENT YEARS BY SEX DIVISION****CHART 3: REQUIREMENT OF CEREAL OF FEMALE ACROSS AGE GROUP 10-14 AND 15-19 IN DIFFERENT YEARS**

CHART 4: REQUIREMENT OF CEREAL OF MALE ACROSS AGE GROUP 10-14 AND 15-19 IN DIFFERENT YEARS



**SOCIAL ACCOUNTING: OBJECTIVES AND ISSUES**

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**ABSTRACT**

*"Social Accounting" is a method by which a business seeks to place a value on the impact on society of its operations. Social Accounting is an expression of company's social responsibilities and requirements of general corporate accountability. It is concerned with the development of measurements system to monitor social performances. It is also known by various names like, social and environmental accounting, corporate social reporting, corporate social responsibility reporting, non-financial reporting.*

**KEYWORDS**

CSR, Social Accounting Matrix , Community Based Monitoring.

**INTRODUCTION**

 **ocial accounting** (also known as *social accounting and auditing, social and environmental accounting, corporate social reporting, corporate social responsibility reporting, non-financial reporting or accounting*) is the process of communicating the social and environmental effects of organizations' economic actions to particular interest groups within society and to society at large.

Social accounting is commonly used in the context of business, or corporate social responsibility (CSR), although any organisation, including NGOs, charities, and government agencies may engage in social accounting. Social Accounting can also be used in conjunction with Community-Based Monitoring (CBM).

D. Crowther defines social accounting in this sense as "an approach to reporting a firm's activities which stresses the need for the identification of socially relevant behaviour, the determination of those to whom the company is accountable for its social performance and the development of appropriate measures and reporting techniques."

Social accounting is often used as an umbrella term to describe a broad field of research and practice. The use of more narrow terms to express a specific interest is thus not uncommon. Environmental accounting may e.g. specifically refer to the research or practice of accounting for an organisation's impact on the natural environment. Sustainability accounting is often used to express the measuring and the quantitative analysis of social and economic sustainability.

Social accounting challenges conventional accounting, in particular financial accounting, for giving a narrow image of the interaction between society and organizations, and thus artificially constraining the subject of accounting.

Social accounting, a largely normative concept, seeks to broaden the scope of accounting in the sense that it should:

- concern itself with more than only economic events;
- not be exclusively expressed in financial terms;
- be accountable to a broader group of stakeholders;
- broaden its purpose beyond reporting financial success.

It points to the fact that companies influence their external environment ( some times positively and many a times negatively) through their actions and should therefore account for these effects as part of their standard accounting practices. Social accounting is in this sense closely related to the economic concept of externality.

Social accounting offers an alternative account of significant economic entities. It has the "potential to expose the tension between pursuing economic profit and the pursuit of social and environmental objectives".

The purpose of social accounting can be approached from two different angles, namely for management control purposes or accountability purposes.

**OBJECTIVES OF SOCIAL ACCOUNTING**

Main objectives of social accounting are to help society by providing different facilities by enterprise and to record them. We can write them in following points:

1. Effective utilization of natural resources- Main objectives of making social accounting is to determine whether company is properly utilize their natural resources or not.
2. Help to employees- Company can help employees by providing the facility of education to children of employees, providing transport free of cost and also providing good working environment conditions.
3. Help to society- Because companies' factories spread the pollution in natural society which is very harmful for society. So, enterprise can help to society by planting the trees, establishing new parks near factory area. and also opening new hospitals
4. Help to customers- In social accounting this the part of benefits given by company to society, if company provides goods to customers at lower rate and with high quality.
5. Help to investors- Company can help to investors by providing transparent accounting information to investors.

**MANAGEMENT CONTROL**

Social accounting for the purpose of management control is designed to support and facilitate the achievement of an organization's own objectives. Because social accounting is concerned with substantial self-reporting on a systemic level, individual reports are often referred to as social audits. The first complete internal model for social accounting and audit, 1981, was designed for social enterprises to help plan and measure their social, environmental and financial progress towards achieving their planned objectives.

Organizations are seen to benefit from implementing social accounting practices in a number of ways, e.g.

- Increased information for decision-making;
- More accurate product or service costing;
- Enhanced image management and Public Relations;
- Identification of social responsibilities;
- Identification of market development opportunities;
- Maintaining legitimacy.

The management control view thus focuses on the individual organization.

Critics of this approach point out that the benign nature of companies is assumed. Here, responsibility, and accountability, is largely left in the hands of the organization concerned.

**SOCIAL ACCOUNTING MATRIX (SAM)**

SAM's are square (columns equal rows) in the sense that all institutional agents (Firms, Households, Government and 'Rest of Economy' sector) are both buyers and sellers. Columns represent buyers (expenditures) and rows represent sellers (receipts). SAM's were created to identify all monetary flows from sources to recipients, within a disaggregated national account. The SAM is read from column to row, so each entry in the matrix comes from its column heading, going to the row heading. Finally columns and rows are added up, to ensure accounting consistency, and each column is added up to equal each corresponding row. In the illustration below for a basic open economy, the item C (consumption) comes from Households and is paid to Firms.

Illustrative Open Economy SAM:

	Firm	Household	Government	Rest of Economy	Net Investment	Total (Received)
Firm		C	$G_F$	$(X-M)_K$	I	$C+G_F+(X-M)_K+I$
Household	W		$G_H$	$(X-M)_C$		$W+G_H+(X-M)_C$
Government	$T_F$	$T_H$				$T_F+T_H$
Rest of Economy	$(X-M)_K$	$(X-M)_C$				$(X-M)_K+(X-M)_C$
Net Investment		$S_H$	$S_G$			$S_H+S_G$
Total (Expended)	$W+T_F+(X-M)_K$	$C+T_H+(X-M)_C+S_H$	$G_F+G_H+S_G$	$(X-M)_C+(X-M)_K$	I	

Abbreviations: Capital letters

Taxes

Wages

iMports

eXports

Savings

Investment

Consumption

Government Transfer Subscripts

Firms

Households

Government

Consumption Goods

K: Capital Goods

**APPLICATIONS OF SAM**

SAMs can be easily extended to include other flows in the economy, simply by adding more columns and rows, once the standard national account (SNA) flows have been set up. Often rows for 'capital' and 'labor' are included, and the economy can be disaggregated into any number of sectors. Each extra disaggregated source of funds must have an equal and opposite recipient. So the SAM simplifies the design of the economy being modeled. SAMs are currently in widespread use, and many statistical bureaus, particularly in OECD countries, create both a national account and this matrix counterpart.

SAMs form the backbone of Computable general equilibrium (CGE) Models, various types of empirical multiplier models, and the Input-output model.

**LIMITATIONS OF SOCIAL ACCOUNTING**

Social Accounting suffers from various serious limitations as follows:

- There is no standard accounting method.
- Comparison between two firms or countries is not possible if method of accounting is different which is quite obvious.
- Input for Social Accounting is not easily available because costs and benefits relevant to the environment are not easily measurable.
- Many business and the Government organizations even large and well managed ones don't adequately track the use of energy and material or the cost of inefficient materials use, waste management and related issue. Many organizations, therefore, significantly underestimate the cost of poor environment performance to their organization.
- It mainly considers the cost internal to the company and excludes cost to society.

**CONCLUSION**

The concept of social Accounting emerged in the 1960's when social values and expectations gave rise to a debate about the role of business in society. This debate focused on the nature of corporate social responsibility and gave rise to the possibility that this responsibility could be discharged through a method of social accounting. Social Accounting has become an integral part of good management in India and abroad. Most of the enterprises are making efforts to earn customer loyalty through community development schemes, good corporate governance and by engaging stakeholders, within and outside the company. It is therefore necessary that managements at all level understand the scope and content of social accounting so that they can make value added contributions towards building the company's brand image and reputation.

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**INVESTIGATING THE IMPACT ON BSE SENSEX USING MULTIPLE REGRESSION MODEL****ASHWITHA KARKERA****ASST. PROFESSOR****DEPARTMENT OF BUSINESS ADMINISTRATION****SHREE DEVI INSTITUTE OF TECHNOLOGY****MANGALORE****MADHUKAR S M****RESEARCH SCHOLAR****JAWAHARLAL NEHRU COLLEGE OF ENGINEERING****SHIMOGA****GIRISH MADLA****ASST. PROFESSOR (SG)****DEPARTMENT OF BUSINESS ADMINISTRATION****SAHYADRI COLLEGE OF ENGINEERING & MANAGEMENT****SAHYADRI CAMPUS****ADYAR****ABSTRACT**

*The present study tries to investigate the primary factor affecting BSE Sensex by using 3 main indicators namely volume of trade, dollar exchange rate and Dow Jones Index. To examine the relationship among BSE Sensex and indicators (volume of trade, dollar exchange rate and Dow Jones Index), Multiple Regression Model was applied. The study has taken into consideration data of BSE Sensex and the indicators from June 2009 to June 2014 and all the variable values were changed to percentage change to eliminate the problem of Autocorrelation. The results showed that the volume of trade, dollar exchange rate and Dow Jones Index have a significant relationship with BSE Sensex.*

**KEYWORDS**

BSE Sensex, trade.

**INTRODUCTION**

Stock market plays a significant role in development of a country's economy. It is very crucial for the growth of the industry and commerce. As a result everyone keeps a close watch on the happenings of the stock market. But fluctuations in the stock market impose a sense of risk among all the stakeholders. The fluctuations in the stock market cannot be fully attributed to stock price as it can be caused due to variations in other related factors like exchange rate, inflation, political condition, turnover etc.

There are various studies that have been undertaken in this domain to predict and forecast stock price movement by investigating the impact of several related variables. Examining the effect of various factors on stock market movement helps the investors in minimizing the risk associated therein. So the present study with the help of Multiple Regression will try to assess the impact of factors like Volume of Trade, Exchange Rate and US Stock Market i.e., Dow Jones Index on BSE Sensex. Data for the study has been collected from 2009 to 2014 on monthly basis and percentage change is considered to eliminate the problem of autocorrelation.

**INDIAN STOCK MARKET**

The trading in India mainly takes place in two major stock exchanges namely the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). BSE is the oldest stock exchange in India which was established in the year 1875 followed by NSE in the year 1992. Both the exchanges follow similar trading mechanism. BSE has about 4,700 listed firms in comparison to NSE which has only 1,200 firms. Out of the total firms listed in BSE about 500 firms make up for more than 90% of the market capitalization.

**BSE Sensex** is an abbreviation of the Bombay Exchange Sensitive Index. Sensex is the benchmark index of the BSE. The index comprises of 30 largest stocks and also most actively traded stocks in BSE among all. It is calculated based on free-float market capitalization and thus does not include the restricted stocks of the company.

**LITERATURE REVIEW**

Many researches have been undertaken to predict and forecast the movement in stock market. Here is the jest of some of the research work already undertaken in the related area.

**Kenneth E. Homa & Dwight M. Jaffee (1971)**, in their study analyzed the relationship between stock prices and call money rate and found that there exist a valid relationship between the two using regression models. **Robert H. Rasche and Harold T. Shapiro (1968)**, in their research attempted to estimate the relationship in stock price movement using macroeconomic model. The work of **Martin Feldstein (1980)** revealed a relationship between share price and inflation. **John Mauldin (2003)** in his article stated that that changes in oil prices forecast stock returns. **R. Smyth and M. Nandha (2003)** in their work tried to examine the relationship between exchange rates and stock prices in Bangladesh, India, Pakistan and Sri Lanka. **Smith (1992), Solnik (1987), and Aggarwal (1981)** in their study found that there is significant positive correlation between exchange rate and stock price, while **Soenen and Hennigar (1988)** in their article stated a significant negative relationship between the two.

**METHODOLOGY**

For the present study data from BSE is obtained from the year June 2009 to June 2014 on monthly basis. The study used Multiple Regression Method to examine the relationship between BSE Sensex and 3 independent variables namely Volume of Trade, Dollar Exchange Rate and Dow Jones index. Accordingly closing values of BSE Sensex on monthly basis has been considered by taking percentage change in BSE Sensex to eliminate autocorrelation problem. The percentage change in BSE Sensex is computed using following method:

**Percentage change of BSE Sensex = ((Present Sensex Value – Previous Sensex Value) / Previous Sensex Value) \* 100**



Other independent variables considered for the study are Volume of Trade (TV), as measured by total trading volume in a month, Dollar Exchange Rate (\$), measured by INR/USD by changing the values to percentage change of INR/USD to eliminate the problem of autocorrelation, Dow Jones index (DJI), measured by closing Dow Jones index of US stock market in each month by changing the values to percentage change of Dow Jones index to eliminate the problem of autocorrelation.

Therefore multiple regression model is:

$$\text{BSE Sensex} = \beta_0 + \beta_1(\text{Volume of Trade}) + \beta_2(\text{Dollar Exchange Rate}) + \beta_3(\text{Dow Jones Index}) + \epsilon$$

## ANALYSIS

### MULTIPLE REGRESSION MODEL

TABLE 1: SHOWING MODEL SUMMARY FOR MULTIPLE REGRESSION

MODEL SUMMARY <sup>a</sup>			
Model	R	R Square	Adjusted R Square
1	.930	.865	.806
			Std. Error of the Estimate
			12.77

a. Predictors: (Constant), Dow Jones Index, Volume of Trade, Dollar Exchange Rate

b. Dependent Variable: BSE Sensex

The coefficient of multiple determinations is .865; which implies that about 86.5% of the variation in the BSE Sensex is explained by Variation in Volume of Trade, Exchange Rate of Dollar and Dow Jones Index. The regression equation is very useful for making predictions since the R2 value is close to 1 and indicates that there is relationship between variables.

TABLE 2: SHOWING COEFFICIENTS FOR MULTIPLE REGRESSION MODEL

COEFFICIENTS <sup>a</sup>				
Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
1 (Constant)	.996	.740		1.346
Volume of Trade	.056	.034	.227	1.646
Dollar Exchange Rate	-.262	.283	-.137	.924
Dow Jones Index	.119	.259	.537	.460

a. Dependent Variable: BSE Sensex

The above coefficient table represents that the all three independent variables have a linear relationship with BSE Sensex with F-significant approximately .000. It is also evident from the table that the BSE Sensex moves along with Dow Jones Index with beta value of 0.537. On the other hand the Dollar value has a negative beta with BSE Sensex with beta value of -0.137.

From the study we can infer that US Stock Market (Dow Jones Index) can explain the movement in BSE Sensex upto a certain level. Moreover, change in dollar value and the volume of trade in BSE also has an effect on BSE Sensex.

## CONCLUSION

From the study we can conclude that volume of trade, exchange rate and Dow Jones Index has an impact on movement in BSE Sensex. The Multiple Regression Model has shown a significant relation of the three variables with the market. Autocorrelation problem was eliminated by changing BSE Sensex, INR/USD, and Dow Jones Index to percentage change value. As the level of risk involved in stock investment is high compared to any other avenue investor should understand the effect of related variables on the index in order to have a better investment strategy. Regression model helps the investor to forecast and predict the movement in BSE Sensex by taking into consideration other variables but certainly does not cover all the factors that will have an impact on stock market. So there is a scope for further research to use better models to predict the market by considering other factors which affect the market in the same sense.

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## SELF-EMPLOYMENT THROUGH DAIRY FARMING: A CASE STUDY OF 'KARENG' MILK SOCIETY AT NAZIRA SUB-DIVISION OF SIVASAGAR DISTRICT OF ASSAM

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### ABSTRACT

*The concept of self-employment is very important for the development of a nation. There are several means to be self-employed and one of them is dairy farming. This study is an attempt to show how self-employment can be generated through dairy farming. The area of study is Nazira subdivision of Sivasagar district. At Nazira, the milk society called 'KARENG' contributes a lot towards generating self-employment. The objective of our study is to examine how far this milk society is successful in generating self-employment opportunities among the youths of the study area.*

### KEYWORDS

Self Employment, Economic empowerment.

### INTRODUCTION

elf-employment is a situation in which an individual works for himself or herself instead of working for an employer that pays a salary or a wage. Considering the continuous growing army of unemployed youths and failure of institutional mechanism to create adequate job opportunities, self employment has remained the sole alternative. There are several means of productive self-employment. People can become self-employed by engaging themselves in occupations like fishery, vegetable cultivation, poultry, piggery, carpenter, child care worker, blacksmith, goldsmith, dairy farming etc. Self Employment is not only important for the person who is self employed but it is equally important for the nation as it reduces the burden of unemployment. However there are several benefits of self-employment for developing countries like India. It has become increasingly difficult for the world's second highest populated economy, India, to create enough employment opportunities for its rapidly growing population and in fact in the last decade the mismatch has taken its severe form.. Hence a major part of the total population remains unemployed. Agriculture being the primary occupation of majority of Indians, it is found to be overburdened and marginal productivity is almost zero in many cases. Although the tertiary sector engage a good number of population but it has also failed to generate employment opportunities in terms of the alarming need of the job seekers. So it is high time to realize the importance of self employment as an alternative to the expectation of being employed. There is a misconception that self employment is only for the illiterate people but considering the huge community of educated job seekers in India, the importance of self employment can not be denied even for the well educated job seekers. Various self employment initiative can not only provide livelihood opportunities to the unemployed youths but also can effectively change their economic fortune. Success stories of some world famous personalities starting from Bill Gates of Microsoft cooperation to the founder of Facebook, Mark Zuckerberg, shows that the self employment initiative undertaken by them has unbelievably changed their economic fortune.

