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## THE MEDIATING EFFECT OF RISK ON ATTITUDE AND SUCCESS TOWARDS LIFE SATISFACTION OF MSME ENTREPRENEURS

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### ABSTRACT

*Entrepreneurship is a vital means of employment, stimulus for economic growth and innovation, encouraging product and service quality, competition and economic flexibility. This study is an empirical research, employing a questionnaire as a research instrument. The sample size consists of 250 MSME entrepreneurs from selected districts of Karnataka. The Entrepreneurial Attitude Orientation Scale (EAO) and Entrepreneurial success measurement were used to measure entrepreneurial attitude and entrepreneurial success. The Satisfaction with Life Scale (SWLS) was also used to determine the level of life satisfaction. To acquire quantitative data, a survey using a five- point Likert Scale was administered to access entrepreneurial traits based upon attitude theory. Structural equation modeling was used to test the hypotheses. Risk taking propensity was used as mediating factor between entrepreneurial attitude and entrepreneurial success. The findings of this study revealed that while micro, small and medium entrepreneurs reached life satisfaction, the micro entrepreneurs seemed to be the happiest. This could be possibly due to the smallness of the business venture, balance between family life and business life, the freedom to express innovative tendencies and the overall reality of owning the business.*

### KEYWORDS

Entrepreneurial Attitude, Entrepreneurial Success, Life Satisfaction.

### INTRODUCTION

Entrepreneurs are enterprising, energetic, resourceful individuals, alert to new opportunities, able to adjust to changing conditions, willing to assume risks involved in change, interested in advancing technologically, improving the quality of products and expanding the scale of operations (Berna, 1960). Thus Entrepreneurship, evergreen as before, has been characterized as opportunity recognition, exploration and relentless drive among entrepreneurs in bringing together all resources necessary for success.

Global Entrepreneurship Monitor (GEM) 2002 report shows that the national level of entrepreneurial activity has a significant association with subsequent levels of economic growth. There are no countries with high levels of entrepreneurship and low level of economic growth (Reynolds *et al.*, 2002). The growth of entrepreneurship in India and its importance can be gauged by the Global Entrepreneurship Monitor (GEM) 2007 report which states that an entrepreneurial boom exists in India, where one in every ten is engaged in entrepreneurial activity. Interestingly, the report also indicates that India has the highest level of business (15%) among GEM nations in 2006. India has nearly three million MSMEs, which account for almost 50 percent of her industrial output and 42 percent of her total exports.

The measurement of entrepreneurial success focuses solely on financial success which includes profitability, sales turnover, sales growth and return on investment. More recently, studies have found evidence of the relevance of non-financial indicators like life style criteria, social responsibility and customer satisfaction (Cooper, 1993). Despite the emphasis on non-financial indicators, financial indicators ensure sustainability in the long run. Financial success and independence is required to ensure that the business remains viable (Marlow and Strange, 1994). Whether we consider financial or non- financial success, the antecedents for entrepreneurial success like demographics and attitude orientation, determine the entrepreneurial behaviour and thereby entrepreneurial success.

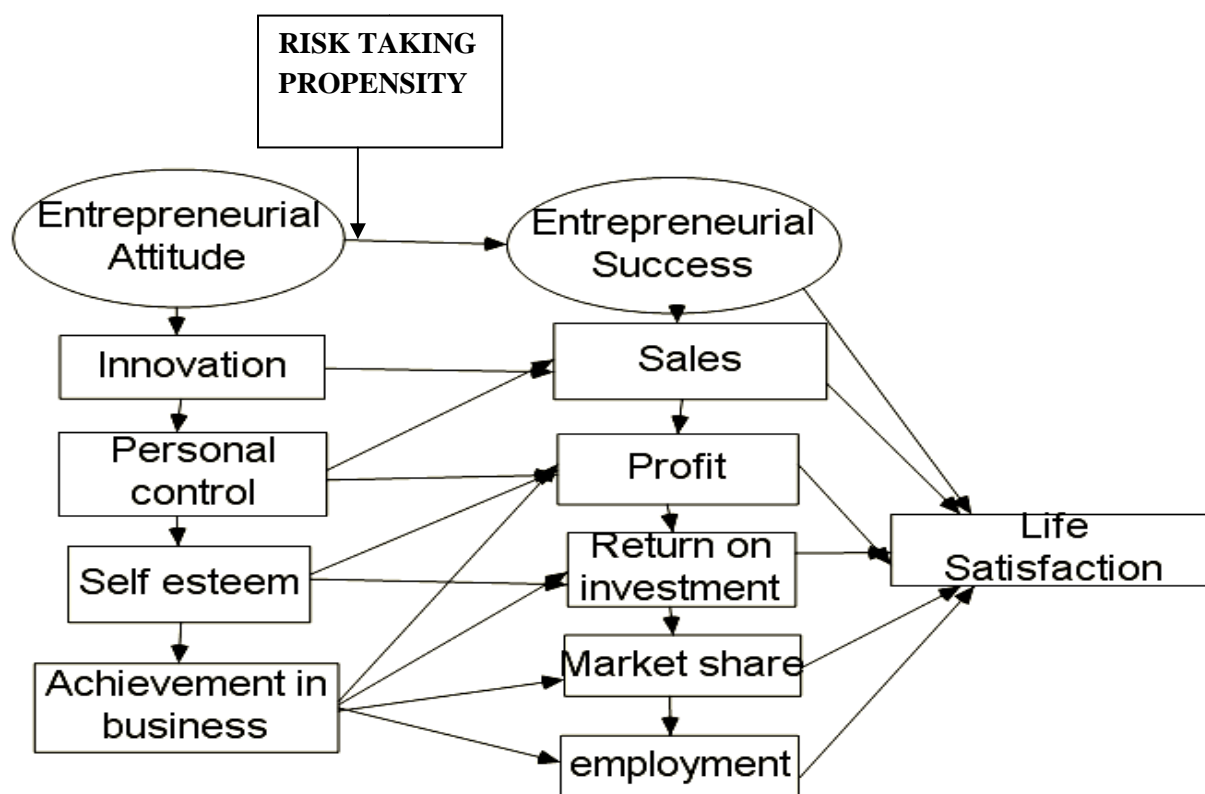
Life Satisfaction is the subjective well being of a person of his life in general, and family and work in particular. Such well being refers to cognitive aspect. The affective aspect refers to the positive feeling and happiness which is termed as life satisfaction.

The Global Entrepreneurial Index (GEINDEX, 2005) indicates that entrepreneurship may generally be positive for national happiness through raising income and wealth to create an 'entrepreneurial economy'. Hence an attempt is made to evaluate the impact of entrepreneurship on life satisfaction.

### CONCEPTUAL MODEL

Robinson *et al.* (1991) presented an attitudinal scale to predict entrepreneurial activity. The advantage of such a scale was that it could be more domain-specific, which increased the correlation with actual behavior and reduced unexplained variability. Achievement in business referred to concrete results associated with the start up and growth of new business ventures. Individuals with a high need for achievement performed better with non-routine tasks and took responsibility for their performance. They sought feedback, compared themselves with others, set for themselves challenges, goals and constantly tried to improve their performance (McClelland, 1961). The achievement motive was based on the assumption of doing something better and quicker than others, or improving upon one's own earlier accomplishments. The development of the motive occurred by how the individual's existing frame of reference was set against the individuals own desire to achieve. Hence, achievement motive would be a process of planning and striving for excellence (Hensemark, 1998). Some studies found a direct, positive correlation between achievement motivation and entrepreneurial behavior (Steven, 2003). The link between entrepreneurs and achievement motivation was strengthened by several studies (Durand and Shae, 1974; Robinson *et al.*, 1991; Caird, 1991). Innovation and understanding were found to be critical elements of entrepreneurship. According to Senge, (2000), most people did not necessarily understand the system they operate within, even though they may have held long- term personal goals. As a result, they were susceptible to developing short- term decision making patterns that tended to disrupt any long term strategic planning or goals. The concept of entrepreneurship has found different definitions over time, but the element of 'innovation' was closely tied to entrepreneurship. Innovation is generally understood as creating new products, methods, markets or new organization. Innovation relates to perceiving and acting upon business activities in new and unique ways (Kirton, 1978; Drucker, 1985). Entrepreneurship is initiating, doing, achieving and building an enterprise or organization, rather than just watching, analyzing or describing one (Driessen and Zwart, 1998). Das and Bing-Sheng (2001) maintain that an ability to recognize and exploit environmental opportunities (i.e. entrepreneurial alertness) led many individuals into entrepreneurial careers.