In fact now a day the concept of self-employment has been becoming very popular and useful in India as it has its own trickle-down effect and there exists a great prospect of attaining grass root development through it. The concept of self-employment has become so much popular that various institutions throughout India has been providing training on self-employment for example: Rural Self Employment Training Institute, Self-Employed Women Association etc. Even the father of the nation Mohandas Karamchand Gandhi began promoting the spinning of khadi for rural self-employment and self-reliance instead of using cloth manufactured industrially in Britain in 1920. Thus in Indian history also the concept of self-employment was too much popular. The government of India has also been taking various schemes for self-employment such as Integrated Rural Development Program (1978), Mahatma Gandhi National Rural Guarantee Act (2005), Swarnajayanti Gram Swarajgar Yojana (1999) etc.

Among the various means of self employment, dairy farming is one of the most popular means. Through cooperative dairy farming a good number of people can become self-employed. In India the dairy cooperative Amul in Gujrat has been generating holistic and productive self-employment opportunities since 1946. Amul spurred India's White Revolution, which made the country the world's largest producer of milk and milk products. In the process Amul became the largest milk food brand in India and has ventured into markets overseas.

Considering the benefits of self-employment through dairy farming on 13th July, 2004, a milk society called 'Sundarpukhuri Prathamik Dugdha Utpadak Samabai Samiti' was established at Nazira subdivision of Sivasagar district in order to generate self-employment opportunities among the youths of the area with Mr Ganesh Baruah and Mr Ranjan Dutta as the founder secretary. At present the president of the milk society is Mr Mahendra Nath Goswami and the secretary is Mr Ganesh Baruah. The society started its business from 1<sup>st</sup> August 2004. At the beginning the society had only one milk collection center at Sundarpukhuri village. The society collected milk from the dairy farmers of the village and the collected milk were sold to various households and hotels. At the very first day the society collected 56 ltr milk from dairy farmers of Sundarpukhuri village. At Sundarpukhuri village the society had its first milk collection center. Gradually the amount of collected milk under the society goes on increasing along with the number of milk collection centers also seen to be increased. In 2009 the society was registered and gave their product a brand name called KARENG. In 8<sup>th</sup> February 2014 the honorable Chief Minister of Assam Mr Tarun Gogoi pasteurized toned milk scheme under Kareng.

Thus in this paper an attempt has been made to identified how the Kareng milk society has emerged as a revolutionary step towards self employment.

### STATEMENT OF THE PROBLEM

The subdivision Nazira of Sivasagar district is known for its richness in oil and natural gas and the headquarter of ONGC is situated in the town. Despite this the area is still backward in terms of industrial infrastructure which can provide employment opportunities to the youths of the area. So having no other scope of being employed, self employment has remained the only source to earn their livelihood for the unemployed youths of Nazira. In this context the dairy farming can go a long way for generating self-employment opportunities. At Nazira there exist a good number of dairy farmers. But they are not fully aware of the prospects of self-employment opportunities through dairy farming. The milk that they get are mainly consumed at home and if there is overproduction then that amount is sold to nearby households at a lower price. Actually we can consider the dairy farming sector of the area as non-monetized one. In this context, the

Kareng cooperative milk society has been providing a good opportunity among the youths for self-employment through dairy farming and monetization of the same sector

## OBJECTIVE OF THE STUDY

The objective of our study is to examine how far the Kareng milk society is successful in generating self-employment opportunities among the youths of the Nazira subdivision.

## DATABASE AND METHODOLOGY

The study is mainly based on primary data. However for some aggregate references secondary data are also used. The primary data are collected from self-employed persons under Kareng milk society through personnel interview. And the secondary data are mainly collected from internet. The method of study is analytical one.

## DISCUSSION

Self-employment is a situation in which an individual works for himself or herself instead of working for an employer that pays a salary or a wage. A self-employed individual earns their income through conducting profitable operations from a trade or a business that they operate directly. In India, as per census 2011 the number of people self-employed in rural areas at about 54.2% against 41.4% in urban areas, while 51% of the country's total workforce is self-employed. In Assam also the number of self-employed persons increases with the population growth.

As the Nazira subdivision is an industrially backward one, so it is necessary to create self-employment opportunities in rural and urban areas of the area. In this context the Kareng milk society has been playing an important role by integrating rural and urban youths in order to make them self-employed. "Kareng" is a project for quality milk production and self-employment generation, established on 13<sup>th</sup> July 2004 as 'Sundarpukhuri Prathamik Dugdha Utpadak Samabai Samiti', it had only one milk collection center at Sundarpukhuri village at that time. The society started working from 1<sup>st</sup> August of the same year. In the first year the society collected milk from thirteen dairy farmers of Sundarpukhuri village. At the first day the society collected 56 liter milk. Gradually the society expands its collection area and it has five collection centers and the society collects maximum of 1400ltr milk per day. The collected milk is sold to various households and hotels. The dairy farmers from which the society collects milk are paid on 10<sup>th</sup> of every month. The payment is deposited in their bank accounts. In 2009 the society gave its product a brand name called "KARENG". The milk delivery system to households has been running on prepaid coupon basis in which coupons are issued to households and the distributors distribute milk to various households. And the milk supply to the hotels is made through milk vans. From 8th February 2009 onwards the households are supplied pasteurized toned packaged milk. On daily basis 800ltr packaged milk are supplied to households and about 600ltr are supplied to hotels. The milk delivery system of Kareng requires a good number of things. The distributors distribute milk to various households by bicycles. The milk supply made to the hotels is done through milk vans. Again in order to keep the packaged pasteurized toned milk the society requires deep freezing facilities. In this respect it mainly got assistance from Oil and Natural Gas Corporation Limited (ONGC) and Dairy Department. The Dairy Department Board gave thirteen bicycles to the society so that the distributors can distribute milk among various households on prepaid coupon basis. The Oil and Natural Gas Corporation Limited (ONGC) provided three milk vans so that milk can be supplied to the hotels by milk vans. ONGC also provided one deep freeze of 2000 liter capacity to keep the pasteurized toned milk and two bicycles.

The role played by the Kareng Milk society in Nazira Subdivision is explained under the following heads.

### SELF EMPLOYMENT GENERATION THROUGH "KARENG" MILK SOCIETY

"Kareng" milk society has been playing an extremely important role in terms of self employment generation. In table 1, the total number of persons who are earning their livelihood under Kareng" milk society is shown.

**TABLE 1: NUMBER OF PERSONS EMPLOYED UNDER "KARENG" MILK SOCIETY**

Office staff	5
Distributor	14
Milk van driver	3
Independent milk seller	475
Miscellaneous	7
Total	504

Source: Survey Data

In the above table we can see that 504 people are earning their livelihood under Kareng milk society, out of this 29 are the permanent staffs of the milk society and the rest are the independent milk seller, who directly sell their milk to Kareng. This figure shows that the Kareng milk society is providing self employment opportunities to a large number of peoples.

### SCALE OF OPERATION OF "KARENG" MILK SOCIETY

Initially the society was conducting its business only as a milk delivery unit. However since 2009, milk pasteurization is also done under the society. Therefore the society is continuously expanding its milk collection centers.

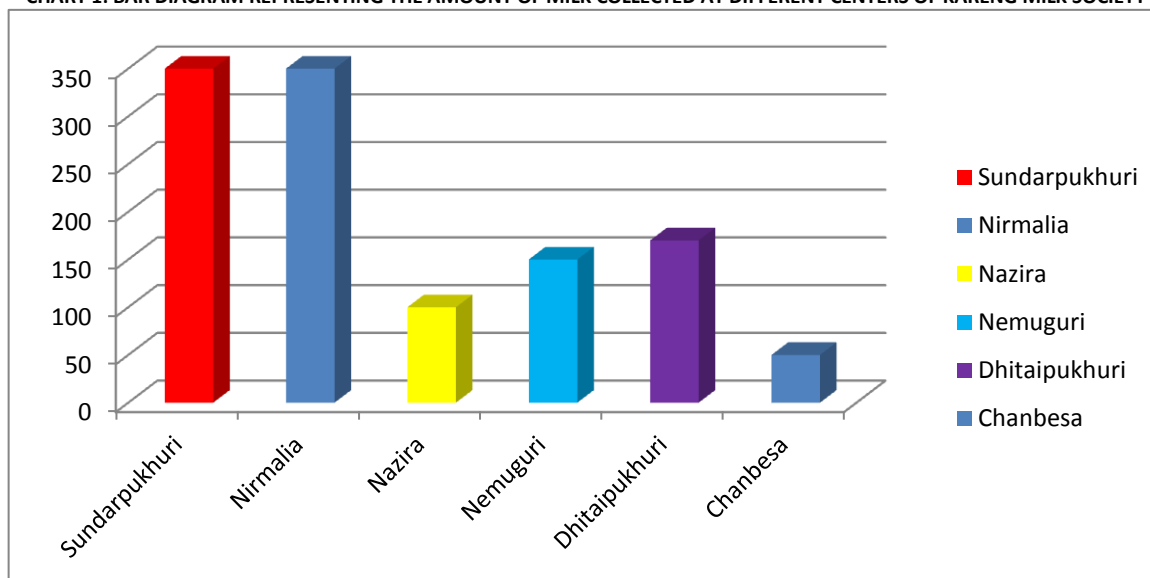
In the first year the society had only one milk collection center at Sundarpukhuri village. Now it has six milk collection centers throughout the Sivasagar district at Sundarpukhuri, Nirmalia, Nazira, Nemuguri, Dhitaipukhuri, Chanbesa. At Chanbesa it established its pasteurization plant. The following table shows the amount of milk collected in five milk collection centers on daily basis.

**TABLE 2: AMOUNT OF MILK COLLECTED AT DIFFERENT CENTERS OF KARENG MILK SOCIETY**

Collection center	Amount of milk collected (in ltr) (on daily basis)
Sundarpukhuri	350
Nirmalia	350
Nazira	100
Nemuguri	150
Dhitaipukhuri	170
Chanbesa	50
Total	1170

Source: Survey data.

CHART 1: BAR DIAGRAM REPRESENTING THE AMOUNT OF MILK COLLECTED AT DIFFERENT CENTERS OF KARENG MILK SOCIETY



Source: Data pertaining to table 2

In the above table we can see that huge amount of milk is collected and supplied under the milk society. However as reported by the officials of the milk society, still they are unable to meet the growing demand of milk. Hence there is a huge potentiality for the society to expand their scale of operation. The milk processed under the "Kareng" milk society is very much popular in Nazira as well as in its nearby areas because of the excellent quality standard maintained by them. The pasteurized toned milk of "Kareng" contains the following nutritional information per half liter

TABLE 3: NUTRITIONAL CONTAINS OF THE PASTEURIZED MILK UNDER "KARENG" MILK SOCIETY

Energy value(kcal)	56.0
Carbohydrate(g)	4.3
Protein(g)	3.0
Added sugar(g)	0
Fat(g)	3.0

Source: Revealed by the milk society

#### PROMOTION OF FINANCIAL INCLUSION

Apart from generating self employment opportunities, the Kareng cooperative milk society is playing an important role in financial inclusion of dairy farmers. Financial inclusion is the delivery of adequate and timely institutional credit facilities to the weaker sections of the society at an affordable cost. Financial inclusion of the excluded group is important because it is the way to uplift their economic status.

The members of Kareng milk society are encouraged to take loans from banks for dairy farming. In 2004 there were no such loan beneficiaries. In 2005, twelve persons took loan for dairy farming. Till 2014 the numbers of loan beneficiaries are 175. And the number of already existing dairy farmers (without loan) are 300. The interested people take loan mainly from State Bank of India Nazira Branch and Nemuguri, Dhitaipukhuri, Sivasagar branches of Gramin Vikash Bank. The following table shows the number of loan beneficiaries and the number of already existing dairy farmers since 2004 which has been increasing till 2014. Thus it appears that Kareng milk society is doing a wonderful job towards the Financial inclusion of dairy farmers.

TABLE 4: FINANCIAL INCLUSION OF THE DAIRY FARMERS OF THE KARENG MILK SOCIETY

Year	No. of dairy farmers( with bank loan)	No. of dairy farmers (without loan)
2004	0	13
2005	12	30
2006	25	50
2007	37	62
2008	60	78
2009	82	104
2010	102	140
2011	124	172
2012	140	230
2013	160	254
2014	175	300

Source: Survey data

Table 4 reveals that, a good number of dairy farmers of Kareng milk society are financially included but still a large number of dairy farmers are outside the ambit of banking services. However the milk society is encouraging the excluded dairy farmers to take bank credit in order to expand their scale of operation.

#### SUMMARY OF THE MAJOR FINDINGS OF THE STUDY

- The Kareng milk society provides a good opportunity among the youths to become self-employed through dairy farming. More than five hundred persons are directly or indirectly engaged under this project.
- The Kareng milk society is playing an important role in financial inclusion of the dairy farmers through developing banking habits among them. The payments of the dairy farmers are deposited in their respective bank accounts. Again upto 2014 the number of loan beneficiaries under it is 175 persons against none in the starting year 2004.
- It contributes towards inclusive growth by generating productive employment opportunities at the rural and urban areas of Nazira. As a result the income level and standard of living of the persons engaged under the Kareng cooperative milk society are continuously improving.

**RECOMMENDATIONS**

Some recommendations can be put forwarded to make Kareng milk society as a revolutionary programme of self employment throughout the country.

- Steps should be taken to introduce other products like curd, paneer, chocolates, ice-cream, butter, cheese, ghee, etc. and the products should be introduced at the state and national level instead of introducing at district market.
- Steps should be taken to increase the milk production and for these necessary measures like financial assistance, advisory services, veterinary advices should be provided. Mainly veterinary support services are very essential for dairy farmers.
- More youths of both rural and urban area should be encouraged to engage under it. For it youth campaigns regarding the future prospects of dairy farming should be arranged from time to time
- Although the Kareng milk society gets assistance from the Dairy Department and Oil and Natural Gas Corporation Limited but it does not seem to be enough for the milk society. There is a good scope for providing financial as well as other government assistance to the society. The milk society does not get any financial assistance under any government scheme. So it is difficult for an infant milk cooperative society to grow at a rapid rate without government assistance.
- The dairy farmers should be encouraged to increase their milk production by taking bank credit.

**CONCLUSION**

White collar job for all is neither desirable nor feasible; unemployment in India is almost taking its explosive form so it is the need of the hour to think alternative to institutional jobs i.e. to become self employment. There are several ways to be self employed and dairy farming is one of them. Realizing this, Kareng milk society has been established in Nazira subdivision of Sivasagar district.

In this paper an attempt has been made to identify the role played by the Kareng milk society in self employment generation among the youths of the Nazira Subdivision. The above success story of Kareng milk society shows that it has provided a ray of hope among the dairy farmers of Nazira as they got a holistic market for selling their milk as the society is continuously expanding its business across the district.

Thus we see that Kareng milk society has revolutionized the milk business of Nazira and generated a good number of self employment opportunities. Further it has played a significant role in financial inclusion of dairy farmers.

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**ROLE OF MICROFINANCE INSTITUTIONS FOR ACHIEVING FINANCIAL INCLUSION IN INDIA****SEEMA RANI****RESEARCH SCHOLAR****UNIVERSITY SCHOOL OF MANAGEMENT****KURUKSHETRA UNIVERSITY****KURUKSHETRA****RAJNI CHUGH****RESEARCH SCHOLAR****UNIVERSITY SCHOOL OF MANAGEMENT****KURUKSHETRA UNIVERSITY****KURUKSHETRA****ABSTRACT**

*Microfinance institutions are playing a significant role in achieving the objective of financial inclusion in India. Various steps have been taken by Reserve Bank of India for achieving the objective of financial inclusion and microfinance is one of the major tools that have been used. The present study purposes the performance of selected microfinance institutions and the overall progress of microfinance program from 2009-12. Sample size taken for the study is 20 institutions selected on the basis of their loan portfolio. The result of the study when analyzed with the help of t-test has shown a significant improvement in the performance of Microfinance Institutions in terms of gross loan portfolio as an indicator. It can be concluded that the objective of Financial Inclusion can be achieved somehow with the help of microfinance program and focused implementation of the guidelines of Reserve Bank of India.*

**KEYWORDS**

Financial Inclusion, , Gross loan portfolio, Microfinance, RBI.

**INTRODUCTION**

Financial inclusion has been defined as the "Provision of affordable financial services" (RBI, 2006a) to those who have been left unattended or under-attended by formal agencies of the financial system. These financial services include "payments and remittance facilities, savings, loan and insurance services" (ibid.). Micro finance has been looked upon as an important means of financial inclusion in India (RBI, 2006b). The Indian concept of micro finance encourages access of SHGs to banks both as means of savings and providers of loan services. However, going a step further, we can say that micro finance has to act proactively not just as a means of financial inclusion and also has to work towards reducing dependence of poor borrowers on various informal sources of credit that are often notorious for the onerous terms at which they offer credit. Given the definition of financial inclusion, any means for financial inclusion, to begin with, has to be not just easily accessible but also affordable to the borrowers, who do not have access to formal financial system. Secondly, it should ensure that over time the borrowers are able to reduce their dependence on informal sources of finance and a certain degree of loyalty towards SHGs, which can work towards permanent or effective inclusion of these borrowers into the formal banking network.