FIGURE 1: CONCEPTUAL MODEL



Perceived self esteem in business pertained to the self confidence and perceived competency of an individual, vis-a-vis his or her business affairs. Self esteem was associated with feeling about oneself (Hogg and Cooper, 2003) and self efficacy (a part of self-esteem) was defined as a belief in the capability to perform the task (Chen, *et al.*, 1998). Entrepreneurship literature also found that persons who believed that their skill and ability set was adequate for achieving success with a new venture were motivated to exert the necessary effort (Douglas and Shepherd, 2000).

Perceived personal control of business outcomes was found to be related to the individual's perception of control and influence over his or her business. Analogous to locus of control, Robinson *et al.* (1991), found that internal personal control led to a positive entrepreneurial attitude. Personal control could be viewed as prerequisite for action. Shapero and Sokol (1982) and Krueger, N.F., Reilly, M.D., (2000) proposed that the propensity to act is an essential disposition for new venture creation. Personal control was also found to be a key factor in enterprise education programmes.

Entrepreneurial success, which is satisfaction with financial success including profitability, sales turnover, return on investment, market share and creating employment opportunities was assessed using items adopted from Chandler and Hanks (1994) who reported a high overall internal consistency for their measure of .77. Evaluation of non financial success took the form of ratings of customer satisfaction, employee satisfaction, relationship with suppliers, and work place relationship (Hoque, 2004). Another key dimension of the entrepreneurial psyche is risk-taking propensity. How entrepreneurs perceive and manage risks in their environment, conditions the success and growth of their businesses. Risk-taking propensity has also been widely studied in the past by Brockhaus, 1980 & 1982. Hence risk taking propensity acts as a mediator between entrepreneurial attitude and entrepreneurial success. Against this background, the following hypotheses were formulated:

H1: There is no significant difference between risk taking propensity and gender between MSME entrepreneurs.

H2: There is no significant difference between risk taking propensity and age between MSME entrepreneurs.

H3: There is positive relationship between entrepreneurial attitude orientation and entrepreneurial success.

H4: There is mediating effect of risk taking propensity between entrepreneurial attitude and entrepreneurial success.

The satisfaction with life scale (SWLS) is a measure of life satisfaction developed by Ed Diener *et al.*, (1985). Life satisfaction is one factor in the more general construct of subjective well being. Subjective well being has at least three components: positive affective appraisal, negative affective appraisal and life satisfaction. Life satisfaction is distinguished from affective appraisal in that it was more cognitively than emotionally driven. Life satisfaction could be assessed specifically to a particular domain of life (eg. work and family). The SWLS is an accepted global measure of life satisfaction. Individuals with entrepreneurial attributes were not necessarily content with conventional rewards if they were to fully employ their capabilities (Augers and Arenberg, 1992). The main attractions for the self-employed were freedom from rules and regulations (Chay, 1993), freedom to make decisions, accountability to one's own self, and potential for higher rewards (Timmons, 1978). Katz (1992) contended that the most relevant values for entrepreneurs are autonomy, creativity, material gain and integration. In addition, Thompson *et al.*, (1992) found that self-employed individuals had a stronger relationship between job and life satisfaction, job and self satisfaction, and job and family satisfaction; as compared to organizationally employed individuals. With global changes continuously taking place, researchers have identified different characteristics about people who enjoyed life satisfaction. Vaillant (2000) said such people enjoyed better physical and mental health and coped with stress better than unhappy people. On the other hand, Argyle (2001) said they were more active, efficient, and productive at their jobs and earned a better income. Lyubomirsky (2008) said that happy individuals were more flexible and efficient in problem-solving. Also, they were more committed to their goals than focused on avoiding failure. This led to the following hypothesis:

H5: There is a positive relationship between entrepreneurial success and life satisfaction.

## METHODOLOGY

This study is an empirical research, employing a questionnaire as a research instrument, and collecting data from selected districts in Karnataka, India. The sample size consisted of 250 MSME entrepreneurs of Grameen Koota, Sanghamithra Rural Financial Services, KASSIA (Karnataka Small Scale Industries Association) and FKCCI (Federation of Karnataka Chambers of Commerce and Industry). Purposive sampling technique was used in this research study. To



acquire quantitative data, a survey using a five point Likert Scale was administered to access entrepreneurial traits based upon attitude theory. A pilot study was conducted among 35 MSME entrepreneurs to test the reliability and efficacy of the instrument. The relationship of entrepreneurship factors with the overall entrepreneurial success and life satisfaction is assessed through analysis of Confirmatory Factor Analysis and Structural Equation Modeling by using Amos Version 16.

ANOVA and t-test were conducted to study whether demographic characteristics had a significant influence on the risk taking propensity of MSME entrepreneurs.

**SURVEY INSTRUMENT**

Robinson et al., (1991) developed the Entrepreneurial Attitude Orientation (EAO) scale based on the tripartite model of attitude, i.e. affective, cognitive and conative measures of attitudes toward entrepreneurship. The constructs of EAO are: 1) achievement in business, 2) innovation in business, 3) perceived personal control of business outcomes, and 4) perceived self-esteem in business. The internal consistencies reported were above 0.70 for entrepreneurial attitude.

With regard to entrepreneurial success; profitability, sales, return on investment, and employment was assessed using the scales of Chandler and Hanks (1994). The internal consistency reported was 0.77. The Satisfaction with Life Scale (SWLS) is a measure of life satisfaction developed by Ed Diener et al., (1985). The internal consistency reported was 0.80 for life satisfaction.

**MEASUREMENT MODEL – CFA PROCEDURE**

The central point in analyzing structural models is the extent to which the hypothesized model “fits” or adequately describes the sample data (Byrne, 2001). A model fit can be evaluated by examining several goodness of fit indices which include:  $\chi^2$ ,  $\chi^2/df$ , GFI, IFI, TFI, CFI, and RMSEA. Besides fit statistics, of particular interest is the path significance indicated by the standardized regression estimate that assesses the effect of one variable on another. Prior to testing the model, the psychometric properties and the goodness of fit of the constructs studied were undertaken.

**HYPOTHESES TESTING USING t-TEST AND ANOVA**

H1: There is no significant difference between risk taking propensity and gender between MSME entrepreneurs.

**TABLE 1 – RISK TAKING PROPENSITY AND GENDER DIFFERENCES**

Personality traits	Gender	Mean	t-value	Significance level
Risk taking propensity	Male	36.69	-1.68	NS
	Female	36.09		

\*Significance at p<0.05

In Table 1, t-value is -1.68, which is not significant indicating that null hypothesis is rejected and ‘There is significant difference between risk taking propensity and gender between MSME entrepreneurs’. Our study shows that most of the women entrepreneurs are less likely to take risks than males.

H2: There is no significant difference between risk taking propensity and age between MSME entrepreneurs.