The importance of financial inclusion stems from various factors. First, an inability to access financial services could lead financially excluded entities to deal mostly in cash, with its attendant problems of safe-keeping. Second, the lack of access to safe and formal saving avenues could reduce their incentives to save. When saving occurs, safety and interest rate benefits may not be to the extent available in the formal system. Inadequate savings could lead households to depend on external sources of funds, in times of need. Often these sources are unregulated and carry high interest rates. High interest rates increase the risk of default by borrowers. Third, the lack of credit products means inability to make investments and significantly improve their livelihoods. As a result, small entrepreneurs often lack an enabling financial environment to grow. Fourth, the lack of remittance products leads to money transfers being cumbersome and high risk. Fifth, the lack of insurance products means lack of opportunities for risk management and wealth smoothening. According to C. Rangarajan there are six approaches in the system of Financial Inclusion, they are, as follows. 1) Credit to the farmer households is one of the important elements of financial inclusion among them providing credit to the marginal and sub marginal farmers as well as other small borrowers is crucial to the need the hour. 2) Rural branches must go beyond providing credit and extend a helping hand in terms of advice on a wide variety of matters relating to agriculture. 3) In district where population per branch is much higher than the national average commercial banks may be encouraged to open the branches. 4) There is need for the simplification of the procedures in relation to granting of loans to small borrowers. 5) The further strengthening the SHG-Bank Linkage Programme (BLP), as it has proved to be an effective way of providing credit to very small borrowers. 6) The business facilitator and correspondent model needs to be effectively implemented.

**PROGRESS OF MICROFINANCE IN INDIA**

The institutions which engage in microfinance services in India follow three types of approaches namely

- i. The Grameen Bank approach
- ii. The Cooperative Societies (which are members of a cooperative bank) approach
- iii. The SHG Programme approach.

In the four years between 2003 and 2007, small borrower bank accounts (credit) i.e. upto Rs 25,000,

Increased marginally from 36.9 million to 38.6 million, while SHGs borrowing members grew from 10 million to 40.5 million and MFIs borrowers grew from 1.1 million to 8 million. In 2007-08, MFIs have added 6 million clients increasing their outreach to 14 million as per data brought out by Sa Daan.

An innovative scheme in rural delivery system launched by NABARD is the linking of SHGs of the poor with banks and bulk lending through NGOs. NABARD considers SHGs a pre-microenterprise stage for majority of the rural population. The linkage project envisages active involvement of NGOs who play a crucial role in formation, nurturing, stabilizing and guiding the SHGs into cohesive and dynamic groups inculcating the habits of thrifts and credit management and ultimately establishing linkage with the banks. Under the SHG-bank linkage programme, three linkage models have broadly emerged. Under the first model, banks directly link SHGs without the intervention of the NGOs. In the second model, banks provide credit to SHGs and NGOs act as Self Help Promoting Institutions (SHPIs). Under the third model, NGOs act both as SHPIs and financial intermediaries for channelizing credit from banks to SHGs.

The SHG-Bank Linkage Programme implemented by commercial banks, RRBs and cooperative banks has emerged as the major micro- finance programme in the country. Under the SHG-Bank Linkage Programme, as on March 31, 2009, 61,21,147 SHGs held savings bank accounts with total savings of Rs 5,545.62 crore as against 50,09,794 SHGs with savings of Rs 3,785.39 crore as on March 31, 2008. Thus more than 8.06 crore poor households were associated with banking agencies under the SHG- Bank Linkage Programme.

TABLE 1: THE PROGRESS UNDER SHG BANK LINKAGE PROGRAMME IN INDIA

Year	New SHGs financed by banks Bank loan					Bank loan
	During the year		Cumulative during the year			Cumulative amount
	No.	Growth (%)	No.	Amount	Growth (%)	
2002-03	2,55,882	29	7,17,360	1,022.34	87	2,048.68
2003-04	3,61,731	41	10,79,091	1,855.53	81	3,904.21
2004-05	5,39,365	49	16,18,456	2,994.25	62	6,898.46
2005-06	6,20,109	15	22,38,565	4,499.09	50	11,397.55
2006-07	11,05,749*	-	28,94,505	6,570.39	-	12,366.49
2007-08	12,27,770*	11	36,25,941	8,849.26	35	16,999.90
2008-09	16,09,586*	31.1	42,24,338	12,256.51	38.5	22,679.85

Source: Govt. of India, 2009

\* from 2006-07 onwards, data in respect of number of SHGs financed by banks and bank loans are inclusive of SHGs financed under the Swarna Jayanti Gram Swarozgar Yojana (SGSY) and the existing groups receiving repeat loans. Owing to this change, NABARD discontinued compilation of data on cumulative basis from 2006-07. As such data from 2006-07 onwards are not comparable with the data of the previous years.

As on March 31, 2009, commercial banks had the maximum share of SHG savings with savings of 35,49,509 SHGs (58 per cent) amounting to Rs 2,772.99 crore (50 per cent); this was followed by RRBs with savings bank accounts of 16,28,588 SHGs (26.6 per cent) and savings amount of Rs1,989.75 crore (35.9 per cent) and cooperative banks with savings bank accounts of 9,43,050 SHGs (15.4 per cent) and savings amount of Rs 782.88 crore (14.1 per cent).

The share of the Swarnajayanti Gram Swarozgar Yojana (SGSY) in SHG savings accounts was 15,05,581 SHGs, forming 25 per cent of the total SHGs having savings accounts in banks. During 2008-09, the average savings per SHG with all banks increased from Rs 7,556 as on March 31, 2008 to Rs 9,060 as on March 31, 2009, varying between a high of Rs 12,218 per SHG with RRBs and a low of Rs 7,812 per SHG with commercial banks. As on March 31, 2009, the share of women SHGs in total SHGs with savings bank accounts was 48,63,921, accounting for 79.46 per cent as compared to the previous years share of 79.56 per cent. During 2008-09, banks financed 16,09,586 SHGs, including repeat loans to existing SHGs, as against 12,27,770 SHGs during 2007-08—a growth of 31.1 per cent (number of SHGs).

As on March 31, 2009, 42,24,338 SHGs had outstanding (cumulative) bank loans of Rs 22,679.85 crore as against 36,25,941 SHGs with outstanding bank loans of Rs16,999.90 crore as on March 31, 2008. This included 9,76,887 SHGs (6.5 percent) with outstanding bank loans of Rs 5,861.72 crore (21.7 per cent) under the SGSY as against 9,16,978 SHGs with outstanding bank loans of Rs 4,816.87 crore as on March 31, 2008. Commercial banks had the maximum share of around 70 percent of outstanding bank loans to SHGs followed by RRBs with a share of 23 per cent and cooperative banks with the balance. As on March 31, 2009, the average bank loan outstanding per SHG was Rs53,689 as against Rs 46,884 as on March 31, 2008. It varied from a high of Rs 57,037 per SHG in the case of commercial banks to a low of Rs 31,460 per SHG in the case of cooperative banks.

## LITERATURE REVIEW

In 2011, Priyadarshini and Ghalib describe a process whereby the MFIs not only offered multiple loans to the same borrower household without following due diligence, but also collaborated with consumer goods companies to supply consumer goods such as televisions as part of their credit programmes. These purely consumption loans exacerbated the already worsening indebtedness of poor households and some of them started defaulting in repayment. Several MFIs then resorted to openly coercive methods for loan recovery. Extreme repayment pressure forced borrowers to approach moneylenders to borrow at exorbitant rates of interest simply to repay the MFIs. When the situation became impossible, and no fresh loans were accessible, some of these borrowers committed suicide and the issue attracted widespread media coverage. Viada and Gaul (2011) point to the growing links between MFIs and the rest of the financial sector. The business success of microfinance attracted new and relatively large sources of both local and international funding, including private equity funds and other financial investors. As a result, MFIs were encouraged to increase loan portfolios to meet ambitious outreach goals or shareholder demands for increasing revenue growth. In 2012 Dr. Christabell. P.J. Vimal Raj A. defined the overall strategy for financial inclusion, especially amongst the poor and disadvantaged segments of the population. It comprises ways and means to effect improvements within the existing formal credit delivery mechanism, as well as an evolution of new models for extending outreach, and a leverage on technology solutions to facilitate large scale inclusion. Only two to five percent of the 500 million poorest households in the world have access to institutional credit. Of which, women receive a disproportionately small share of credit from formal banking institutions. The Women's Self Help Group movement is bringing about a profound transformation in rural areas of India. In 2013 Porkod examine the role of micro finance in the empowerment of people and the realisation of financial inclusion in India. While there are reservations about the efficacy of MFIs in handling public money, their growth and achievements demand attention and appreciation. Shankar Savita (2013), found that while MFIs do break down many barriers to financial inclusion, there are limitations in the extent of their outreach to those excluded. First, MFI penetration in the country is skewed and excludes some areas neglected by the banking sector, suggesting a need for policy incentives to encourage expansion to those areas. Second, even in areas in which MFIs operate they are unable to provide services to some financially excluded individuals on account of their methods of operation. To provide greater and more long lasting access to more individuals there is a need for MFIs to consider adopting more flexible operating models and to offer portability of accounts. There is also a case for skill based training to enable greater access to MFI membership.

## OBJECTIVES

To study the performance of selected microfinance institutions on the basis of gross loan portfolio and the progress of overall microfinance program for achieving financial inclusion.

## RESEARCH METHODOLOGY

Descriptive type of study has been done. The sample size include 20 microfinance institutions (NGOs and NBFCs) which provides their data on MIX (mix market) database. The period taken for the study is of 3 years i.e from 2009-12. The statistical tool t-test has been applied to draw the results.

## DATA ANALYSIS

TABLE 2

### ONE-SAMPLE TEST

ONE-SAMPLE TEST					
	Test Value = .05				
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference
					LowerUpper
Gross loan portfolio	19.742	2	.003	6.29011E9	4.9192E97.6610E9

The results of the table (No.1) depicts that there is significant difference between the loan portfolio of the selected Microfinance Institutions from the year 2009-12. When calculated at 95% confidence level, the t-value comes out to be 19.742 that is more than the tabulated value(19.742>2.92), showing the performance has increased significantly which in turns helps in achieving Financial Inclusion in India.

TABLE 3

Items	Microfinance institutions Number (in millions)		
	2009-10	2010-11	2011-12
Loans disbursed by banks	691	469	465
Loans outstanding by banks	1513	2176	1960

Source: Basic Statistical Returns of Commercial Banks, RBI

FIGURE 1

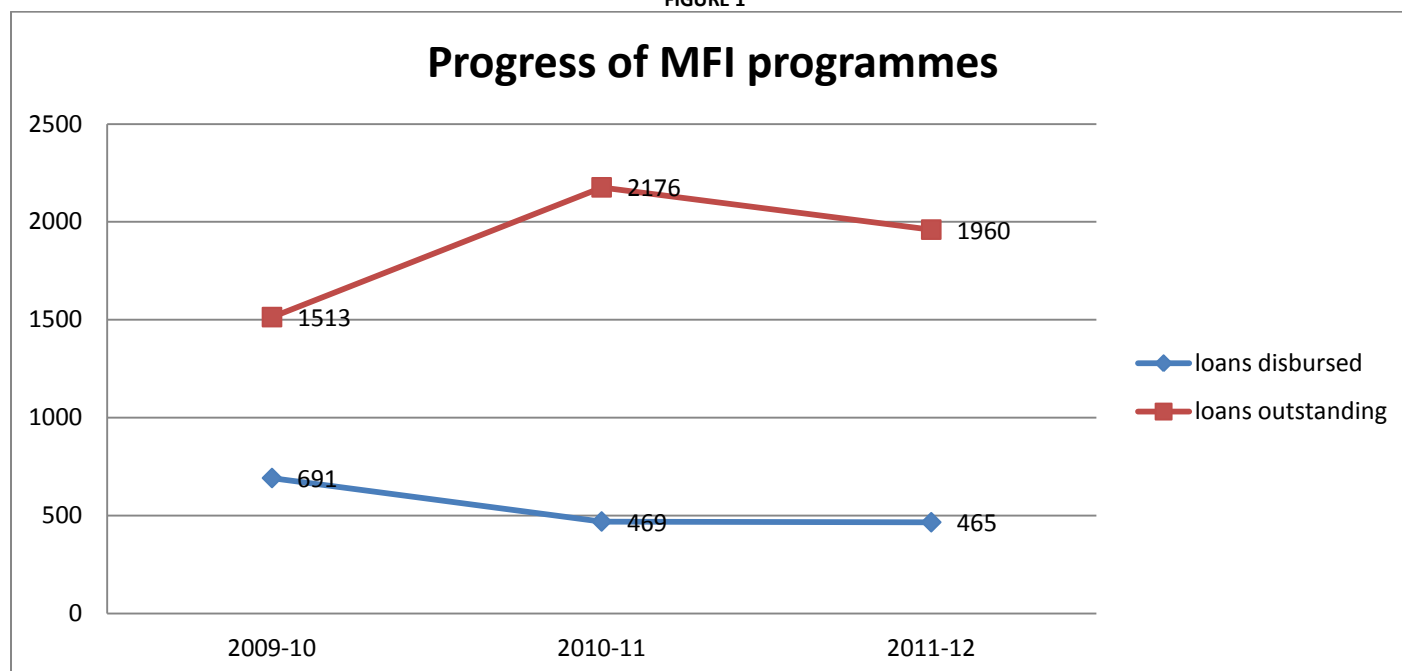


Chart shows the progress of overall Micro-finance program from the year 2009-12. It has been found that the no. of loans disbursed by banks has decreased in 2010-11 from the previous year due to Andhra Pradesh crises in 2008. After 2011 the performance has been improved in case of loan outstanding but loan disbursement rate has been decreased.

## CONCLUSION

The Micro Finance Institutions are an integral part of financial inclusion and instrumental in providing "last mile connectivity" but there need to be a balance. They should be kept viable but within certain boundaries. At present, these MFI across the country is under stress. The Reserve Bank of India has set up a committee under the chairmanship of Mr. Y. H. Malegam to examine the issues confronting the microfinance industry, including their interest rate structure and suggest recommendation. For achieving complete financial inclusion and for inclusive growth microfinance institutions are playing their role significantly. Access to financial services could be made more easily and effectively by means of SHGs and MFIs. Financial inclusion is a big road which India needs to travel to make it completely successful. Financial inclusion will be real and successful only when the small and marginal farmers and landless labourers have unhindered access to the financial services like Savings, Credit, Micro insurance and remittance facilities.

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**THE STUDY OF SOLVENCY POSITION OF MUMIAS SUGAR COMPANY LIMITED, KENYA****OMBEGA OGUTA KEPHAR****RESEARCH SCHOLAR****DEPARTMENT OF BUSINESS AND ECONOMICS****JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY****BONDO****ABSTRACT**

*This paper investigates the solvency performance of Kenya's leading sugar industry for the period 2009 - 2013. Financial ratios are employed to measure the liquidity and credit quality performance of Mumias sugar Company. The study reveals that overall liquidity was favourable since there was greater claim of shareholders over the assets of the company than those of the creditors in the long run of its operation.*

**KEYWORDS**

Analysis of short term, long-term liquidity position.

**INTRODUCTION**

Every business should have sufficient working capital to survive on its short run operations and in long run to grow. Any business has to ensure optimum utilization of four factors of production such as land labour capital and organization to maximize its net assets. It is essential for a financial manager to analyse the solvency of the firm to ensure to achieve the one the goals of the firm i.e. maximize the net asset of the firm. The ability of the firm to meet its short term as well as long term obligation to its creditors, to ensure a reasonable return to its owner and secure optimum utilization of the assets of the concern. Failure to maintain adequate liquidity in an enterprise it can lead to a portion of working capital being financed by long term funds. Solvency analysis is an important activity of evaluating financial soundness of the companies. The effective management and control of various components of short term funds has direct impact on liquidity of the enterprise.

**STATEMENT OF PROBLEM**

"The analysis of financial solvency of the Mumias Ltd Company aimed at disclosing short and long term liquidity of the business."

**OBJECTIVES OF STUDY**

1. To measure short – term and long – term solvency of the business.
2. To compare inter-period financial position and revelation of trend in liquidity of the company.
3. To forecast future potential of the company.

**TOOLS FOR THE ANALYSIS**

The study employed financial ratios both for short-term and long-term, specifically:

1. Current ratio
2. Liquidity ratio
3. Fixed asset ratio
4. Debt equity ratio and
5. Capital gearing ratio

**LIMITATION OF STUDY**

1. The study is only applicable to Mumias Sugar Company.
2. The study is based on historical data
3. Financial statement does not always disclose the correct financial position of a business concern as they are influenced by the personal opinion.
4. Balance sheet of the company is a static document as it discloses the financial position of the company on a particular date, but the value shown and composition of item keep changing day by day and information does not disclose current realities.
5. Financial statement of one period may not be comparable as such with statements of other periods due to difference in condition and change in economic situations.

**PERIOD OF STUDY**

The study covers a period of five financial years as from 2009 to 2013.