**TABLE 2– RISK TAKING PROPENSITY AND AGE**

Age group	N	Mean	SD	F	Level of significance
21-30	40	2.00	0.33	0.205	NS
31-40	95	2.03	0.30		
41-50	85	1.98	0.21		
51-60	30	2.05	0.23		

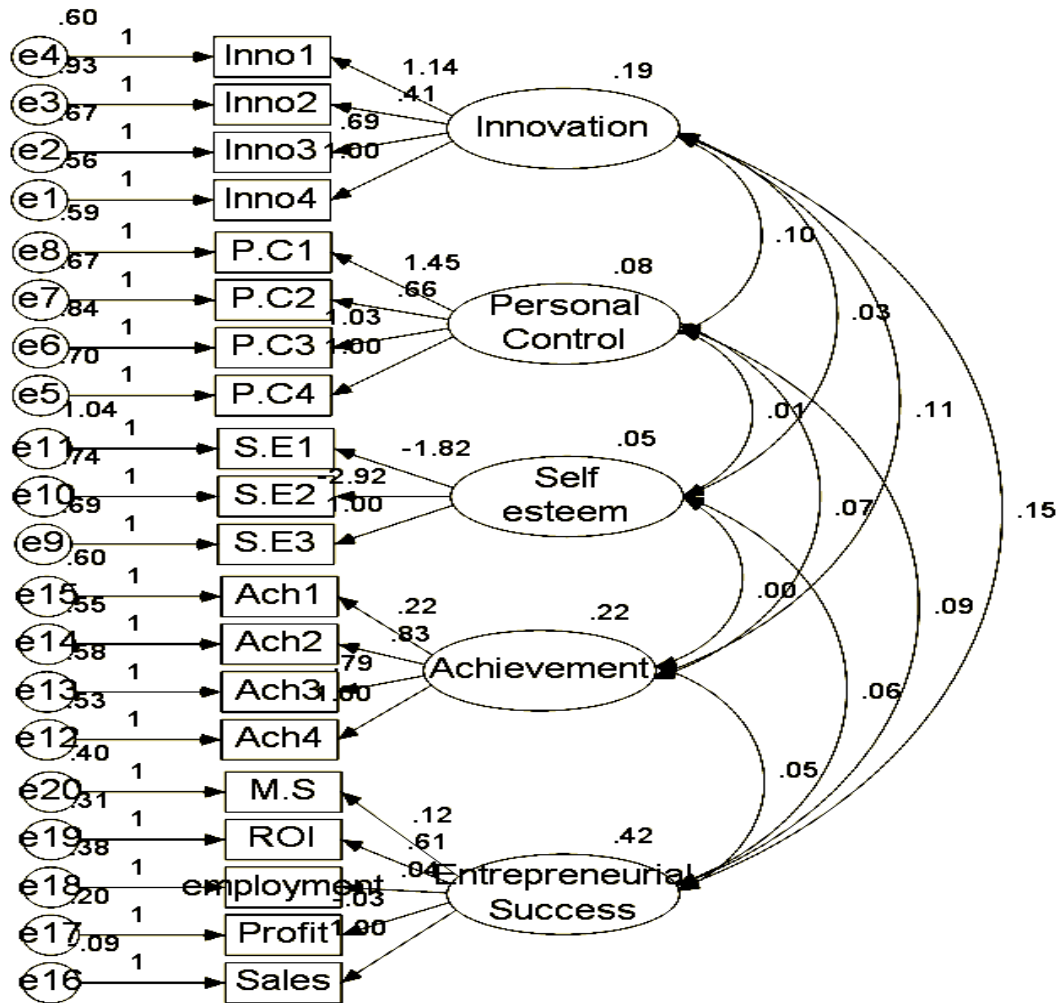
\*Significance at p<0.05

In Table 2, ‘F’ value is 0.205, which is also not significant indicating that null hypothesis is rejected and ‘There is significant difference between risk taking propensity and age between MSME entrepreneurs’. With regard to age, younger entrepreneurs irrespective of gender were more emotionally and financially risk averse compared to the older and experienced entrepreneurs.

**HYPOTHESES TESTING USING STRUCTURAL EQUATION MODEL (SEM)**

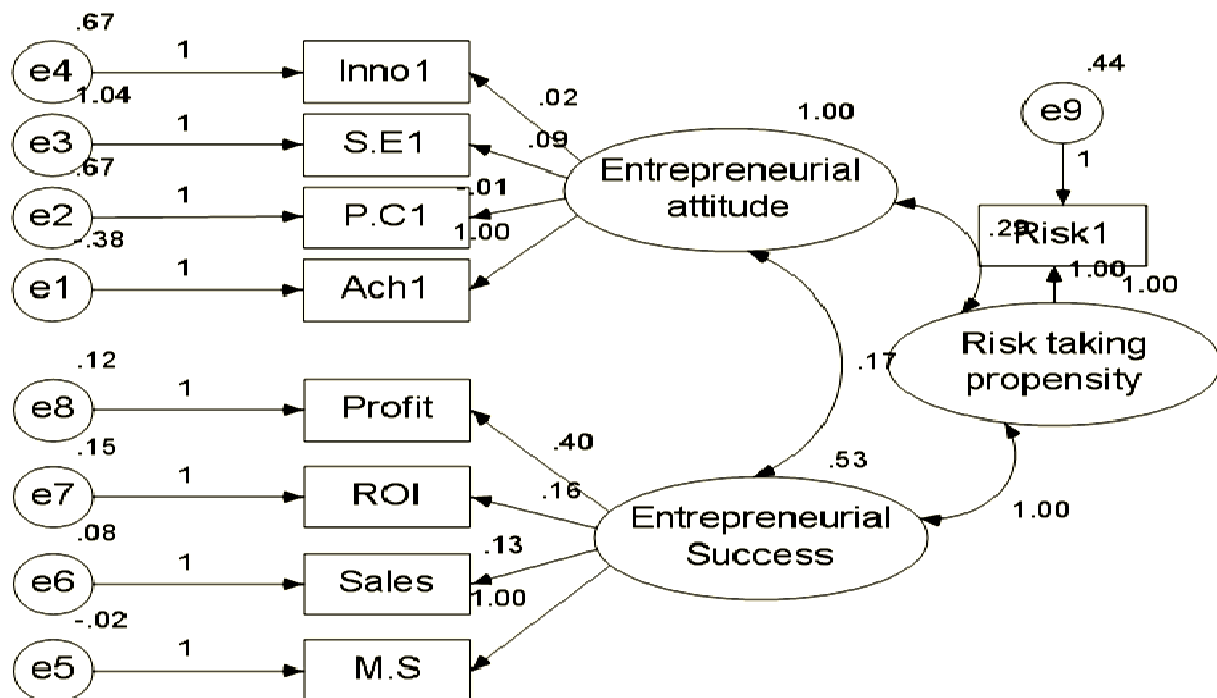
In testing the hypotheses developed for this study, Structural Equation Modeling (SEM) was used because it offers a number of advantages compared to other commonly used technique. SEM offers a greater precision in model estimation. It takes into account both direct and indirect effects and provides an estimate of the total effect (both direct and indirect) of each independent variable on the dependent variable (Kline, 1998). It also resolves the problem of multicollinearity.

FIGURE – 2 STRUCTURAL MODEL – ENTREPRENEURIAL ATTITUDE AND ENTREPRENEURIAL SUCCESS



H3: There is positive relationship between entrepreneurial attitude orientation and entrepreneurial success. As depicted in the figure 2, analysis of data using SEM procedure showed a significant direct relationship of entrepreneurial attitude and entrepreneurial success. This model yielded a model fit of  $\chi^2 = 258.4$ ,  $p = 0.000$ ,  $\chi^2/df = 2.00$ , GFI is 0.916, AGFI is 0.911, TLI= 0.946 CFI is 0.926 and RMSEA is 0.044. The results therefore, supported all the hypothesized relationship.