**METHODOLOGY OF STUDY**

The methodology employed on the analysis of solvency of Mumias Sugar Co. Ltd is based on secondary data. The secondary data was mainly collected from Annual reports, Interim records, Company journals, News papers, Company web site.

**ANALYSIS AND INTERPRETATION****CURRENT RATIO ANALYSIS**

The company's Current ratio expresses relationship that exists between current assets and current liabilities and can be calculated by dividing current assets by current liabilities.

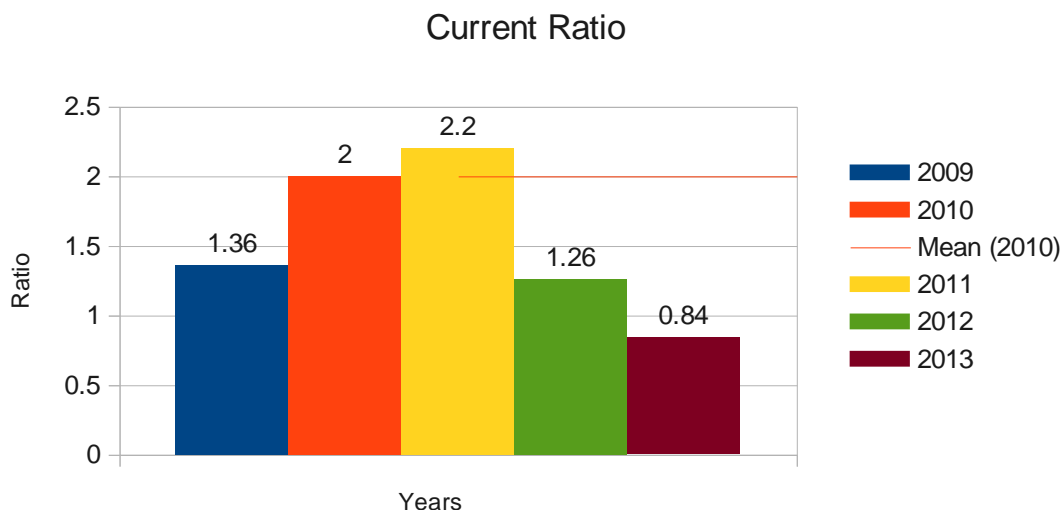
The relation help to measure the short term solvency of a business. In a sound business a current ration of 2:1 is considered an ideal one.

**TABLE 1**

Years	2009	2010	2011	2012	2013
Current ratio trend.	1.36	2.00	2.20	1.26	0.84

Sources: Computed data from Annual Reports

FIGURE 1

**INFERENCE**

- The year 2009, 2012 and 2013 the business's current ration is below the ideal ration, which indicates that Mumias sugar company's short term solvency is doubtful and it's evident the business was not in position to meet its current liabilities in time as and when they are due to mature.
- The year 2010 the business attained the ideal ration on its liquidity which discloses caution and provides flexibility for payment.
- The year 2011 the displays a high ration, a greater margin of safety to creditors. However, from the management point of view such a higher ration indicates poor planning since a excessive funds are invested in current assets and lies idle. This is an indication that Mumias sugar has less efficient use of funds, which shows how it does depend on long term source of raising funds which are expensive than current liabilities.

**QUICK/LIQUID/ACID TEST RATIO ANALYSIS**

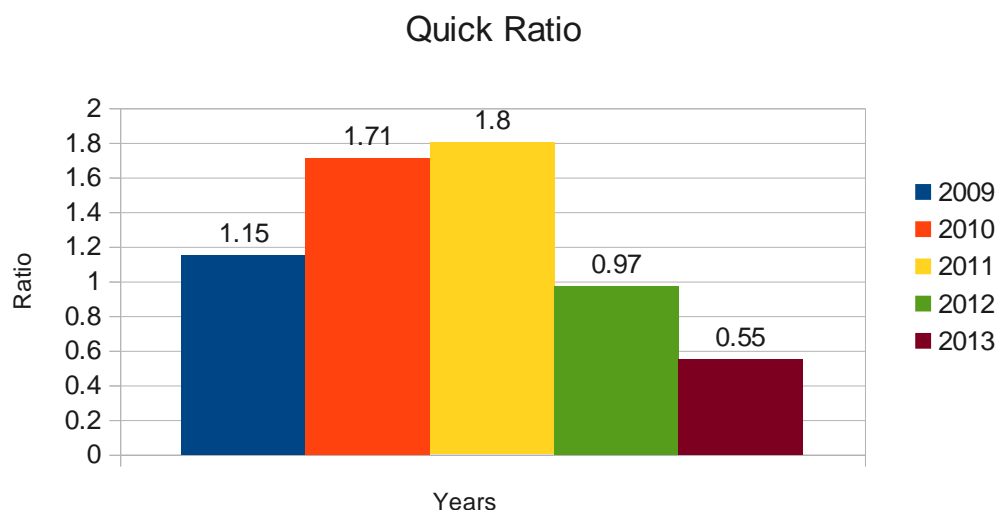
Its a ration of a more refined measure of Mumias's business solvency. Which could establish the relationship between liquid assets and current liabilities. Can be calculated by dividing quick assets by current liabilities. The ideal liquid ration or generally accepted norm for liquidity ration is '1:1'.

TABLE 2

Years	2009	2010	2011	2012	2013
Quick ratio trend.	1.15	1.71	1.80	0.97	0.55

Sources: Computed data from Annual Reports

FIGURE 2

**INFERENCE**

The year 2012 and 2013 indicates that the ration is below the ideal which shows that Mumias sugar had a bad liquid position. The year 2009, 2010 and 2011 the ration was above ideal which indicates current assets convertible easily to cash.

**ANALYSIS OF VARIANCE ON SHORT TERM SOLVENCY (Current ratio and Quick ratio)**

TABLE 3: ANOVA TABLE

Source of Variance	Sum Square	Degree of Freedom	Mean Sum Square	Variance Ratio
Between column	SSC= 0.22	1	0.22/1 = 0.22	F = MSE/MSC = 0.29/0.22 = 1.32
Within column	SSE= 2.33	8	2.33/8 = 0.29	
Sum Square Total	SST= 2.55	9		



Degree of freedom is 1,8

$F = .29/.22 = 1.32$

Table value at 5% level = 5.32

$H_0$  accepted since  $F < \text{Table value}$ .

#### INFERENCE

Thus there is no significant difference between the ratios i.e current and quick ratios.

#### FIXED ASSET RATIO ANALYSIS

The company could be in position to establish the relationship between its fixed assets and long term funds. The objective of the ratio is to ascertain the proportion of long term funds invested in fixed assets. The ideal ratio should be '0.67'. Though the ratio should not be more than one.

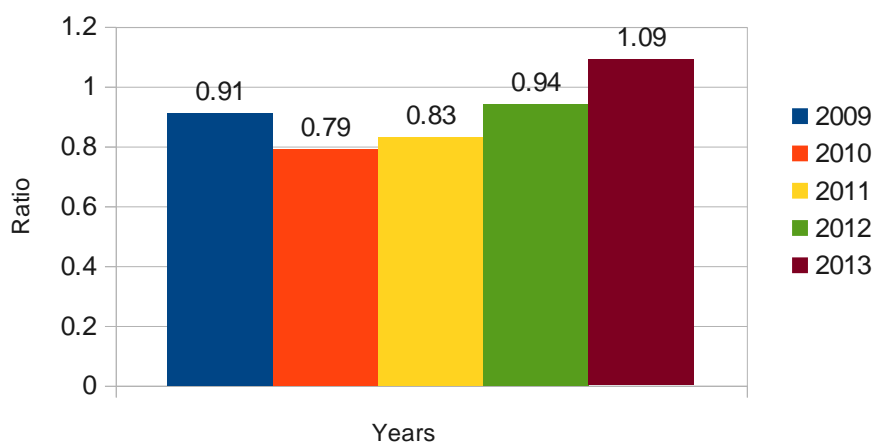
TABLE 4

Years	2009	2010	2011	2012	2013
Fixed asset ratios trend.	0.91	0.79	0.83	0.94	1.09

Sources: Computed data from Annual Reports

FIGURE 3

### Fixed Assets Ratio



#### INFERENCE

In the year 2013 the ratio was more than one which indicates that the fixed assets are purchased with short term funds which are not a prudent policy in the business.

The year 2009, 2010, 2011 and 2012 the ratio is less than one which indicates that a portion of working capital has been financed by long term funds.

#### DEBT EQUITY RATIO ANALYSIS

The company would be able equate total debt to total assets since total capital represents total assets. Which could enable Mumias to measure a portion of business assets financed by creditors. The ideal ratio is '1'.

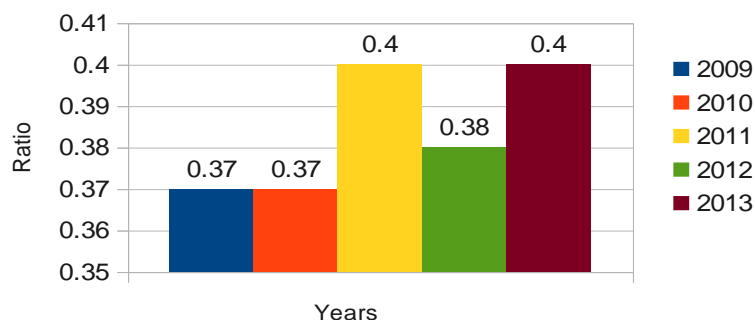
TABLE 5

Years	2009	2010	2011	2012	2013
Debt equity ratios trend.	0.37	0.37	0.40	0.38	0.40

Sources: Computed data from Annual Reports

FIGURE 4

### Debt Equity Ratio



#### INFERENCE

In the long run, the ratio is below the ideal which indicates that Mumias Sugar company's management considered favourable since greater claim of shareholders over the assets of the company than those of the creditors. Thus it provides greater margin of safety to creditors in extending credit, which is disadvantageous to shareholders as they get lesser dividend.

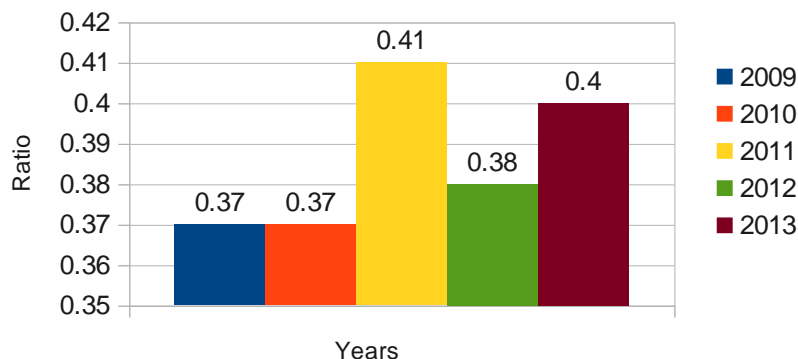
**CAPITAL GEARING RATIO ANALYSIS**

The ratio could be employed by company to show the proportion of various items of long term finance employed in Mumias Sugar Company's business. Which indicates proportion between owners' fund and non owners funds (leverage).

**TABLE 6**

Years	2009	2010	2011	2012	2013
Capital gearing ratios trend.	0.37	0.37	0.41	0.38	0.40

Sources: Computed data from Annual Reports

**FIGURE 5****Capital Gearing ratio****INFERENCE**

It can be inferred that throughout the five years the company discloses a low gearing ratio which indicates that the company is trading on thick equity. The equity shareholders funds are more and the capital is said to be low geared.

**CONCLUSIONS**

- The company's short term solvency was fairly good even though the recent years i.e 2012 and 2013 showed departure from the accepted standard to be maintained in an organization. It thus reveals that its liquidity was doubtful for it was not in position to meet its current liabilities as and when they are due. It can be presumed that they were met through long term loans because much of current assets are used in financing non current assets of the company.
- The long-term solvency of the company was favourable as there was greater claim of shareholders over the assets of the company than those of the creditors on the company.
- There was no trading on equity as the company traded on thick equity alone which led to low gearing ratio on the owners of the company which is disadvantageous on earnings of the company.

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## ANNEXURE

TABLE 7: COMPARATIVE BALANCE SHEET OF MUMIAS SUGAR COMPANY LTD FOR PERIOD OF FIVE YEARS I.E 2009 TO 2013

Particulars	2013 ('000)	2012 ('000)	2011 ('000)	2010 ('000)	2009 ('000)
<b>Non current assets.</b>					
Property, plant and equipment.	19,615,082	19,810,560	16,415,740	11,585,953	12,098,452
Intangible assets.	315,676	206,603	156,732	142,879	186,203
Non current receivables.	157,695	150,090	92,385	98,393	79,128
<b>Total Non C.A</b>	<b>20,088,453</b>	<b>20,167,253</b>	<b>16,664,857</b>	<b>11,827,225</b>	<b>12,363,783</b>
<b>Current assets.</b>					
Inventories	2,463,064	1,676,088	1,191,114	955,078	796,096
Biological assets.	219,378	191,093	210,615	179,375	189,501
Trade and other receivables.	3,765,866	4,584,048	3,863,595	3,327,244	3,262,935
Taxation recoverable.	183,102	200,214	250,109	401,301	396,032
Collateral deposit.	301,925	294,817	314,524	286,709	272,892
Short term deposits.	-	51,797	14,345	820,376	-
Quoted investments – at fair value.	44,106	35,240	25,267	-	-
Cash and bank balance.	70,923	138,063	642,090	525,751	182,381
<b>Total C.A</b>	<b>7,048,364</b>	<b>7,171,360</b>	<b>6,511,659</b>	<b>6,495,834</b>	<b>5,099,837</b>
Non current assets held for sale.	11,576	61,500	-	11,051	12,095
<b>Net C.A</b>	<b>7,059,940</b>	<b>7,232,860</b>	<b>6,511,659</b>	<b>6,506,885</b>	<b>5,111,932</b>
<b>Total assets.</b>	<b>27,148,393</b>	<b>27,400,113</b>	<b>23,176,516</b>	<b>18,334,110</b>	<b>17,475,715</b>
<b>Equity and liabilities.</b>					
<b>Equity.</b>					
Share capital.	3,060,000	3,060,000	3,060,000	3,060,000	3,060,000
Revaluation surplus.	3,173,432	3,350,880	3,552,456	1,535,846	1,687,251
Retained earnings.	7,055,538	9,312,806	7,863,551	6,404,006	5,292,218
<b>Shareholders equity.</b>	<b>13,288,970</b>	<b>15,723,686</b>	<b>14,476,007</b>	<b>10,999,852</b>	<b>10,039,469</b>
<b>Non current liability.</b>					
Deferred income taxation liability	2,443,472	3,027,494	3,327,449	1,846,201	1,238,710
Provision for service gratuity.	10,464	2,747	3,735	19,800	16,597
Deferred grant income.	15,379	-	11,800	25,760	37,786
Long term borrowing.	2,981,335	2,925,531	2,395,834	2,192,476	2,382,814
<b>Total Non C.L</b>	<b>5,450,650</b>	<b>5,955,772</b>	<b>5,738,818</b>	<b>4,084,237</b>	<b>3,675,907</b>
<b>Current liabilities.</b>					
Borrowings.	3,058,448	2,463,448	610,028	337,304	897,397
Trade and other payables.	4,844,672	2,928,017	2,024,399	2,567,492	2,509,110
Provision for service gratuity.	5,652	1,201	10,482	6,474	4,454
Provision for staff leave pay.	43,626	28,552	33,822	29,478	28,157
Unclaimed dividends.	456,375	299,437	282,960	309,273	321,221
<b>Total C.L</b>	<b>8,408,773</b>	<b>5,720,655</b>	<b>2,961,691</b>	<b>3,250,021</b>	<b>3,760,339</b>
<b>Total equity and liabilities.</b>	<b>27,148,393</b>	<b>27,400,113</b>	<b>23,176,516</b>	<b>18,334,110</b>	<b>17,475,715</b>

Source: Published company's financial reports

## TREND OF AGRICULTURAL FINANCE BY COMMERCIAL BANKS: A CASE STUDY OF UNION BANK OF INDIA, BANK OF BARODA AND STATE BANK OF INDIA

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**DAV PG COLLEGE**  
**VARANASI**

### ABSTRACT

*Agriculture is considered as an identity of India and backbone of Indian economy. Agriculture had, always, been an important source of income and livelihood to big part of population, since historical period. But due to low and slow profit and hard work present in this sector, agricultural work is not at the top of the preference list of jobs that today's workforce is interested in. This trend is also due to the problems, attached with this sector, in starting up agricultural works at satisfactory and commercial level. Problem of easy and proper institutional finance was among those several problems. Several programmes have been launched through government and private sector to remove exclusion of agriculture sector from financial system. In recent time period, agricultural sector is treated as one of the priority sector to be given finance by commercial banks. An attempt has been made in this paper to study trend of agriculture finance by commercial banks (especially by Union Bank of India (UBI), Bank of Baroda (BOB), and State Bank of India (SBI)).*

### KEYWORDS

Agriculture, finance, commercial banks, development, non-performing assets.

### INTRODUCTION

The agriculture sector plays a very significant part in our country's GDP but the role played by infrastructure service providers in arranging with the requirements of agricultural sector, timely and adequately, is not so significant. Some of the basic and important infrastructures such as transportation, electricity, elementary education proper banking and financial services etc. have still not penetrated in most of the part of rural India.