FIGURE – 3 STRUCTURAL MODEL – MEDIATING EFFECT OF RISK ON ENTREPRENEURIAL ATTITUDE AND ENTREPRENEURIAL SUCCESS

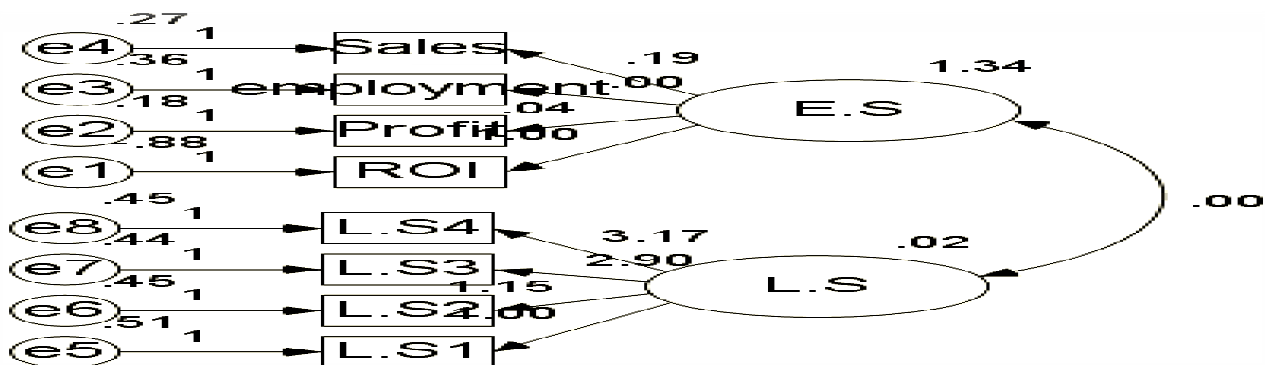


H4: There is mediating effect of risk taking propensity between entrepreneurial attitude and entrepreneurial success.

As depicted in the figure 3, analysis of data using SEM procedure showed a mediating effect of risk taking propensity between entrepreneurial attitude and entrepreneurial success. This model yielded a good model fit of  $\chi^2 = 40.7$ ,  $p = 0.000$ ,  $\chi^2/df = 2.00$ , GFI is 0.966, AGFI is 0.781, IFI is 0.948 TLI is 0.986 and RMSEA is 0.056. The results supported the hypothesis.

Note: Inno – Innovation, Ach – Achievement, P.C – Personal Control, S.E – Self Esteem, M.S – Market Share

FIGURE – 4 STRUCTURAL MODEL –ENTREPRENEURIAL SUCCESS AND LIFE SATISFACTION



H5: There is a positive relationship between entrepreneurial success and life satisfaction.

As depicted in the figure 4, analysis of data using SEM procedure showed a significant direct relationship of entrepreneurial success and life satisfaction. This model yielded a good model fit of  $\chi^2 = 28.1$ ,  $p = 0.000$ ,  $\chi^2/df = 2.00$ , GFI is .971, AGFI is .946, IFI is .911 and RMSEA is .044. The result therefore, supported the hypothesized relationship.

**DISCUSSIONS**

The findings of the present study confirmed that entrepreneurs ranging from 25 to 44 years of age are the most entrepreneurially driven. There is a direct correlation between age, experience, education and entrepreneurial success. Female entrepreneurs are less likely to be founders of new businesses than males. It was seen that women entrepreneurs differ from males in personality characteristics like risk taking propensity and locus of control. Need for achievement and innovation was found to be the same for both genders. However, 30 % of the entrepreneurs were found to be co-preneurs, where couples share their responsibilities and ownership. Entrepreneurs took a greater degree of risk in areas where they have control or competencies in realizing profit. It was found that among small businessmen in Karnataka, those with a high achievement motivation have relatively larger business ventures than those with a low achievement motivation. The effect of training, before and after start-up, on entrepreneurial competencies was not significant for MSME entrepreneurs, as they value 'life experience' and on-going support and advice from experts to a greater extent. Inter alia, 'learning by doing' and on-the-job experience was found to be the most crucial component of entrepreneurial learning.

Begley (1995) defined risk-taking propensity as the willingness to take moderate risks. This means that when entrepreneurs face different situations, they will probably show different risk propensities. Many entrepreneurship studies have found that a large number of successful entrepreneurs are moderate risk-takers (Bridge et al., 1998). This confirms our observation that 92% of the respondents are moderate risk takers.

Our study indicates that women entrepreneurs are risk averse when compared male entrepreneurs. They are risk handlers rather than risk takers and take calculated risks, only in the areas where they are competent. This was mainly owing to economic compulsions. This finding supports the views of Geddes et al., 2006, who assert that women entrepreneurs are more emotionally risk averse when compared to their male counterparts. They also confirmed that younger entrepreneurs, irrespective of gender, were risk averse compared to the older and experienced entrepreneurs.

In our study, it was found that entrepreneurs held strong beliefs in their own capabilities and potential to start their own businesses, reflecting a need to self-actualisation. This was reflected in the recognition of motives like realizing creativity, capabilities, and potential. The study shows that 68% of the entrepreneurs' 'level of satisfaction' was consistently high. The correlation was considerable (0.81). These participants demonstrated a strong desire to create a better environment for their family and to ensure family happiness by enjoying both physical and emotional health. It was found that the biggest driver of life satisfaction is physical and emotional health (28%). Entrepreneurs believed in providing a better life for their families, providing a platform for their children in business, and also exposing their children to entrepreneurial culture, and creating happiness in the family (Vaillant, 2000). The study showed that life evaluation factors like marriage, children and friends constituted 22% of the respondents.

Hammermesh (1990) found that entrepreneurs worked an additional 17 hours a week more than employed individuals. The positive aspects of work increased their energy levels when there was a high demand for personal energy needed in job, leading to life satisfaction (Naughton, 1987). In our study, it was observed that respondents worked 20 hours a week more than employed individuals. They opined that success meant being personally satisfied with their firms' progress and personal achievement. Some respondents indicated that maintaining a flexible lifestyle, having a balanced life between work and family and being able to do what they liked doing, gave them satisfaction. Factors like the sense of independence, responsibility for their business endeavour, work environment and accountability for their successes and failures accounted for 24%. A strong sense of family values like tolerance, healthy behavior, determination, philanthropic attitude, coincided with higher levels of satisfaction with life, constituting 26%.

Thus, there was found to be a direct relationship between entrepreneurial success and life satisfaction.

**CONCLUSION**

Entrepreneurial attitude is strong predictor of success which leads to life satisfaction among MSME entrepreneurs. The results confirm Gibb's (2005) contention that, in MSMEs, competitive advantage is achieved and sustained through the ability of the entrepreneur, despite constraints associated with the size of the firm. MSME entrepreneurs consistently possess higher values like mutual respect, and sense of accomplishment, clubbed with fun and enjoyment in life. This is also consistent with their value system and familism. Given the dynamic business environment that MSME entrepreneurs worldwide face, largely due to the increasing globalisation of business, the possession of the appropriate attitude and competencies should greatly assist entrepreneurs to face the travails and turbulences of business and life with fortitude, and to face the uncertain future with confidence. Based on the results of this study, there is little doubt that entrepreneurial attitude constructs are the critical components for entrepreneurial success leading to life satisfaction among entrepreneurs in MSME and as such, they should continue to be a central focus for any Entrepreneurship Development Programme or any development policy planning or implementation by the State.

Academically the study holds relevance as entrepreneurial learning in B-schools has significant impact on building entrepreneurial attitudes among potential entrepreneurs. Understanding of competencies and entrepreneurial personality could bring about an invaluable insight for an entrepreneurial career.