Well the concern of this paper is banking services. Agricultural is said to be identity of Indian economy and Indian economy is an agrarian economy, then also serving the needs of agriculture sector was something in which Indian banking sector has some sort of disinterest. While the other sectors such as industrial and service sector have always attracted bankers to get finance. One of the reasons of this trend can be said that the low returns which is given by agricultural sector as compared to other sectors (industry and service). Not only low returns but the returns are quite slow and prone to be affected by several uncontrollable factors. This condition of financial exclusion has prevailed not only from the time when the modern banking system was introduced but from ancient history. And this condition has resulted in to several social evils such as private lenders, who were just like parasites –always ready to conquer all the holdings, where big or small, of the innocent farmers, by hook or by crook.

With the passing time, the importance of agriculture sector for the Indian economy and important role to be played by banking sector (especially commercial banks) as most essential tool for development, had been felt by Government, and several plans have been initiated to remove financial exclusion and the banks were advised to enhance their reach in rural sector to cater the financial needs of agriculture works.

Of course, the implementations of these plans have changed the face of financial services in rural areas in positive way. Now, the agricultural sector is one of the priority sectors for banks to be give credit. But these efforts are not up to the requirements that are needed by the Indian agricultural sector to make the sector more competitive that to at global level. There has been always deficiency on the demand and supply of the banking services in rural India.

### PRESENT SCENARIO

In between the first decade of 21<sup>st</sup> century i.e., from the year 2000 onwards the agricultural sector of India had made several appreciable and competitive achievements. The agricultural sector is registering growth year by year and also their contribution towards capital formation and exports is also had been considerable during recent years and the trend is expected to be continued in same way. The banking sector also had shown reduction in the disinterest towards agricultural credit lending. The period 2004-07 had been some special in this regard and was termed as 'doubling period'. During 2001 to 2012, around 28 lakh crores have been disbursed for agriculture sector as finance, and further, 35 to 42 lakh crore is expected to be invested during 12<sup>th</sup> five year plan period. Now agricultural credit is considered as most important investments strategy regarding agriculture.

### SCHEDULED COMMERCIAL BANKS ROLES IN AGRICULTURAL FINANCE AND CREDIT DELIVERY

As stated earlier, there has been tremendous increase in the finance given by commercial banks to agricultural sector- both in – direct finance or indirect finance. For example- in following table we can see the direct total credit, for agricultural and allied sector, in form of loan given by commercial banks (during 2004-05 to 2011-12):

### OBJECTIVE OF THE STUDY

The objective of present study is to study the volume and trend of agriculture finance (with special emphasis on direct finance) provided by commercial banks, and the variations therein, during three financial year i.e., 2010-11, 2011-12 and 2012-13.

A case study has been made over Union Bank of India (UBI), Bank of Baroda (BOB) and State Bank of India (SBI).

### METHODOLOGY

This study is a secondary data based study. The study has been done on the basis of- annual reports of the selected banks, trends and progress of banking in India (RBI publication) etc.

**TABLE 1: DIRECT CREDIT FOR AGRICULTURE AND ALLIED ACTIVITIES BY COMMERCIAL BANKS (Rs. in crores)**

Year	Loans issued	Loans outstanding
2004-05	48367	95519
2005-06	80599	135603
2006-07	115266	169018
2007-08	113472	202796
2008-09	160690	256119
2009-10	188253	315436
2010-11	222792	357584
2011-12	312877	443223

Source: Handbook of statistics on the Indian Economy

We can see in the above table that the loan issued and loan outstanding has increased with every year and the increase in loan issued and loan outstanding in the stated time period was around 546.88% and 364.01% respectively. In above table loan consists of both long term and short term.

Let us see the indirect credit for agriculture and allied activities by commercial banks in the following table:

**TABLE 2: INDIRECT CREDIT FOR AGRICULTURE AND ALLIED ACTIVITIES BY COMMERCIAL BANKS** (Rs. in crores)

Year	Loans issued	Loans outstanding
2004-05	21728	36017
2005-06	27751	57175
2006-07	38766	82564
2007-08	40278	93443
2008-09	73721	110702
2009-10	82839	145554
2010-11	86732	146923
2011-12	-	142585

Source: Handbook of statistics on the Indian Economy

We can see that there is increment in indirect financing by commercial banks by the way of loan issued and loan outstanding.

Now let us the condition of scheduled commercial banks regarding outstanding agriculture advances (direct and indirect), in the following table:

**TABLE 3: SCHEDULED COMMERCIAL BANK'S ADVANCES TO AGRICULTURE OUTSTANDING** (Rs in crores)

Year	Total Direct Finance	Total Indirect Finance
2004-05	95565	36071
2005-06	134798	57175
2006-07	172128	82564
2007-08	214644	93443
2008-09	264893	110702
2009-10	317767	145554
2010-11	360253	146923
2011-12	440758	142585

Source: Handbook of statistics on the Indian Economy

The total increment in direct finance outstanding as given by scheduled commercial banks from 2004-05 to 2011-12 was around 361.21% and 295.28% was in case of indirect finance.

#### BRIEF SECTOR WISE CREDIT DEPLOYMENT COMPARISON

The above tables show some of the good trends regarding agricultural finance by commercial banks. This may be due to banker's own interest or may be due to the pressure from government's side. Financing to agriculture sector, as one among the priority sector, is still just to fulfil the mandatory and legal requirements as stipulated by government and RBI. Of course, the volume of finance to agriculture and allied services had increased, remarkably, but the increase was not as significant as there was increase in the finance for the industry and other sectors. This may be clear by having a note (in the following table) over the sectoral credit deployment by banks (in the end month of financial year 2010-11, 2011-12, and 2012-13):

**TABLE 4: SECTORAL DEPLOYMENT OF GROSS BANK CREDIT** (Rs in crores)  
(A)

Sector	Outstanding as on			% increase or decrease from 2010-11 to 2012-13
	March 2011	March 2012	March 2013	
Agriculture and allied activities (a)	460300	548400	589900	+28.15
Industry (b)	1620800	1937400	2230200	+37.59
Services (c)	900800	1016600	1148600	+27.50
Personal loans (d)	685400	787300	900900	+31.44
Non-food credit (a To d)	3667400	4289700	4899600	+33.59
Gross bank credit	3731500	4371400	4964200	+33.03

Source: Reports on Trend and Progress of Banking in India, various issues

The above table shows the monthly details of outstanding credit advanced to various sector (in the month of March-2011, 2012 and 2013). On taking March 2011 as base year, then there was increase, in agriculture and allied activities outstanding, was of around 28.15% while in industrial sector and personal loans outstanding was 37.59% and 31.44% respectively. Only the service sector outstanding had increased lesser than agricultural sector (27.5%).

Now let us see the percentage share of several sectors in non food credit and gross bank credit:

(B)

Sector	March 2011		March 2012		March 2013	
	Non-food credit	Gross bank credit	Non-food credit	Gross bank credit	Non-food credit	Gross bank credit
Agriculture and allied activities (a)	12.55%	12.33%	12.78%	12.54%	12.03%	11.88%
Industry (b)	44.19%	43.43%	45.16%	44.31%	45.51%	44.92%
Services (c)	24.56%	24.14%	23.69%	23.25%	23.44%	23.13%
Personal loans (d)	18.68%	18.36%	18.35%	18.01%	18.38%	18.14%

Source: Reports on Trend and Progress of Banking in India, various issues

It is slightly clearer that bank lending toward industrial sector is more than any other sector in the economy. And of course the share of agricultural finance has gone down.

#### OVER ALL PRIORITY SECTOR FINANCING

Agriculture, as stated earlier, is one of the priority sector. And at macro level, the finance given to agriculture sector has declined, the deficiency is not only this much, but the target of lending finance towards priority sector has always been something that the commercial banks are, due to some or other reasons, unable to achieve.

The target of 40% lending to priority sector, to be given by public and private sector banks, have also not been achieved, in the study period (2010-11, 2011-12 and 2012-13). This 40% target is 40 % of adjusted net bank credit (ANBC)/ credit equivalent off –balance sheet exposure (OBE), whichever is higher. Advances to agriculture and weaker sections of society were less than, in 2011-12, 18% and 10% respectively, at the aggregate level.



There was a rise in the growth of priority sector credit in 2012-13 against overall credit growth during the year. In 2012-13, credit to priority sector by public and private sector banks was 36.3% and 37.5% respectively, which is again a short of the target to be completed. The details above are provisional. The data can be stated more clearly in following table:

TABLE 5: PRIORITY SECTOR LENDING BY BANKS (Rs. in crores)

As on 30 <sup>th</sup> March 2012						
Sector	Public sector banks		Private sector banks		Foreign banks	
	Amount outstanding	% of ANBC/OBE	Amount outstanding	% of ANBC/OBE	Amount outstanding	% of ANBC/OBE
Total priority sector advances → of which ↓	1130700	37.2	286400	39.4	80500	40.9
Agriculture	478600	15.8	104200	14.3	100	0.1
Weaker sections	288800	9.5	38900	5.4	-	-
Small enterprises	396600	13.1	110500	15.2	21700	11
As on 31 <sup>st</sup> March 2013						
Sector	Public sector banks		Private sector banks		Foreign banks	
	Amount outstanding	% of ANBC/OBE	Amount outstanding	% of ANBC/OBE	Amount outstanding	% of ANBC/OBE
Total priority sector advances Of → which ↓	1283600	36.3	327400	37.5	103300	35.2
Agriculture	530600	15.0	111900	12.8	7200	2.4
Weaker sections	347300	9.8	50500	5.7	5500	1.9
Small enterprises	478400	13.5	141700	16.2	28300	9.6

Source: Reports on Trend and Progress of Banking in India, various issues

Note: As on 31<sup>st</sup> March 2013, priority sector lending targets for domestic scheduled commercial banks/ foreign banks with 20 branches or more is set as 40% of adjusted net bank credit (ANBC) or credit equivalent off –balance sheet exposure (OBE), whichever is higher. The target of 40% for foreign banks with 20 branches or more is to be achieved by March 2018. For foreign banks having less than 20 branches, the target is 32%.

#### NON – PERFORMING ASSETS (NPAs) AND AGRICULTURE SECTOR

An asset, including, a leased asset, becomes non-performing when it ceases to generate income for the banks. A NPA was defined as a credit facility in respect of which the interest and / principal has remained 'past due' for a specified period of time.

Regarding agricultural advances, where interest and /or instalment of principal remain unpaid after being due for two harvest seasons, but for a period not exceeding two half years, such an advance should be treated as NPA.

The slow and low return of agriculture sector, make the financiers (to bankers also) to feel conservative while advancing credit regarding those advances in becoming NPAs. And non-priority sector is privileged while granting advances in expectation of lesser or no NPAs.

Let us see the sector wise NPAs of domestic banks in following table

TABLE 6: SECTOR –WISE NPA OF DOMESTIC BANKS (Rs. in crores)

Bank group	Priority sector		Of which				Non- priority sectors		Total NPA	
			Agriculture		Others					
	Amount	%age	Amount	%age	Amount	%age	Amount	%age	Amount	%age
Public sector banks										
2011	41300	58.1	14500	20.4	26800	37.7	29800	41.9	71100	100
2012	56200	50	22700	20.8	33500	29.8	56300	50.0	112500	100
2013	66900	42.9	28000	18.0	38900	24.9	89000	57.7	155900	100
Nationalised banks										
2011	25700	59.9	9200	21.5	16500	38.4	17200	40.9	43000	100
2012	32300	48.4	12900	19.3	19400	29.1	34500	51.6	66800	100
2013	40500	42.2	15600	16.3	24800	25.9	55400	57.8	95900	100
SBI group										
2011	15600	55.3	5300	18.7	10300	36.6	12600	44.7	28100	100
2012	23900	52.3	9800	21.4	14100	31.0	21800	47.7	45700	100
2013	26400	44.1	12400	20.7	14100	23.4	33500	55.9	59900	100
Private sector banks										
2011	4800	26.8	2200	12.1	2700	14.7	13200	73.2	18000	100
2012	5100	27.9	2200	11.8	3900	16.1	13200	72.1	18300	100
2013	5200	26.0	2200	10.9	3100	15.2	14800	74.0	20000	100
Old private sector banks										
2011	1600	43.3	400	11.3	1200	32	2100	56.7	3700	100
2012	1800	42.9	600	13.4	1200	29.6	2400	57.1	4200	100
2013	1900	36.8	600	12.2	1300	24.6	3300	63.2	5200	100
New private sector banks										
2011	3200	22.6	1800	12.3	1500	10.3	11100	77.4	14300	100
2012	3300	23.4	1600	11.3	1700	12.1	10800	76.6	14100	100
2013	3300	22.2	1500	10.4	1700	11.8	11500	77.8	14800	100
All SCBs										
2011	46100	51.8	16700	18.7	29500	33.1	43000	48.2	89100	100
2012	61300	46.9	24900	19.0	36400	27.9	69500	53.1	130800	100
2013	72300	41.0	30200	17.2	42000	23.8	103800	59.0	175900	100

Source: Reports on Trend and Progress of Banking in India, various issues

In the above table we can see that there are higher NPAs in non-priority sector than priority sector, which have increased year by year. However, this is due to simple reason that the advances given to non- priority sector is more than the advances given to priority sector. But we can also see that the proportion of NPA, related to priority sector including agriculture sector, have declined during the study period in any of the category of banks; whereas the share of non priority sector NPA have shown increment. It can be interpreted that priority sector are proving themselves as among the good debts for banks.

#### A SAMPLE STUDY OVER UNION BANK OF INDIA (UBI), BANK OF BARODA (BOB) AND STATE BANK OF INDIA (SBI)

A simple and short case study has been stated in this paper by taking SBI, BOB and UBI as sample for the study. For the purpose of study agriculture advances have been taken that have been given by these banks in the year 2010-11, 2011-12 and 2012-13. Also share of various sector of economy in their NPA is also stated.

The advances given by the banks, during financial from 2010-11 to 2012-13, to agriculture sector is given below in following table:

**TABLE 7: AGRICULTURAL ADVANCES BY UBI, BOB AND SBI (Rs. in crores)**

Bank	2010-11	2011-12	2012-13	% variation from 2010-11 to 2012-13
UBI	21046	15397	20224	-3.90
BOB	24529	29036	28739	+17.16
SBI	94826	107256	124834	+31.64

Source: Annual report of banks

The performance of UBI has not been satisfactory as the agricultural advances has reduced by around 3.90% from 2010-11 to 2012-13 but we can also observe there was reduction by big amount from 2010-11 to 2011-12 and the condition had actually improved from 2011-12 to 2012-13. The advances given by BOB and SBI had also increased, during the study period, by around 17.16% and 31.64% respectively.

Let us see sector wise NPA of these bank to check the share of agriculture sector in their NPA, in following table:

**TABLE 8: SECTOR WISE NPA (IN PER CENT)**

Sector	Percentage of NPAs to total Advances in the sector		
	2010-11	2011-12	2012-13
<b>UBI</b>			
Agriculture & allied activities	4.14	9.58	7.33
Industry (Micro, small, medium large )	2.53	2.92	3.22
Services	2.10	3.52	1.80
Personal loans	3.36	6.95	3.83
<b>BOB</b>			
Agriculture & allied activities	3.47	3.99	4.91
Industry (Micro, small, medium large )	1.76	1.12	3.31
Services	1.22	2.72	5.27
Personal loans	1.72	3.66	6.87
<b>SBI</b>			
Agriculture & allied activities	6.74	8.92	9.50
Industry (Micro, small, medium large )	2.80	4.12	4.37
Services	2.93	2.94	4.43
Personal loans	2.54	2.92	1.98

Source: Annual report of banks

Again we can see that in case of UBI share of agriculture sector has increased in between the study period, but it can be said there is an improvement in 2012-13 over 2011-12 as the share has decreased in between these two financial years. But in case of BOB and SBI there is year by year increase in share of agriculture advances in NPA. This may be again due to the simple reason that the advances given by BOB and SBI is more than that given by UBI and there advances have also grown during study period (as shown in table 7).

## FINDINGS AND CONCLUSION

Following are some of the findings of this study:

- There is growth in agricultural credit but this growth is only a nominal, still more penetration in the rural is required;
- As per NABARD annual report (2012-13), out of 14 crore farm house hardly half are covered by formal banking institutions, remaining are dependent on informal sources of finances;
- Hardly few of the commercial banks are success in lending credit to agriculture sector and other priority sector up to the set target, maximum time and majority of the banks have failed to reach the target;
- Though agriculture credit have contributed towards NPA, but the NPA contributed by other non-priority sector, especially industrial sector is much more than that of agriculture sector (along with other priority sector);
- It have also been found that the major beneficiaries, of agricultural credit by banks were big farmers, and small and marginal farmers have not received proper benefits.

For an agrarian economy like India, where the agriculture fulfil the needs of most of the people living in the country, need may be financial or any else need and agriculture is attached with emotions of large part of population, it become important to provide proper financial back up to ensure development of agriculture which will ensure development of rural sector and finally whole Indian economy can grow, as the rural sector is the backbone of Indian economy.

The commercial banks have worked out good measures for enhancing financial inclusion, but again to state that these measures are due to mandatory orders of RBI and government. Whatever be it so, the level of financial inclusion have increased, but still there are several factors which are creating disinterest in banking sector to promote agriculture at good pace. More attempts are required to promote financial inclusion and small agriculturist are also required to included in financial covering along with promotion of effective research and development in agriculture sector.

## LIMITATIONS OF THE STUDY

Following are the main limitations of the present study;

- The study is totally based on secondary data;
- Time assumed for study is of very short period;
- Only 3 banks have been selected as sample to make study.

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**EXPLORATION OF CSR PRACTICES OF NATIONALIZED BANKS IN INDIA**

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**ABSTRACT**

Corporate Social Responsibility (CSR) developed slowly in India. But with the beginning of 21st century CSR in India has come to the forefront. The Corporate Social Responsibility has emerged as a significant feature of business philosophy and ethics assuming greater importance in the corporate world, including the banking sector. There is a visible trend in the banking sector of India promoting and following the CSR practices. Regarding the banking sector, The Reserve Bank of India (RBI) (2011) on stressing the need for CSR, suggested banks to pay special attention towards integration of social and environmental concerns in their business operations to achieve sustainable development. RBI also pointed out to start non financial reporting (NFR) by the banks which will cover the work done by the banks towards the social, economic and environmental betterment of society. The present study is based on the case study method and to know the CSR initiatives taken by the banks and thrust areas adopted for CSR in the Indian banking sector (Nationalized Banks). The aim of the research paper is to access the CSR practices and CSR key areas in Indian banking sector. Ten Nationalized Banks are selected for the study. Data are collected from the secondary sources mostly from concerned Banks Annual Report, web sites, newsletters and other secondary sources. It is concluded that for the Indian banking company whatever the CSR activities are happening are centered on education, rural development, women empowerment, financial support to weaker sections and helping the physically challenged. In fine, there is a need to promote a drive in banking Companies towards greater accountability on CSR. In order to attain the social objectives, there is a need for framing a CSR Policy in every banking company for prioritization of activities on social spending and allocation of separate funds for this purpose.

**KEYWORDS**

CSR practices, CSR policy Indian banking Sector, Nationalized Banks.

**INTRODUCTION**

In the late 1960s and early 1970s, the term "corporate social responsibility or CSR" came into common use. In the 1950s the primary focus was on businesses' responsibilities to society and doing good deeds for society. In the 1960s key events, people and ideas were instrumental in characterizing the social changes ushered in during this decade. In the 1970s business managers applied the traditional management functions when dealing with CSR issues, while, in the 1980s, business and social interest came closer and firms became more responsive to their stakeholders. During the 1990s the idea of CSR became almost universally approved, also CSR was coupled with strategy literature and finally, in the 2000s, CSR became definitively an important strategic issue. However, CSR is a broad concept and there is little consensus on specific meaning or criteria that define what CSR is (Dahlsrud 2008). CSR basically is a corporate initiative to assess and take responsibility for the company's effects on the environment and impact on social welfare. The CSR generally applies to company efforts towards various social welfare initiatives to benefit employees, customers, and the community at large. Corporate social responsibility may also be referred to as "corporate citizenship" and can involve incurring short-term costs that do not provide an immediate financial benefit to the company, but instead promote positive social and environmental change.

Regarding the banking sector, The Reserve Bank of India (RBI) (2011) on stressing the need for CSR, suggested banks to pay special attention towards integration of social and environmental concerns in their business operations to achieve sustainable development. RBI also pointed out to start non financial reporting (NFR) by the banks which will cover the work done by the banks towards the social, economic and environmental betterment of society.

Nowadays, many nationalized banks in India have created their individual brand image in the field of Corporate Social Responsibility (CSR) by taking various social initiatives in the era of social welfare and community development. The catalytic contributions made by nationalized banks for economic growth in India have created their separate entities towards financial growth. The main objective of this study is to analyze the CSR activities carried out by selected nationalized banks of India.

**OBJECTIVES OF THE STUDY**

The purpose of the study is to highlight the existing CSR activities by selected banks and give suggestions for better CSR activities. The main objectives of this paper include:

1. To access the application and initiatives of CSR in selected Nationalized Banks.
2. To study the existing CSR practices in selected Nationalized Banks.

**METHODOLOGY**

The present study is based on the case study method. Ten Nationalized banking institutions are selected under stratified random sampling method from the vast network of banking and financial institutions of the country. Data are collected from secondary sources most particularly from concerned Banks Annual Report, web sites, newsletters and other secondary sources. The study covers the period 2007 to 2010. In general annual reports are considered appropriate documents for studying social disclosures as they are an important means of communication to various stakeholders and these documents also enjoy high credibility.

**REVIEW OF LITERATURE**

One of the simplest ways of economizing effect in an enquiry is to review and build upon the work already done by others. A comprehensive review of literature is must in any research endeavor. This section provides a review of the theoretical literature on CSR activities in banking sector in India and in other countries.

Now-a-days CSR has been assuming greater importance in the corporate world including financial institutions and banking sector. Banks and other financial institutions start promoting environment friendly and socially responsible lending and investment practices. RBI (2007) has also directed Indian banks to undertake CSR initiatives for sustainable development and also asked banks to begin non-financial reporting which is related to activities in the era of environmental, social and economic accounting.

**Wise and Ali (2009)** in their study on corporate governance and corporate social responsibility in commercial bank of Bangladesh, through analysis of the annual reports of these banks, found that the corporate social responsibility disclosures by the banks focus on initiatives undertaken to support two critical sectors within Bangladesh's economy: agriculture and the SME sector. **Sharma(2011)** made an attempt to analyze CSR practices and CSR reporting in India with special reference to banking sector and concluded that banking sector in India is showing interest in integrating sustainability into their business models but its CSR reporting practices are far away from satisfaction. He has also given a list of core thrust areas for reporting CSR activities by the Indian banks as: children welfare, community welfare, education, environment, healthcare, poverty eradication, rural development, vocational training, women's empowerment, and protection to girl child, employment. **Narwal (2007)** made a study to highlight the CSR initiatives taken by the Indian Banking Industry. The findings suggest that banks have an objective view-point about CSR activities. They are concentrating mainly on education, balanced growth (different strata of society), health,

environmental marketing and customer satisfaction as their core CSR activities. Moreover, there are studies focused on development of scales or instrument for measuring the corporate social responsibility activities of the firms.

**Md. Mizanur Rahman<sup>1</sup>, Md. Feroz Iqbal<sup>2</sup> (2013)** The study reveals the importance of corporate social responsibility as a tool to gain competitive advantage, has positive impact on employees' behavior, customers' behavior and in establishing a bank's image. These all may create reputation and long term interest for all the parties related to the bank. On the basis of the perception of the bank employees, the study identified the level of importance of some core areas of CSR performance. Among the selected core seven sectors, the respondents have given more importance on the area 'Education'. Finally, the study attempted to find out the selected ten private commercial bank's performances of CSR in some selected important areas. In this case Dutch Bangla Bank (DBBL) is on the top most position and The FSIBL, Trust bank and EXIM bank have also a good contribution to CSR and deal with different areas of CSR. Therefore the most of the private commercial banks fall under the average rate. They consider only a few areas. The banks should diversify their CSR practices and consider the other important areas of the society, such as women empowerment, health care, rural development activities related to the poverty alleviation. This can ensure the overall development of the country. For this reason, the Bangladesh Bank can monitor the CSR adoption and performance of banks and also give some directions to the banks and provide some priority areas for CSR practice. **Sharma (2010)** has studied the CSR in Indian banking and said that in the developed countries have incorporated CSR in their annual budget but in the developing countries it is under root and it must be grown for the benefit of communities and for environment.

## CSR IN BANKING SECTOR

Corporate Social Responsibility [CSR] generally refers to activities undertaken by Institutions towards its commitment for ethical values, community and concern for environment. Now-a-days CSR has been assuming greater importance in the corporate world including financial institutions and banking sector. Banks and other financial institutions start promoting environment friendly and socially responsible lending and investment practices. RBI (2007) has also directed Indian banks to undertake CSR initiatives for sustainable development and also asked banks to begin non-financial reporting which is related to activities in the area of environmental, social and economic accounting.

CSR has been assuming greater importance in the corporate world, including the banking sector. To highlight the role of banks in CSR, the RBI circulated a notice on December 20, 2007 for all the scheduled commercial banks in India. Recently financial institutions adopt an integrated approach between customer satisfaction and CSR in a broader way. RBI also instructs the banks to integrate their business operation along with social and environmental aspects. The major key areas of CSR are children welfare, community welfare, education, environment, healthcare, poverty eradication, rural development, vocational training, women empowerment, protection to girl child, and employment. Regarding the banking sector Bhatt (2008) stated that banks do not exist in a vacuum. They make a lot effort to achieve sustainable contribution to the country's GDP growth, meet the demand of the growing middle operations development.

Now the govt. of India has also made CSR mandatory for the corporate and banking sector. The clause 135 of companies Bill, 2012 requires banks and companies to contribute 2 percent of their net profit to CSR. Specifically, the CSR Clause applies to any company, during any fiscal year, with (1) a net worth of rupees 500 crore (about U.S. \$90 million) or more; (2) a turnover of rupees 1,000 crore (about U.S. \$180 million) or more; or (3) a net profit of rupees 5 crore (about U.S. \$900,000) or more.

## MAJOR AREAS OF CSR IN INDIAN FINANCIAL INSTITUTIONS

Name of bank	Major CSR Areas	Name of bank	Major CSR Areas
Canara Bank	1. educational support 2. Poverty eradication 3. Rural development 4. Vocational training to unemployed	Allahabad bank	1. Educational support, 2. Micro financing, 3. Rural development 4. Vocational training to unemployed and women
Union bank of India	1. Farmer's Club, Village Knowledge Centers, Joint Liability Groups for promotion of SHGs Rural Development Educational support	State bank of India	1. Community Services Banking 2. Rural Community Development 3. Adoption of the Girl Child 4. Research and Development on Education
Punjab national bank	1. Sustainability. 2. Corporate Volunteering. 3. Social Investments. 4. Health. 5. Education	Bank of India	1. Educational support. 2. Environmental issues. 3. Financial support to vulnerable sections of society through micro financing. 4. MSME financing. 5. Dairy development. 6. Agriculture development.
Bank of Baroda	1. Rural development. 2. Women's empowerment. 3. Vocational training. 4. Community Welfare. 5. Physically Challenged. 6. Poverty Eradication.	Oriental bank of commerce	1. rural development 2. vocational training 3. employment
Dena bank	1. Women's Empowerment 2. Rural development. 3. Educational support.	Central bank of India Ltd.	1. Education 2. Environment 3. Rural Development 4. Vocational Training
Syndicate Bank	1. Community Welfare 2. Education 3. Physically Challenged 4. Poverty Eradication 5. Rural Development 6. Vocational Training 7. Women	Bank of Maharashtra	1. Community Welfare 2. Education 3. Energy 4. Poverty Eradication 5. Rural Development 6. Senior Citizens 7. Vocational Training 8. Women

## CSR INITIATIVES BY BANKS

### ALLAHABAD BANK

Corporate Social Responsibility (CSR) was introduced for the first time in Bank in September / October, 2012 and was targeted mainly on the rural populace. The Bank had extended financial support in different sectors as below:



- Provision of arsenic-free drinking water in a village;
- One time support to 10 tribal girl children for their education;
- Contribution towards development of the interior of a high quality diagnostic clinic meant for the economically weaker sections of the society;
- Contribution towards renovation of a rehabilitation centre for mentally challenged women;
- Donation of a vehicle to Centralized Accident & Trauma Services(CATS) to be used for field inspection;

**CANARA BANK**

The banks follow the triple bottom line approach of development ensuring social economical and environmental sustainability. Bank recognizes SD & CSR which includes the following activities in general:

- Promotion of self employment & Skill Development
- Promotion of education specially financial literacy
- Assistance to Rural Schools & Govt. schools for creating better facilities for learning.
- Empowering the schools with focus on women, weaker Section and minorities
- Programmes for welfare of women, SC/ST, artisans, minorities, weaker section
- Adoption of backward villages for their integrated development
- Development of Agriculture & allied activities Rural Development
- Entrepreneurship development

**DENA BANK**

As a Corporate Social Responsibility measure, the Bank is implementing Dena Laxmi Shiksha Protsahan Yojana since 2005. The girl students belonging to BPL family, who has secured the highest / second highest marks (first and second) in class 7<sup>th</sup>, residing in village / studying in the schools located in villages in service area (command area) of Branches are eligible for grant of scholarship under this scheme. The scheme aims to provide scholarship to Girl students from the BPL families for meeting the expenses for the purchase of books, uniforms, school bag, stationery, payment of fees etc., so as to enable them to pursue their studies.

**BANK OF INDIA**

Some of the CSR initiatives already undertaken by the Bank are providing –

1. Solar street lights and Hand pump sets in Rural areas.
2. Rain water harvesting mechanism / equipments agriculture /drinking water/development of the area.
3. Ambulances to Hospitals catering to economically challenged sections of the society, rural areas, etc.
4. Ultra-modern medical equipments to Family Planning Centre and other hospitals.
5. Wheel chairs to physically challenged sportspersons and others.
6. Gensets for running equipments in hospitals for the Cancer patients.
7. Construction of classrooms for the economically challenged students of the society.
8. Support to orphaned / blind students requirements.
9. Vehicles for institutions providing food / mid-day meal to government /local bodies schools catering to poorer sections of the society.
10. Running Projects also include:-Credit Counseling Centres –‘Abhay’ in 6 cities;- 54 Financial Literacy Centers (FLC);-42 RUDSETIs/RSETIs for imparting vocational training in rural areas

**ANDHRA BANK**

Some of the CSR initiatives already undertaken by the Bank are providing

- Under the aegis Andhra bank rural development trust bank is imparting training to youth in rural and semi urban areas so that poor people can take up self employment ventures. They also conduct vocational and human resource development training. So far they have provided training to 71,666 participants
- The bank has taken initiatives for including more people from the marginalized and down trodden sections into the banking system. The bank has already implemented financial inclusions in districts of Orissa and Andhra Pradesh.
- During the year '07-'08 the bank has adopted Gundugolanu village in Andhra Pradesh for improving health , sanitation , education facilities with a comprehensive budget of 5.50cr.
- The bank is setting up a school in the campus of Andhra University in Vishakhapatnam.
- Along with the Andhra Pradesh Government and NABARD, it has set up APBIRED for providing training to unemployed youth for improving their skills.
- In the year 2007-2008, the bank has donated 2.14cr to various trusts and NGOs.

**ORIENTAL BANK OF COMMERCE**

Some of the CSR initiatives already undertaken by the Bank are providing

- Bank set up a special purpose vehicle, OBC Rural development Trust, with a view to institute Rural Development Training and Resource Centres at different locations. The main objective of the Trust is to provide training on latest techniques of agriculture and animal husbandry, maintenance of farm machinery, skill up gradation of rural youths for self employment, capacity building of rural poor, specially the SHGs, training to educated unemployed youth and village adoption for all round development . Four such centres have become operational at Srigaganaganagar, Jaipur, Ferozepur, and Rudrapur.
- In all 77 training programmes were organized in which 3598 people were imparted training. The training programmes were conducted on latest agronomic practices, rearing of animals, local crafts like Phulkari in Punjab, tailoring, Cottage and agro processing and computer related trainings to the unemployment youth. Special training programmes were organised exclusively for the members of SCs/ STs and minority communities. A total of 2824 trained persons were credit linked for pursuing/ setting up of economic activities.

**SYNDICATE BANK**

Bank recognizes CSR which includes the following activities in general:

Synd Small Credit"- an innovative scheme with doorstep banking facility to provide need-based credit to entrepreneurs of small means. The product part of financial inclusion, by bringing all eligible entrepreneurs into bank's fold.

"SyndShakti"-A new product launched by the Bank to extend need-based credit to artisans and self-employed persons including Carpenters, Plumbers, Auto Technicians, Packaging Technicians, etc., for purchase of power toolkits to mechanize and enhance efficiency of their operations their operations and as a result improve their income level.

"Financial Inclusion:" Launched a campaign to achieve 100% financial inclusion. A booklet containing comprehensive guidelines to augment the process of total financial inclusion released.

"Water Conservation initiatives:" To promote Water Management and conservation measures among the villagers, Bank started initiatives for clearing and cleaning of village ponds in the selected service area villages.

**STATE BANK OF INDIA**

The Bank is actively involved since 1973 in non-profit activity called Community Services Banking. All branches and administrative offices throughout the country sponsor and participate in large number of welfare activities and social causes.

Apart from the normal banking operations, the Bank, as a responsible and responsive corporate citizen, seeks to reinvest part of its profit in various community welfare projects to improve the quality of life of the poor, neglected, weaker and down trodden sections of society.

In the financial year 2007-08, the Bank made donations aggregating Rs. 8.11 crore to various Relief Funds and also to NGOs / Trusts / Societies for their projects with social orientation. In recognition of its contribution to Rural Community Development, the Bank was awarded the prestigious Reader's Digest Pegasus Corporate Social Responsibilities Award 2007. In fact, it was the only Bank to have received this recognition.