For practitioners this study is important as organizations that promote corporate entrepreneurship could use the EAO Scale to identify their employees' entrepreneurial traits and to take part in brainstorming for new venture creations.

**DIRECTIONS FOR FUTURE RESEARCH**

1. Classifying the entrepreneurs in SME based on the type of business is not in the scope of this study; such a classification would have shown interesting results.
2. To understand more about the findings of this research, a detailed study on each one of the entrepreneur's entrepreneurial traits and the reasons underlying them can be taken up using a case study approach.
3. This research study could also be replicated and refined in other research context covering potential entrepreneurs.

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**DETERMINANTS OF CAPITAL STRUCTURE IN NIGERIAN FIRMS: A THEORETICAL REVIEW**

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**ABSTRACT**

*This paper examines the determinants of capital structure decisions of firms in the manufacturing industry in Nigeria. The capital structure of a firm consists of a particular combination of debt and equity issues to relieve potential pressures on its long-term financing. To examine such issues, many theories have been developed in the literature and they generally focus upon what determinants are likely to influence the leverage decisions of the firms. This paper examined directly detailed background information of manufacturing sector in Nigeria with the aim of discovering major determinants of its capital structure. And the basic determinants of capital structure in the firms identified by various studies are tangibility, size, growth opportunities, profitability and non-debt tax shields. In addition to these, issues such as corruption, political atmosphere, nature of financial markets, have also been identified as influencing seriously the capital structure of firms in Nigeria. The paper also highlighted issues such as financial distress, bankruptcy threats, solvency problem, risk of default etc due to unstable economic and political situations as possible dangers that may plague firms whose capital structure may tilt more towards debt financing.*

**KEYWORDS**

Capital Structure, Manufacturing Firms, Determinants, Debts, Equity.

**INTRODUCTION**

Capital structure describes the proportionate relationship between debt and equity. While debt is majorly made up of long term loans such as debenture, equity includes paid up share capital, share premium, reserves, and surplus or retained earnings. Therefore, a company can finance its investments by debts and/or equity. The pioneering work of Franco Modigliani and Metron Miller (1958) commonly known as the MM theory, on capital structure led to the development of several other theories bent on explaining the basic determinants of the capital structure in firms. Both theoretical and empirical capital structure studies have generated many results that attempt to explain the determinants of capital structure. As a result of these studies, some broad categories of capital structure determinants have emerged. Titman and Wessels (1988), and Harris and Raviv (1991), however, point out that the choice of suitable explanatory variables is potentially contentious. In other words, what might be applicable in one area may not necessarily define what will work in other areas or regions.

The corporate sector in Nigeria is characterized by a large number of firms operating in a largely deregulated and increasingly competitive environment. Since 1987, financial liberalization has changed the operating environment of firms, by giving more flexibility to the Nigerian financial managers in choosing the firm's capital structure (Salawu & Agboola, 2008).

There are only a limited number of studies that examine factors which influence the capital structure of Nigerian firms. Although the capital structure issue has received substantial attention in developed countries, it has remained neglected in the developing countries. The reasons for this neglect are discussed by Bhaduri (2002). He notes that until recently, development economics have placed little importance to the role of firms in economic development. Second, until the eighties, the corporate sectors in many Less Developed Countries (LDCs) faced several constraints on their choices regarding sources of funds. Access to equity markets was either regulated, or limited due to the underdeveloped stock market (Bhaduri, 2002).

It is clear that capital structure is an important management decision as it greatly influences the owner's equity return, the owners' risks as well as the market value of the shares. In other words, how a firm is financed is very important not just to the managers of a firm but also to fund providers. This is because if a wrong mix of finance is employed, the performance and survival of the business enterprise may be seriously affected. However, firms financing decisions involve a wide range of policy issues which may be outside the direct control of a firm's management. At the macro level, they have implications for capital market development, interest rate and security price determination, and regulation. At the micro level, such decisions affect capital structure, corporate governance and company development (Green, Murinde and Suppakitjarak, 2002).

It is therefore incumbent on management of a company to determine an appropriate capital structure which will ensure that their business continues as a going concern. As observed by Prasad et al, (2001), a thriving business environment will not only serve as a means of income generation for households alone, but it will also help in generating tax revenue for the government and immensely facilitating poverty reduction through fiscal transfers.

**BACKGROUND OF THE NIGERIAN MANUFACTURING SECTOR**

The manufacturing sector of any economy is involved in the conversion of raw materials into finished consumer goods or producer or intermediate goods. Like other industrial activities, manufacturing creates avenues for employment, helps to boost agriculture, helps to diversify the economy, and serves as a viable means of foreign exchange earnings for the country. In addition, the sector also helps to minimize the risk of overdependence on foreign trade or imported goods.

Manufacturing remains one of the most powerful engines for economic growth. It acts as a catalyst to transform the economic structure of countries. The potential benefits from the sector are even greater today particularly for emerging economies. With rapid technological change, sweeping liberalization and the increased defragmentation and internationalization of production, manufacturing has become the main means for developing countries to benefit from globalization and bridge the income gap with the industrialized world. These potential benefits justify the importance of promoting manufacturing in the developing countries of which Nigeria is one.

Lagos and its surroundings are home to about 60% of Nigeria's industrial base. Other key industrial centers are Kano, Ibadan and Kaduna. Nigeria's most important manufacturing industries include beverages, cement, cigarettes, food processing, textiles and detergents.

Manufacturing activities in Nigeria has pass through four identifiable stages.

- i. The pre-independence era – when manufacturing was limited to primary processing of raw materials for exports and the production of simple consumer items by foreign multinational corporations anxious to gain a foot hold in a growing market.



- ii. The post-colonial era – the 1960s characterized by more vigorous import substitution and the beginning of the decline of the export oriented processing of raw materials. The import substitution method adopted here never achieved the desired aim of reducing overdependence on imported goods. During this stage too, foreign ownership of manufacturing firms reached its peak.
- iii. The decade of the 70s – remarkable and outstanding due to the discovery of commercial quantities of crude oil in the country. This phase saw government attempting to control the entire manufacturing process in the country but with little success. It also marked the initiation of the indigenization program in Nigeria.
- iv. The last phase is that marked by declining government revenues due to volatile oil prices.

According to the Bureau of Public Enterprise (BPE) (2006) activities in the Nigerian industrial and manufacturing sector can be classified into four groups, Multinational, National, Regional and Local. However, the Manufacturers Association of Nigeria has categorized its industries into Large, Medium and Small Scales in line with the National Council of Industries (NCI) classification.

According to Manufacturers Association of Nigeria (MAN) and Standard Organization of Nigeria (SON), classification of manufacturing sectors, the following products sectoral groups exist in Nigeria: Food, Beverages & Tobacco; Chemical and Pharmaceuticals; Domestic and Industrial Plastic and Rubber; Basic Metal, Iron and Steel and Fabricated Metal Products; Pulp, Paper & Paper Products, Printing & Publishing; Electrical & Electronics; Textile, Wearing Apparel, Carpet, Leather & Footwear; Wood and Wood Products Including Furniture; Non-Metallic Mineral Products; Motor Vehicle & Miscellaneous Assembly.

The Nigerian manufacturing industry is premised on import- substitution, a situation where attempt is made to produce locally goods that are imported into the country. To achieve this objective, industrial equipment and raw materials are transported into Nigeria, installed, and used for routine production activities, either by multinational corporations, and other industries. Consequently, Nigerian industries, as with industries in many developing countries, are characterized by their inability to revolutionize or transform production.

Secondly, manufacturing in developing countries in general and Nigeria in particular, consists largely of a handful of factories producing construction material, clothing, textiles, footwear and processed foods using simple assembly processes.