Under a new scheme named 'Adoption of the Girl Child' over 8,300 poor girl children have been adopted by various branches throughout the country to meet their personal and educational expenses. This is not merely a financial assistance scheme but offers emotional and psychological support to the 'adopted girls' due to the active involvement and care of the SBI Ladies Clubs.

From the Research and Development Fund, the Bank has so far extended Rs.6.61 crore as research grants to 71 chairs / research projects at various Universities and Academic institutions. For the current year SBI has extended 100000 Sterling Pounds to London School of Economics for establishing an India Observatory and I.G.Patel Chair at their Asia Research Centre in participation with RBI.

#### **BANK OF BARODA**

Bank has always upheld inclusive growth high on its agenda. Bank has established 36 Baroda Swarojgar Vikas Sansthan (Baroda R-SETI) for imparting training to unemployed youth, free of cost for gainful self employment & entrepreneurship skill development and 52 Baroda Gramin Paramarsh Kendra and for knowledge sharing, problem solving and credit counseling for rural masses across the country, as on 31.03.2011. Bank has also established 18 Financial Literacy and Credit Counseling Centres (FLCC) in order to spread awareness among the rural masses on various financial and banking services and to speed up the process of Financial Inclusion, as on 31.03.2011.

#### **CORPORATION BANK**

Corporation Bank has set up an Association and has named it as "Corp Kiran", a name suggested by its own staff members. The Association will be managed by women in the Bank for undertaking CSR activities at all Zonal/Circle Headquarters & Head Office.

The target group for all the activities shall be persons from weaker sections of the society. Illustrative list of CSR activities that can be undertaken by the Association are as follows:

- Providing for food, clothing etc to poor school children, orphanages, old age homes, destitute homes, physically challenged people, medical help to poor people in distress etc.
- Distribution of books and other assistance for the poor & disabled school children.
- Organizing health checkup camps and blood donation camps, providing medical equipment etc., initiating awareness drives for prevalent diseases like HIV AIDS etc.
- Other Community Developmental activities benefiting poor & disabled people.
- Green initiatives like tree plantation drives, maintaining greenery, motivating people to replace non-renewable energy sources with renewable ones like solar, wind energy etc.
- Engaging in empowerment activities like vocational trainings, adult education programmes etc.
- Counseling of poor students for taking up various competitive exams.
- Creation of awareness regarding health, sanitation in rural areas, slums etc.
- Awareness regarding rain water harvesting and ground water recharging.
- Aid to Schools to purchase teaching aids, incentives to meritorious needy students, literacy enhancement drives, etc.
- Awareness programme for farmers for taking up better cultivation practices, field visits, interaction with scientists, progressive farmers etc.
- Career guidance camps/programmes for poor students.
- Providing basic infrastructure, sanitation etc at Schools and Hospitals.
- Support for the purchase of water purifiers in schools and colleges.

The Association would enlist support of Banks' employees / ex-employees, their family members, NGOs, SHGs, State Governments, District Administration, local bodies etc in project execution.

#### **CONCLUSION**

CSR is now an integral part of functioning of a banking sector. The performance of banks should also be judged on Corporate Social Responsibility initiatives taken to benefit the society and nation at large which sought to be achieved through active participation by banks. Though the banking sectors have taken effect in the area of CSR to attain the social objectives, there is a need to frame a CSR policy in every bank. Most banks use CSR as a marketing tool to spread the word about their business. The CSR practices and initiatives can further be more activated and improved with proper co-ordination between the banks, government, and non-government organizational. The analysis shows that, these banks are making efforts for the implementation of CSR, but are restricted within certain fields. There is a need for better CSR activities by the banks, which is possible by adding more and more social development issues link with corporate sector. Conclusively, the measures suggested are, active government participation, proper implementation of policies and separate CSR department with trained employees.

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**BANCASSURANCE IN INDIA: AN INDUSTRY OUTLOOK OF LIFE INSURANCE**

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**ABSTRACT**

*One of the most momentous changes in the financial services sector over the past few years are the appearance and development of bancassurance. The present paper attempts to find out the contribution of banks in the individual new business premium of private life insurer and LIC for past nine years. In addition, it focuses on the various models persisting to bancassurance and its impact on the stakeholders. The study is descriptive and exploratory in nature. Observation and secondary data collection methods are used in the study. Secondary data is collected from IRDA and other relevant websites. The results of the study revealed a growing trend of bancassurance in the life insurance industry as it showed more than three times growth in the life insurance premium. Low penetration rate (3.2% in financial year 2013) indicates that in spite of ever growing population, major chunk has not been covered under the insurance sector.*

**KEYWORDS**

Bancassurance, Bancassurance Models.

**INTRODUCTION**

A sound financial sector is the backbone of healthy economy. On one hand, it is the banking sector which is highly competitive and on the other hand the insurance sector which has a lot of potential for growth. The combination of these two sectors results in an innovative concept of "BANCASSURANCE". The Insurance Industry as a financial service is considered as one of the important segments in an economy for its growth and development. Insurance is a 'business of solicitation' unlike a typical banking service; it requires great drive to market the insurance products.

**HISTORICAL BACKGROUND OF INSURANCE INDUSTRY**

The Indian insurance industry is as old as it is in any other part of the world. The first insurance company was started in India in 1818 at Kolkata. We had a number of foreign and Indian insurers operating in the Indian market till the nationalization of the industry but there were unethical practices adopted by some of the players against the interest of the insurance consumers. The Government of India issued an Ordinance on 19 January 1956 nationalising the Life Insurance sector and Life Insurance Corporation came into existence in the same year. The Life Insurance Corporation (LIC) absorbed 154 Indian, 16 non-Indian insurers as also 75 provident societies—245 Indian and foreign insurers in all. In 1972 with the General Insurance Business (Nationalisation) Act was passed by the Indian Parliament, and consequently, General Insurance business was nationalized with effect from 1 January 1973. 107 insurers were amalgamated and grouped into four companies, namely National Insurance Company Ltd., the New India Assurance Company Ltd., the Oriental Insurance Company Ltd and the United India Insurance Company Ltd. The General Insurance Corporation of India was incorporated as a company in 1971 and it commence business on 1 January 1973. Nationalisation has lent the industry solidity, growth and reaches which is un-paralleled.

**INSURANCE IN INDIA**

The Government of India, in 1994 appointed a Committee under the Chairmanship of R. N. Malhotra, former Governor of RBI to study the need for private participation in the Insurance industry. The committee reported that only 22 per cent of the Indian population was insured. Based on the committee report, the Government of India took necessary initiatives to improve the operational efficiency of insurance companies and insurance penetration as well. The year 1999 brought a remarkable change in the Indian insurance sector, as a result of major structural changes like ending of Government monopoly and passing of the Insurance Regulatory and Development Authority (IRDA) bill, relaxing all entry restrictions for private and foreign players to enter into the market.

*Indian insurance sector is regulated by IRDA (Insurance Regulatory Development Authority).*

IRDA was established in the year 2000 as an exclusive Regulatory Authority for the insurance sector through the enactment of IRDA Act, 1999. A number of amendments were brought in various insurance related statutes, viz., Insurance Act, 1938, LIC Act, 1956 and General Insurance Business Nationalisation Act, 1972 (GIBA). The Progress in the overall developments in the insurance sector was swift and more prominent after the establishment of IRDA.

In life insurance business, India is ranked 10<sup>th</sup> among the 88 countries, for which the data are published by Swiss Re (source: IRDA, Annual Report, 2012-13).

As at end-September 2013, there are 52 insurance companies operating in India; of which 24 are in life insurance business and 27 are in non-life insurance business and in addition, GIC is the sole national reinsurer.

**TABLE 1: REGISTERED INSURER IN INDIA** (As on 30<sup>th</sup> September, 2013)

Type of Business	Public sector	Private sector	Total
Life Insurance	1	23	24
General Insurance	6	21	27
Re-insurance	1	0	1
Total	8	44	52

(Source: IRDA, Annual Report 2012-13)

**THE INDIAN ECONOMY**

The economy's growth rate slowed down to 5 per cent in 2012-13 as compared to 6.2 per cent in 2011-12. Declining growth rate of the economy, persistent higher inflation and prices and slower rate of household savings impacted the growth of insurance sector in India.

During 2012-13, the service sector also slowed down registering a growth of 7.1 per cent as compared to 8.2 percent during the previous year. Within the service sector, "financing, insurance, real estate & business services" registered the growth of 8.6 percent during 2012-13 as compared to 11.7 percent in the previous year.

The life insurance industry recorded a premium income of Rs. 2, 87,202 Crore during 2012-13 as against Rs. 2, 87,072 Crore in the previous financial year, registering a growth of 0.05 per cent. While private sector insurers posted 7.38 per cent decline in the previous year, Life Insurance Corporation of India (LIC), the state owned insurance company, recorded 2.91 per cent growth (0.29 per cent decline in the previous year) in the total premium underwritten.

**CONCEPT OF BANCASSURANCE**

Bancassurance is a new buzzword in India. Bancassurance, i.e., banc + assurance, refers to banks selling the insurance products. Bancassurance term first appeared in France in 1980, to define the sale of insurance products through banks. 'BANCASSURANCE' as term itself clears the meaning. It's a combination of the term 'Bank' and 'Insurance'. It means that insurance companies have started selling their products through banks.

It's a new concept to Indian financial market but it is very widely used in western and developed countries. It originated in India in the year 2000 when the Government issued notification under Banking Regulation Act which allowed Indian Banks to do insurance distribution. It started picking up after Insurance Regulatory and Development Authority (IRDA) passed a notification in October 2002 on 'Corporate Agency' regulations. All scheduled commercial banks were permitted to undertake insurance business as agent of insurance companies on fee basis, without any risk participation.

*"Bancassurance is the process of using a bank's customer relationships to sell life and non-life insurance products".*

With the opening up of this sector to private players, competition has become more intense and the public sector major LIC has been challenged with a flood of new products and new means of marketing. Insurance industry in India has been progressing at a rapid pace since opening up of the sector to the entry of private companies in 2000. Banks are being used as an effective alternate channel to distribute insurance products either as 'stand-alone insurance products' or 'add-ons to the bank products' by way of combining the insurance with typical banking products/services.

## REGULATORY AUTHORITY

In India banking and insurance sectors are regulated by two different entities. The banking sector is governed by Reserve Bank of India and the insurance sector is regulated by Insurance Regulatory and Development Authority (IRDA). Bancassurance, being the combination of two sectors comes under the purview of both the mentioned regulators. Each of them has elaborate and descriptive rules, restrictions and guidelines.

## REVIEW OF LITERATURE

**1) Bergendahl, Goran (1995)** Developed principles for banks that want to evaluate the distribution of life insurance as well as non-life insurance products and identify key factors for profitability. Analysed the costs of training personnel, the costs of computers and communication, the fixed and variable sales costs, and the costs of administration including customer service. These costs have to be covered by direct benefits in terms of commissions and indirect benefits in terms of more faithful bank customers and also identified five key factors: the number of branches; the number of specialists per branch; the number of customers to the bank; the cross-selling ratio; and the reduction over time in costs of selling and administration.

**2) Karunakaran (2006)** attempted to explore the scope for bancassurance models as feasible source of sustainable income to banking sector by exploiting the synergy in the context of India & concludes that going by the present pace, bancassurance would turn out to be a norm rather than an exception in future in India and it would be a 'win-win situation' for all the parties involved - the customer, the insurance companies and the banks.

**3) Fields, L. Paige et.al. (2007)** examined the the potential for bidder wealth gains in bancassurance mergers by examining a sample of such mergers in the United States and abroad. Study found positive bidder wealth effects that are significantly related to economies of scale (as measured by the size of the target relative to the bidder), potential economies of scope, and the locations of the bidders and targets. These results suggest that the bancassurance architectural structure for financial firms does offer some benefits and thus may become more prominent in future years.

**4) Artikis, Panayiotis G. et.al. (2008)** focused on the main empirical findings related to the bank-insurance model and to outline the market practices across the world and concluded an uneven success of the bancassurance phenomenon across the world. It is not clear whether re-regulation is the cause or response to globalization, and vice versa, which in turn both shape the bancassurance arena. A number of incentives for the formation of financial conglomerates are identified.

**5) Fan, Chiang Ku and Cheng, Shu Wen (2009)** compared the efficiency of bancassurance, an indirect marketing channel formed through the creation of subsidiaries, with an insurer's own team, a direct marketing channel, in the Taiwan insurance sector. major findings of the study are: the efficiency score of a direct marketing channel is significantly higher than that of a comparable indirect marketing channel. The efficiency relationship between the indirect marketing channel and the direct marketing channel is independent. A marketing efficiency evaluation, when divided into different marketing channels for evaluation, provides meaningful results for marketing decision-makers.

**6) Maenpaa, Irinja and Voutilainen, Raimo (2011)** investigated how financial service providers cross-sell combined bank and insurance service offerings in a business-to-business context with the aim of increasing understanding on the creation of corporate customer value through cross-selling. The results showed that financial service providers anticipate a shift from separate sales events towards one-stop shopping and from unilateral provision of non-related products towards consideration of hybrid products in the SME segment.

**7) Chang, Pang-Ru et.al. (2011)** study offers a comparison of bancassurance and traditional sales channels in Taiwan. Using a data envelopment analysis approach, this study first computes the efficiencies of bancassurance and traditional sales channels separately. The efficiency score of the traditional sales channel is significantly higher than that of a comparable bancassurance channel. Furthermore, the efficiency relationship between the bancassurance and the traditional sales channels is independent. These findings have significant implications for the insurance industry.

**8) Tiwari, Anshuja and Yadav, Babita (2012)** conducted a study with an objective to understand the role of banc assurance in Indian life Insurance Industry and to measure customer awareness, satisfaction and perception towards buying life insurance products from banks and concluded that Banc assurance would accelerate the growth of life Insurance business, reduce cost, Low awareness of banc assurance among customers and second preferred distribution channel by customers. There is a tremendous scope and growth opportunity available for banc assurance in future in the Indian life Insurance market.

**9) Constantinescu, Dan (2012)** studied the diversity of bancassurance institutional models induce complex processes of buying or merging, starting with simple contractual relations, continuing with the products which create the object of distribution through this system. the study revealed that according to Basel II and Solvency II rules and regulations offer new expectations of analysis concerning the management of the quality of the offered financial services through the bancassurance channel of the distribution having in view the control of the associated risks.

## SIGNIFICANCE OF THE STUDY

Insurance is one of the fastest growing industries and has a significant contribution in socio-economic development of the economy. Huge untapped Indian market presents both opportunity and challenge to the Insurance Company. The success of insurers highly depends on the effectiveness of distribution channel. The rising market competition and demand for innovative need based products by the customers has forces insurance companies to look for alternative cost effective distribution channel results into emergence of "Bancassurance". It is profitable both to Banks and Insurance companies and has a very bright future to be the most developed and efficient means of distribution of Insurance products. Insurance companies can sell both life and non-life policies through banks.

## OBJECTIVES OF THE STUDY

- i) To examine the trends of channel – wise bancassurance in India during last nine years.
- ii) To study the bancassurance models adopted by various countries.
- iii) To critically examine the impact of bancassurance on its stakeholders.

## RESEARCH METHODOLOGY

**NATURE OF THE STUDY:** Descriptive and Exploratory study.

**DATA TYPE:** data used in the study is a secondary data, collected from various published sources i.e. journals, magazine, published IRDA annual reports.

**ANALYSIS:** Tabulation and graphic methods are used for the analysis and presentation of Annual reports of IRDA for last nine years are used as a sample for the study. Ms Excel 2010 is used for drafting graphics and tables.



## RESULTS AND DISCUSSION

Traditionally, insurance products were sold only through individual agents and they accounted for a major chunk of the business in retail segment but after the establishment of IRDA, various amendments were made in the insurance sector. One of the major amendments is the selling of insurance policies through banks referred as 'Bancassurance'. Bancassurance is the channel for selling out the insurance products.

The analysis is discussed in three sections. Section I emphasize on the first objective, examining the trends of channel – wise bancassurance in India during last nine years. Section II describe about the various bancassurance models and section III will examine the impact of bancassurance on its stake holders.