Thirdly Nigeria's manufacturing industries consist mainly of assembly plants with little backward linkages (i.e. absence of domestic development of inputs needed by sectors such as raw materials, intermediate goods and specialized and skilled labour) in the economy, since most of the inputs are imported.

Fourthly, is the high technological dependence through continued importation of finished parts for vehicle assembly. Consequently, the technological manpower in the automobile industry will continue to perform routine assembly tasks.

Nigerian industries tend to be characterized by routine production activities, lack of backward linkage in the economy. In some case, prevalence of highly-packaged technology, performance of minor operations, lack of ancillary industries, and insignificant or non-existent research and development (R & D) activities.

## REVIEW OF RELATED LITERATURE

The term capital structure refers to the percentage of capital (money) at work in a business by type. It is a mix of a company's long-term debt, specific short-term debt, common equity and preferred equity and it simply describes how a firm finances its overall operations and growth by using different sources of funds. Broadly speaking, there are two forms of capital: equity capital and debt capital. Each has its own benefits and drawbacks and a substantial part of wise corporate management is attempting to find the optimal capital structure in terms of risk/reward payoff for shareholders.

A firm's capital structure is then the composition or structure of its liabilities. For example, a firm that sells N30 billion in equity and N70 billion in debts is said to be 30% equity-financed and 70% debt-financed. The firm's ratio of debt to total financing, 70% is thus referred to as the firm's leverage which can also be described as its gearing ratio - the proportion of the capital employed of the firm which comes from outside of the business finance.

The capital structure of a firm or more specifically the firm's debt-to-equity ratio, provides insight into how risky a company is. Usually a company more heavily financed by debt poses greater risk, as this firm is relatively highly levered. Thus the concept and an understanding of the capital structure of a firm are extremely important because it can influence not only the return a firm earns for its shareholders, but whether or not a firm survives in a recession or depression.

Capital structure decisions are very difficult to make in uncertain economies. In developing economies in particular, the existence of macro environment factors such as high and soaring interest rates, volatility in economic and political situations are important factors that determines the capital structure of firms. The presence of the factors above causes financing decisions to experience a significant rise; in addition the diminution or dwindling economic activities also raises uncertainty.

Knowledge about capital structures have mostly been derived from data in developed economies that have many institutional similarities (Booth et al., 2001). Since different countries have different institutional arrangements, mainly with respect to tax and bankruptcy codes, existing market for corporate control, and the roles of banks and securities markets, it might prove inadequate to infer that what occurs in the developed economies or what determines their capital structure can be used to explain what is obtainable in the developing countries like Nigeria. In addition, there are differences in social and cultural issues and in the levels of economic development thus the need to examine differently the determinants of capital structure for firms in developing economies.

According to Bas et al, (2008) most capital structure studies to date are based on data from developed countries. The few studies that have been done on developing countries hardly seem to agree as noted by Abor (2008). For instance, Singh and Hamid (1992) and Singh (1995) used data on the largest companies in selected developing countries and found that firms in developing countries made significantly more use of external finance to finance their growth than is typically the case in the industrialized countries. In a subsequent study, they again found that firms in developing countries rely more on equity finance (internal finance) than debt finance. In an Indian study by Cobham and Subramaniam (1998), using a sample of larger firms, found that Indian firms use substantially lower external and equity financing. Meanwhile in a study of large companies in ten developing countries, Booth et al. (2001) also found that debt ratios varied substantially across developing countries, but overall were not out of line with comparable data for industrial countries. According to them,

"In general, debt ratios in developing countries seem to be affected in the same way and by the same types of variables that are significant in developed countries. However, there are systematic differences in the way these ratios are affected by country factors, such as GDP growth rates, inflation rates, and development of capital markets."

These differences underline the importance of an examination of the basic determinants of capital structure for firms operating in a developing environment.

As a result of numerous studies, some broad categories of capital structure determinants can be identified. These factors identified will very likely influence the leverage decision of a firm. Titman and Wessels (1988), and Harris and Raviv (1991) quoted in Buferna et al, however, point out that the choice of suitable explanatory variables is potentially controversial. This notwithstanding, there are four key variables identified in the studies by Rajan and Zingales (1995), and Bevan and Danbolt (2002) that can be found relevant for studies in Developing Countries. These selected explanatory variables are: tangibility, size, profitability, and the level of growth opportunities. Abor (2008), identified age of the firm, size of the firm, asset structure, profitability, growth, firm risk, tax and ownership structure. In the case of SMEs, other heterodox factors such as industry, location of the firm, entrepreneur's educational background and gender, form of business, and export status of the firm may explain their capital structure.

## DETERMINANTS OF CAPITAL STRUCTURE

Based on the different theories on capital structure, a number of empirical studies have identified firm-level characteristics that affect the capital structure of firms. Among these characteristics are age of the firm, size of the firm, asset structure, profitability, growth, firm risk, tax and ownership structure. In the case of SMEs, other heterodox factors such as industry, location of the firm, entrepreneur's educational background and gender, form of business, and export status of the firm may explain their capital structure.

### Age of the firm

This serves as a standard measure of reputation in capital structure models. As a firm continues longer in business, it establishes itself as an ongoing business and therefore increases its capacity to take on more debt; hence age is positively related to debt. Before granting a loan, banks tend to evaluate the creditworthiness of entrepreneurs as these are generally believed to pin high hopes on very risky projects promising high profitability.

Petersen and Rajan (1994) found that older firms should have higher debt ratios since they should be higher quality firms. Hall et al. (2004) agreed that age is positively related to long-term debt but negatively related to short-term debt. Esperança et al. (2003), however, found that age is negatively related to both long-term and short-term debt. Green, Murinde and Suppakitjarak (2002) also found that age has a negative influence on the probability of incurring debt in the initial capital equation, and no impact in the additional capital equation.

#### **FIRM SIZE**

Larger firms are more diversified and hence have lower variance of earnings, making them able to tolerate high debt ratios (Castanias, 1983; Titman and Wessels, 1988; Wald, 1999). Smaller firms, on the other hand, may find it relatively more costly to resolve information asymmetries with lenders, thus, may present lower debt ratios (Castanias, 1983). Lenders to larger firms are more likely to get repaid than lenders to smaller firms, reducing the agency costs associated with debt. Therefore, larger firms will have higher debts.

Empirical evidence on the relationship between size and capital structure supports a positive relationship. Several works show a positive relationship between firm size and leverage (see Barclay and Smith, 1996; Friend and Lang, 1988; Barton et al., 1989; MacKie-Mason, 1990; Kim et al., 1998; Al-Sakran, 2001; Hovakimian et al., 2004). Their results suggest that smaller firms are more likely to use equity finance, while larger firms are more likely to issue debt rather than stock. Their results showed that the success rate for large firms applying for bank loans was higher than that of smaller firms. In a study of six African countries, Bigsten et al. (2000) also showed that about 64% of micro firms, 42% of small firms and 21% of medium firms appear constrained, while this is only 10% for the large firms. Cassar and Holmes (2003), Esperança et al. (2003), and Hall et al. (2004) found a positive association between firm size and long-term debt ratio, but a negative relationship between size and short-term debt ratio.

#### **ASSET STRUCTURE**

The degree to which the firm's assets are tangible should result in the firm having greater liquidation value (Titman and Wessels, 1988; Harris and Raviv, 1991). Bradley et al. (1984) assert that firms that invest heavily in tangible assets also have higher financial leverage since they borrow at lower interest rates if their debt is secured with such assets. It is believed that debt may be more readily used if there are durable assets to serve as collateral (Wedig et al., 1988). Booth et al. (2001) suggest that the relationship between tangible fixed assets and debt financing is related to the maturity structure of the debt. In such a situation, the level of tangible fixed assets may help firms to obtain more long-term debt, but the agency problems may become more severe with the more tangible fixed assets, because the information revealed about future profit is less in these firms. If this is the case, then it is likely to find a negative relationship between tangible fixed assets and debt ratio.

#### **PROFITABILITY**

The relationship between firm profitability and capital structure can be explained by the pecking order theory (POT) discussed above, which holds that firms prefer internal sources of finance to external sources. The order of the preference is from the one that is least sensitive (and least risky) to the one that is most sensitive (and most risky) that arise because of asymmetric information between corporate insiders and less well informed market participants (Myers, 1984). By this token, profitable firms with access to retained profits can rely on them as opposed to depending on outside sources (debt). Murinde et al. (2004) observe that retentions are the principal source of finance. Titman and Wessels (1988) and Barton et al. (1989) agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratios since they are able to generate such funds from internal sources.

#### **FIRM GROWTH**

Growth is likely to place a greater demand on internally generated funds and push the firm into borrowing (Hall et al., 2004). According to Marsh (1982), firms with high growth will capture relatively higher debt ratios. In the case of small firms with more concentrated ownership, it is expected that high growth firms will require more external financing and should display higher leverage (Heshmati, 2001). Aryeetey et al. (1994) maintain that growing SMEs appear more likely to use external finance – although it is difficult to determine whether finance induces growth or the opposite (or both). As enterprises grow through different stages, i.e., micro, small, medium and large scale, they are also expected to shift financing sources. They are first expected to move from internal sources to external sources (Aryeetey, 1998).

#### **FIRM RISK**

The level of risk is said to be one of the primary determinants of a firm's capital structure (Kale et al., 1991). The tax shelter-bankruptcy cost theory of capital structure determines a firm's optimal leverage as a function of business risk (Castanias, 1983). Given agency and bankruptcy costs, there are incentives for the firm not to fully utilize the tax benefits of 100% debt within the static framework model. The more likely a firm is exposed to such costs, the greater their incentive to reduce their level of debt within its capital structure. One firm variable that affects this exposure is the firm's operating risk; in that the more volatile the firm's earnings stream, the greater the chance of the firm defaulting and being exposed to such costs. According to Johnson (1997), firms with more volatile earnings growth may experience more situations in which cash flows are too low for debt service.

#### **TAXATION**

Numerous empirical studies have explored the impact of taxation on corporate financing decisions in the major industrial countries. Some are concerned directly with tax policy, for example: MacKie-Mason (1990), Shum (1996) and Graham (1999). MacKie-Mason (1990) studied the tax effect on corporate financing decisions and provided evidence of substantial tax effect on the choice between debt and equity. He concluded that changes in the marginal tax rate for any firm should affect financing decisions. When already exhausted (with loss carry forwards) or with a high probability of facing a zero tax rate, a firm with high tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. Graham (1999) concluded that in general, taxes do affect corporate financial decisions, but the magnitude of the effect is mostly "not large".

#### **MANAGERIAL OWNERSHIP**

Managerial insiders (officers and directors) have a somewhat different perspective since many of them have large portions of their personal wealth invested in the firm (Amihud and Lev, 1981; Friend and Hasbrouck, 1988). The personal wealth managerial insiders have invested in their employer is composed largely of their employer's common stock and the firm-specific human capital they have accumulated while working for their employer. Since these items tend to represent a large proportion of an insider's total wealth, the bankruptcy of the employer would have a major impact on their personal wealth. As a result, Friend and Hasbrouck (1988) argue, managerial insiders should be more sensitive to the bankruptcy risk that debt financing induces and more inclined to minimize this risk by using less than the shareholder wealth maximizing amount of debt in the firm's capital structure. Further, the more wealth a managerial insider has invested in the employer, the greater the incentive they have to minimize the use of debt financing.

Research has shown that factors that determines capital structure differs from firm to firm and even from country to country.

### **DETERMINANTS OF CAPITAL STRUCTURE IN NIGERIAN FIRMS**

The factors considered in choosing appropriate amount of equity and debt capital for Nigerian firms can be identified from the various researches on the issue. Ogbulu and Emeni (2012) in their work using 110 firms over a period of five years (2000 – 2005) identified age and size of firms as the major significant determinant of capital structure of these firms. Their study made use of the Ordinary Least Square (OLS) technique to estimate the parameters (size, growth, profitability, tangibility and age) of the model. Profitability, tangibility and growth were found not have any positive relationship with the capital structure of the selected firms. The theories that lend support to this study are the Information Asymmetry and Pecking Order theories.

Hassan (2011) investigated in to the determinants of capital structure in listed insurance firms in Nigeria. Using a linear regression model, his study noted that profitability, growth, tangibility, and size were prominent determinants of capital structure in Insurance firms. The results of his study were consistent with the propositions of the Pecking order theory, the trade off theory and the Agency Cost theory.

In the banking sector, Iwarere and Akinyele (2010) carried out an empirical research to ascertain the basic determinants of capital structure in the banking sector. A survey of twenty five banks revealed that growth opportunities, profitability, tangibility, issuing cost, tax economics associated with debt financing, risk/cost of financial distress and earnings per share were the major determinants of capital structure in the banking sector. The theories supporting this result would be the pecking order theory,

In his study "Testing static tradeoff theory against pecking order models of capital structure in Nigerian quoted firms", Adesola (2009) leading conclusion is that capital structure of quoted firms in Nigeria is significantly influenced by the return on asset (profitability) and growth. Their empirical result, support both pecking order theory and static trade off theory as playing significant role in corporate financing choice of quoted firms but with the pecking order exerting more influence. The study covered a period of ten years, and used 27 Nigerian quoted companies.

Salawu and Agboola (2008) reports profitability, tangibility, and size as being the major determinants of capital structure particularly in large firms in Nigeria. While profitable firms use less leverage, they also find it relatively easy to access long term funds since they have the required collateral. Their study made use of 33 large non financial firms and data which were collected for 14 years were analyzed using the regression technique. Evidence from their study concludes that the behavior of large firms in Nigeria is consistent with the trade-off theory.

In addition to the factors identified above as major determinants of capital structure, the following can be described as peculiar factors affecting the capital structure of manufacturing firms in Nigeria

#### 1. CORRUPTION

According to the World Bank (2006), corruption is the abuse of public office for private gain. It is usually wide spread with distorting policies, weak bureaucracies, and weak judicial system. Corruption looms very largely within the public and private sector areas of foreign exchange transaction, embezzlement, over-invoicing, over-valuation, currency counterfeiting, illegal capital and profit transfers, illegal currency manipulation, money laundering, large scale banking and insurance frauds, etc (Okwu & Adegun, 2007) Because of this wide spread nature of corruption in the country, financial institutions are very wary in advancing loans to firms and international financial bodies will hardly think of investing in Nigerian firms as a result there is the absence of capital inflow to firms who are in dire need of such funds for advancement. Corruption therefore drains financial resources available for investment activities in Nigeria and this generally slows down the growth of firms in the manufacturing sector and by implication retarded growth in the level of productivity.

#### 2. POLITICAL ATMOSPHERE

Developing countries such as Nigeria often times grapple with the twin problems of a weak economy and political instability. The instability in our political system has had a deleterious effect on the national economy. Direct foreign investments a major source of capital for Nigerian firms has almost dried up due to unfavourable political atmosphere. Most meaningful progress made in our economic development has more or less become a victim of the unhealthy political climate. Lack of continuity in economic policies favouring Nigerian firms has stagnated and has not encouraged them these grow and flourish.

#### 3. NATURE OF FINANCIAL MARKETS

Financial system or markets is a broad terminology used to describe the combination of the monetary and the capital markets operations. The money market activities relate to the borrowing and lending of short-term funds. The capital market is the market where equity capital and debenture and government bonds are traded. These instruments are usually long tenured.