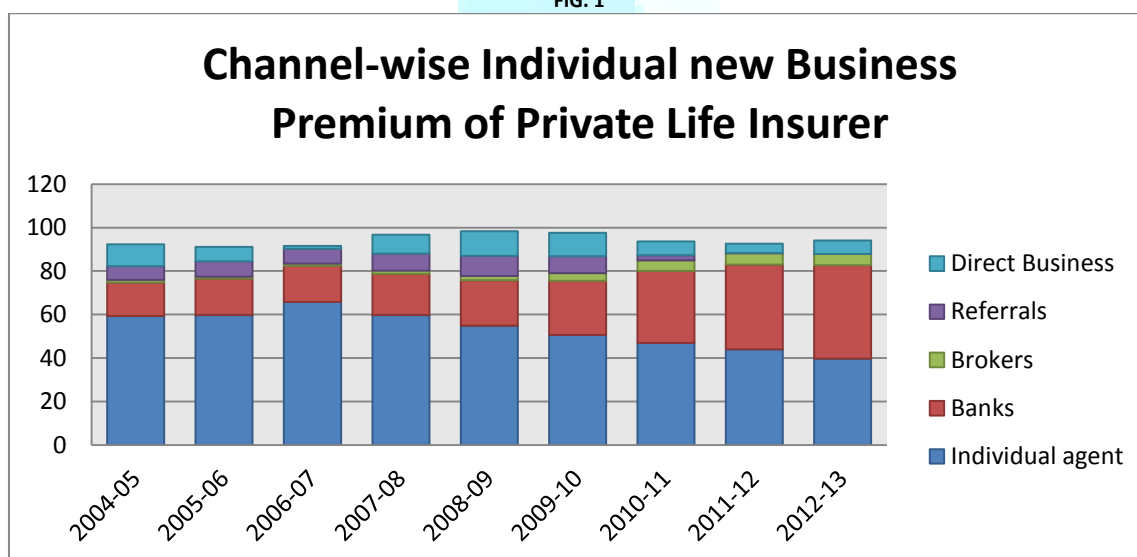
### SECTION I

#### 1.1 CHANNEL-WISE INDIVIDUAL NEW BUSINESS PREMIUM OF PRIVATE LIFE INSURER

TABLE 2: PRIVATE LIFE INSURERS' NEW BUSINESS PREMIUM (In Percent)

Year	Individual agent	Banks	Broker	Referrals	Direct Selling
2004-05	59.30	15.42	1.23	6.25	10.05
2005-06	59.71	16.87	0.83	7.06	6.61
2006-07	65.8	16.58	1.05	6.77	1.39
2007-08	59.81	18.89	1.5	7.79	8.78
2008-09	54.94	20.78	2	9.27	11.37
2009-10	50.67	24.88	3.44	7.85	10.73
2010-11	46.89	33.21	4.77	2.34	6.43
2011-12	44.05	39.01	5.07	0.16	4.35
2012-13	39.68	43.08	5.05	0.10	6.14

FIG. 1



(Source: IRDA, Annual Report 2004-13)

It is revealed from the above table I that in case of private life insurer various intermediaries are involved in the insurance industry i.e. individual agents, banks, brokers, referrals & direct selling. With the emergence of new concept "Bancassurance", the share of individual agents in the new business of insurance premium has been decreased from 59.30 percent in 2004-06 to 39.68 percent in 2012-13. Banks as a intermediaries has gained significant importance as their share was 15.42 percent in 2004-06 raised to 43.08 percent in 2012-13. It becomes clear that with the introduction of Bancassurance, banks plays an important role in the growth of insurance sector. The share of broker was 1.23 in 2004-06 but increased to 5.05 in 2012-13. The share of referrals & direct selling was 6.25 and 10.05 in 2004-06 but dropped to 0.10 & 6.14 in 2012-13 respectively.

#### 1.2 CHANNEL-WISE INDIVIDUAL NEW BUSINESS PREMIUM OF LIFE INSURANCE CORPORATION (LIC)

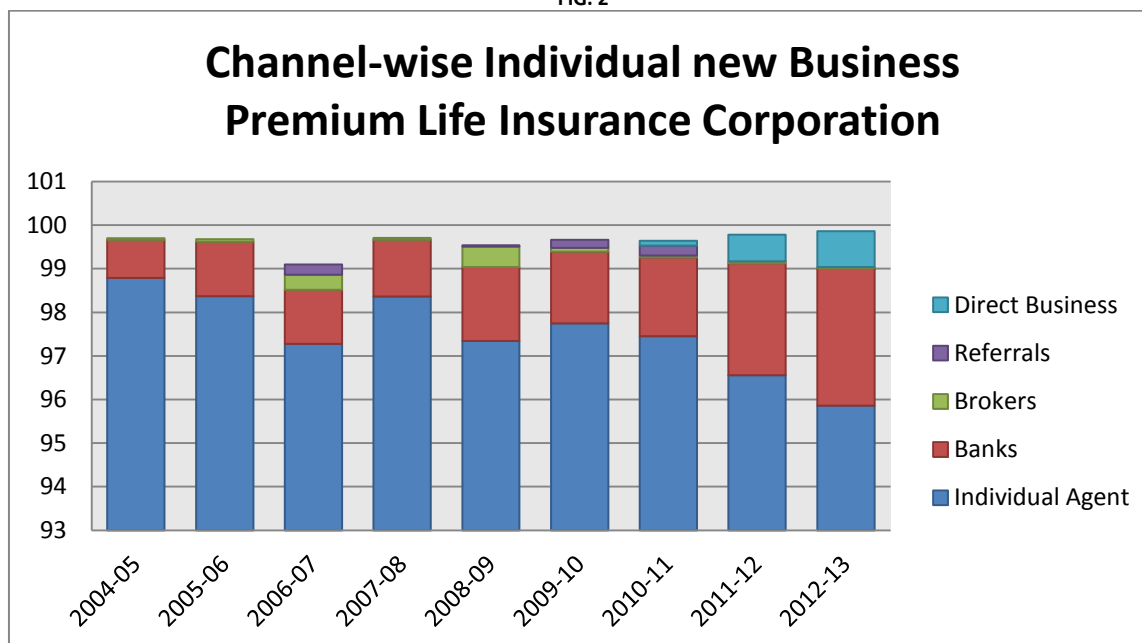
TABLE 3: LIFE INSURANCE CORPORATION (LIC) NEW BUSINESS PREMIUM (In Percent)

Year	Individual agent	Banks	Broker	Referrals	Direct Selling
2004-05	98.79	0.87	0.04	0	0
2005-06	98.37	1.25	0.06	0	0
2006-07	97.28	1.24	0.34	0.24	0
2007-08	98.36	1.3	0.05	-	-
2008-09	97.34	1.7	0.47	0.03	-
2009-10	97.75	1.64	0.09	0.18	0
2010-11	97.45	1.81	0.04	0.23	0.11
2011-12	96.56	2.57	0.04	0	0.61
2012-13	95.86	3.16	0.02	-	0.82

(Source: IRDA, Annual Report 2004-13)



FIG. 2



(Source: IRDA, Annual Report 2004-13)

Similarly table II revealed that Life Insurance Corporation (LIC) Insurance premium of individual agents has declined from 98.79 percent in 2004-06 to 95.86 percent in 2011-12-13 whereas Banks performance has shown more than three times growth in their life insurance premium contribution. The share of banks in LIC new business premium was 0.87percent in 2004-06 and increased to 3.16 percent in 2012-13. Share of brokers, referrals and direct selling in new business premium is very nominal.

## SECTION II

### BANCASSURANCE MODELS

Bancassurance has grown at different places and taken shapes and forms in different countries depending upon demography, economic and legislative prescriptions in that country. It is most successful in Europe, especially in France, from where it started, Italy, Belgium and Luxembourg. The concept of bancassurance is relatively new in India. Bancassurance encompasses a variety of business models. There is no single pattern to follow in creating a bancassurance operation. There are different development models, which can be divided into three major categories e.g.

1. Development models,
2. Structural classification and
3. Product based classification

#### 1) DEVELOPMENT MODELS

Bancassurance takes different forms that vary from one country to the next. However, three primary models of bancassurance are emerging. These are Distribution agreement, Joint venture and Full integration. Shown in Fig. 3:

FIG. 3



#### 1.1) DISTRIBUTION AGREEMENT

In this model bank act as an intermediary for an insurance company. This method is very simple to operate and require very less capital. This model is commonly used in countries like USA, Germany, UK, Japan and South Korea.

#### 1.2) JOINT VENTURE

In this model bank acts under partnership agreement with one or more insurance companies. Hence banks and insurance companies work together so they can share their expertise. This model is popular in Italy, Spain, Portugal and South Korea.

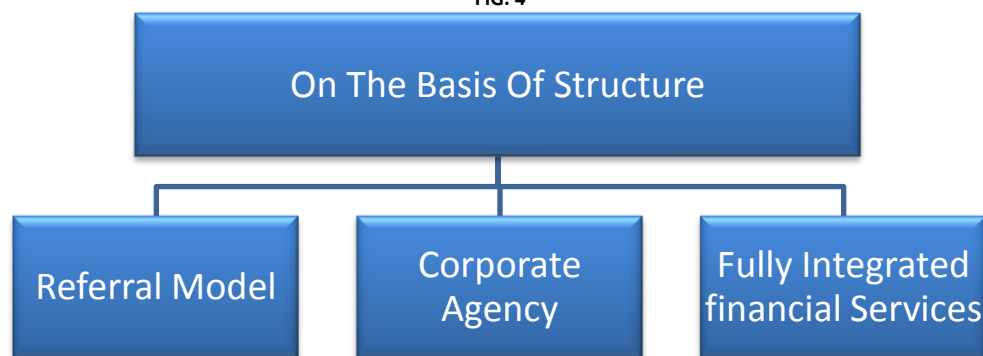
#### 1.3) FULL INTEGRATION

These model works on the creation of new subsidiary which require substantial capital to start its operation, but it enjoy the advantage of same corporate culture. Countries like France, Spain, Belgium, Ireland, UK adopted this model.

#### 2) STRUCTURE BASED CLASSIFICATION

On the basis of structure models of bancassurance have been classified into three categories e.g. Referral model, corporate agency model, fully integrated financial services model. In India Referral and Corporate agency models are generally used. Shown in Fig. 4:

FIG. 4

**2.1) REFERRAL MODEL**

Those Banks avoids to risk, adopt "referral model" wherein they merely part with their client data base for business lead for commission. The actual transaction with the prospective client in referral model is done by the employees of the insurance company either at the premise of the bank or elsewhere. Referral model is nothing but a simple arrangement, wherein the bank, while controlling access to the client's data base, parts with only the business leads to the agents or sales staff of insurance company for a referral fee or commission for every business lead that was passed on. This model would be suitable for almost all types of banks including the Regional Rural Banks, cooperative banks and even cooperative societies both in rural and urban.

**2.2) CORPORATE AGENCY**

This is another Non-risk banc assurance model, wherein the bank employees are trained to appraise and sell the products to the customers. Here the bank acts as corporate agent for the insurance products for a fee or commission. This Model is more viable and appropriate for most of the mid-sized banks in India as also the rate of commission would be relatively higher than the referral arrangement. This, however, is subject to reputation risk of the marketing bank. It also suffers some practical difficulties in the form of professional knowledge about the insurance products. Besides, resistance from staff to handle totally new service could not be ruled out. This model is best suited for majority of banks including some major urban cooperative banks because neither there is sharing of risk nor does it require huge investment in the form of infrastructure and yet could be a good source of income.

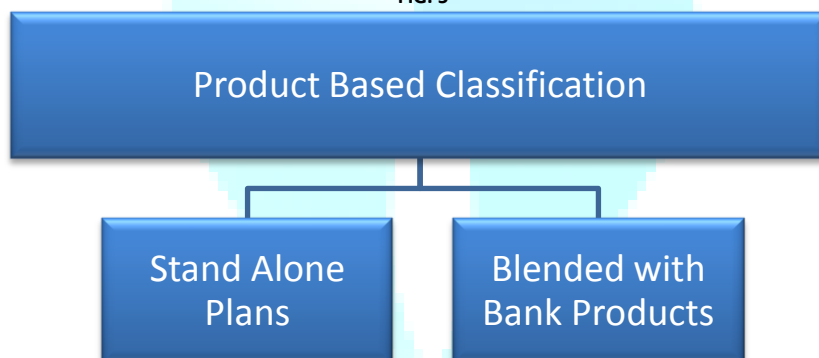
**2.3) FULLY INTEGRATED FINANCIAL SERVICE**

Apart from the above model, in this model bank functions as fully universal in its operation and selling of insurance products is just one more function within. Banks are equipped with a counter within to sell the insurance products as an internal part of its activities. This includes banks having a wholly owned insurance subsidiary with or without foreign participation. The great advantage of this strategy being that the bank could make use of its full potential to reap the benefit of synergy and therefore the economies of scope. This may be suitable to relatively larger banks with sound financials and has better infrastructure.

**3) PRODUCT-BASED CLASSIFICATION**

Bancassurance model on the basis of product classified into two categories e.g. Stand alone plans and Blended with bank products. Blended with bank products are more familiar in India e.g. Health Insurance with Home loan, Accident Insurance with Car loan etc. shown in Fig. 5

FIG. 5

**3.1) STAND-ALONE PLANS**

It involves marketing of the insurance products through either referral arrangement or corporate agency without mixing the insurance products with any of the banks' own products. Insurance is sold as one more item in the menu of products offered to the bank's customer, however, the products of banks and insurance will have their respective brands too.

**3.2) BLENDED WITH BANK PRODUCTS**

This strategy aims at blending of insurance products as a value addition while promoting bank's own products. Thus, banks could sell the insurance products without any additional efforts. In most times, giving insurance cover at a nominal premium or sometimes without explicit premium does act as an added attraction to sell the bank's own products. eg blending home loan with health insurance.

**SECTION III****WHO ARE STAKEHOLDERS?**

Stake holder is a person entrusted with the stakes of bettors or one that has a stake in an enterprise or one who is involved in or affected by a course of action. Stakeholder, an entity that can be affected by the results of that in which they are said to be stakeholders, i.e., that in which they have a stake. A stakeholder is anybody who can affect or is affected by an organisation, strategy or project. They can be internal or external and they can be at senior or junior levels. Some definitions suggest that stakeholders are those who have the power to impact an organisation or project in some way.

Stakeholders in case of bancassurance include insurer, bankers, customers, government etc. While stakeholders may not have a direct financial holding in the company, they would still stand to benefit if the venture or company succeeds. For example, the local government may wish to see an insurance company or bank succeed because it provides tax revenue, even though the local government does not directly own any part of the company.

## 3.1 POSITIVE IMPACT OF BANCASSURANCE ON ITS STAKEHOLDERS

TABLE 4

FOR INSURER	FOR BANKS	FOR CUSTOMERS
<ul style="list-style-type: none"> <li>➤ Attract further business.</li> <li>➤ Access to banks clients.</li> <li>➤ Reduce dependence upon agent</li> <li>➤ Increased efficiency.</li> <li>➤ Access to rural market through banks.</li> <li>➤ Reduced distribution cost</li> <li>➤ Diversification of distribution method</li> <li>➤ Reduced risk</li> <li>➤ Increase market penetration</li> </ul>	<ul style="list-style-type: none"> <li>➤ Stable &amp; supplement source of income</li> <li>➤ Banks became super market "one stop shop"</li> <li>➤ Increase profitability</li> <li>➤ Product diversification</li> <li>➤ Customer retention</li> <li>➤ Use of existing staff</li> </ul>	<ul style="list-style-type: none"> <li>➤ Better relation with banks</li> <li>➤ Awareness of insurance policies</li> <li>➤ Better premium rates &amp; services</li> <li>➤ All services under one roof.</li> <li>➤ Innovative &amp; better product</li> <li>➤ Better financial counselling</li> <li>➤ Easy access for claims</li> </ul>

## 3.2 NEGATIVE IMPACT OF BANCASSURANCE

- a) **Affected bank sales:** The brand equity of the insurer is improved with bancassurance tie-up but poor insurance service may hinder the sale of core banking products.
- b) **Question of customer data security:** Data management of an individual customer's Identity and contact details used by the insurance company may lead to compromising on data security.
- c) **Wastage Of Valuable Resources:** The sale of the wrong kind of insurance can lead to the waste of valuable resources that could otherwise be directed to better matters.
- d) **Customer Dissatisfaction:** The unfair handling of claims can lead to customer dissatisfaction and disillusionment with the product.
- e) **Conflicting Interest:** There is a possibility of conflict of interest between the other products of bank and insurance policies (like money back policy). This could create confusion in the mind of customer regarding where he has to invest.

## FINDINGS AND IMPLICATIONS

Bancassurance has received much attention from both researchers and policymakers, as it is a major step towards the creation of universal financial markets in the 21st century. Bancassurance is emerging as a natural pathway for the effective development of insurance. **Section I** clearly explains that there can be no doubt of the importance of the potential for Bancassurance to open the path toward cost-efficient access to insurance products, both Life and non-Life. Increased share of banks in new business of life insurance premium evidenced the success of bancassurance in India but low penetration ratio (3.2 percent in 2012) indicate that there is still untapped market which could be covered with widening the distribution channel. **Section II** highlighted various bancassurance models prevailing in different countries and referral model, corporate agency and blended with bank products are more familiar in India. **Section III** emphasised on the impact of bancassurance on its stakeholders and concluded that despite of some limitation it has positively affected its stakeholders including insurers, bankers and customers.

Prompted by the success of the bancassurance model globally and to facilitate active integration with the insurance company, several banks promote insurance companies singly or jointly in India.

## FUTURE SCOPE OF RESEARCH

Where legislation has allowed, bancassurance has mostly been a phenomenal success and, although slow to gain pace, is now taking off across Asia, especially now that banks are starting to become more diverse financial institutions, and the concept of universal banking is being accepted.

1. In non-life insurance business banks are looking to provide additional flow of revenues from the same customers through the same channel of distribution and with the same people.
2. Insurers have been turning in ever-greater numbers to alternative modes of distribution because of the high costs they have paid for agent services. These costs became too much of a burden for many insurers compared to the returns they generated.
3. Insurers operate through bancassurance own and control relationships with customers. Insurers found that direct relationships with customers gave them greater control of their business at a lower cost. Insurers who operate through the agency relationship are hardly having any control on their relationship with their clients.

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