Capital markets all over the world are catalysts for capital formation, wealth creation and dispersion and, ultimately, economic development. They move financial resources from areas of economic surplus to areas of deficit. However the problems of insider abuse, management inefficiencies among other ills have rendered the NSE incapable of fulfilling its function as a major source of capital to Nigerian firms including those in the manufacturing sector.

If a firm borrows heavily on short term basis, a temporary recession may render it unable to pay. Also if a firm is in a weak financial position, lenders may not want to lend money to such firm. This could force a firm into bankruptcy.

### CONSEQUENCES OF FINANCIAL LEVERAGE

Although there are two basic component of capital available to manufacturing firms in Nigeria, there is the danger of over dependent on one particularly external debt. Where financial leverage is not properly utilized and where the going concern of the firm is uncertain, borrowing could run a firm down due to the following reasons:

#### 1. FINANCIAL DISTRESS

Financial distress can take a business unawares and for a firm that is heavily indebted, it can ruin the business. Thus it is dangerous for a firm to depend so much on debt financing.

#### 2. BANKRUPTCY THREATS

Bankruptcy is defined as a compulsory administration of the estate of an insolvent 'person' by the court for the benefit of its creditors. Bankruptcy threats signify a potential inability of a firm to meet its external obligation. Where a firm is facing bankruptcy threats and is heavily indebted, such firm can be easily ruined and driven out of business.

#### 3. SOLVENCY PROBLEM

Solvency describes the ability of a firm to meet its financial obligation both long and short term. This is actually dependent on the streams of income that flows to the firm which can be affected by some many factors that are outside the direct control of the firm. Where a firm is unexpected hit by a factor that will reduce the inflow of incomes, the firm becomes unable to meet its projected financial obligations. Hence it is always advisable to utilize external finances with caution.

#### 4. RISK OF DEFAULT

This describes a potential inability of a firm to pay back loans obtained. It can be due to so many factors such as economic fluctuations, unstable political conditions, changes in government policies, which prevents the firm to derive expected benefits from loans obtained.

### CONCLUDING REMARKS

One of the major works on capital structure in Nigeria are those done by Salawu (2007) and Salawu & Agboola (2008). Their studies revealed that for non-financial firms such as the manufacturing firms, there is a significant positive relationship between asset structure (tangibility) and long-term debt ratios. Therefore, collateral value is found to be a major determinant of the level of debt finance. The size of the company was also found to have a statistically significant positive relationship with both total debt and short term debt ratios for the sample. Profitability was also seen to have positive impact on leverage of large firms in Nigeria, confirming that the tax advantage of debt financing has relevance in these firms. Their results further revealed that dividend payment does not represent a better financial approach for large firms in Nigeria. In addition, non-debt tax shields are positively and significantly correlated with capital structure. This suggests that large Nigerian firms that have large non-debt tax shields are less leveraged. The evidence of the behavior of large firms in Nigeria is consistent with the trade-off theory.

This paper also advocates that for manufacturing firms in Nigeria, factors such as corruption, nature of financial markets, political atmosphere may also constitute major determinants of capital structure in Nigeria. Also, the paper also proposes that for firms with a huge portion of their capital structure composed of external debt, their inability to pay back as at when due may be hindered by factors such as financial distress, bankruptcy threat, risk of default, solvency problem etc.

This suggests that management must strive to determine the best mix of debt and equity that will maximize the returns of the firm because it is only at that point that the wealth of shareholders will be maximized.

It is clear that capital structure is an important management decision as it greatly influences the owner's equity return, the owners risks as well as the market value of the shares. It is therefore incumbent on management of a company to develop an appropriate capital structure. In doing this, all factors that are relevant to the company's capital decision should be properly analyzed and balanced.



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## THE EFFICIENCY OF MARKET RISK DISCLOSURES IN JORDANIAN COMMERCIALS BANKS

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### ABSTRACT

*Transparency and disclosure is important ingredient of banking sector stability and this study focuses on assessing the current operational risk disclosure in Jordanian banks. So we focuses on the market risk items that Jordanian banks disclose and if comply with the central bank of Jordan requirement's. The survey methodology was adopted by testing the annual financial reports for Jordanian commercial banks. 12 banks were as a whole society. The study found evidence that, Jordanian banks primarily meet the requirement of central bank of Jordan relating to market risk disclosure, but there are many discrepancies between Jordanian banks relating to formalize the financial report to present the market risk disclosure in the same format, in additon the requirements of central bank of Jordan dose not enough when we compare it with the international bank of settlement. Our study advice to enhance current market risk disclosure practices in Jordanian banks.*

### KEYWORDS

Market risk, Disclosure, Basel II, Bank of International Settlement (BIS).

### 1.1 INTRODUCTION AND MOTIVATION TO THIS STUDY

The economy is the mainstay of any country, and became the strength of the countries which measured by the efficiency of its economy. Since the banks are the cornerstone of any economy, and the annual reports are available indicator and scale of the work of these banks, it was necessary that these reports reflect the work of those banks clearly, inclusive and transparent, which is the concept of disclosure.

The principle of information disclosure in the financial statements play an important and central in the preparation of accounting data published and this principle is considerable interest by both the Councils professional accounting or regulatory authorities on the profession, in addition to the bodies of the international exchange (Mikhail, 2006) and therefore it is for the preparation of the data that achieve adequate and proper disclosure was necessary to determine the information that should be disclosed and how disclosure by these entities (Lewis and Pendrill, 2000).

Market risk is the risk of loss from adverse movements in market prices such as commodity prices, exchange rates and interest rates [Linsmeier and Pearson (1997)]. Given the frequency and magnitude of losses arising from market risk exposures experienced by several corporate and non-corporate entities in the last decade, there has been wide-spread concern about the adequacy of market risk disclosures [see for example, AIMR (1993), AICPA (1994), and Basle Committee (1995)].

Commercial banks have been disclosing maturity gap data (a type of quantitative market risk disclosure) for some time. Ryan (1997) refers to these disclosures as the best extant example of ex ante risk disclosures. Banks also provide some qualitative information on their interest rate risk in their annual reports. We investigate the efficacy of maturity gap and interest rate risk management policy disclosures by commercial banks in indicating banks' interest rate risk. Barth (1998) argues that "although these disclosures are not available for most firms, they are suggestive about disclosures that would be useful to investors of nonregulated firms" [quoted in Schrand and Elliott (1998)]. Thus, our study provides preliminary evidence on the efficacy of market risk disclosures mandated by SEC (1997).

In addition to the above, there is growing interest by the Bank of International Settlements and practices to expand the concept of disclosure of market risk to enhance the transparency and clarity in the work of the banking sector and its activities are beyond those existing in the legislation of accounting and local legislation and of the Central Bank and Securities Commission in each state (Institute of International Finance, 2003).

And here we know that a disclosure about market risk is necessary as part inherent in the nature of banking activity basis, hence the need arises to disclose the nature of this important part in the annual financial reports of banks through disclosed and the nature and characteristics.

### 1.2 THE PROBLEM OF THE STUDY

In their annual reports, banking institutions provide stakeholders with relevant financial, operational and strategic information. As a major task of banks is to measure and manage the

risks that arise from their business activities and as stakeholders are generally concerned with

the levels of risks that a financial institution has taken to achieve a particular outcome, the reporting and discussion of these risks are an integral part in banks' annual reports.

Under Pillar 3 financial institutions are required to provide detailed information on their capital structure and adequacy, as well as information on the size and assessment of risk exposures. The aim is to provide stakeholders and market participant with an opportunity to better being able to assess the riskiness of the institution.

In this paper we examine the quantity and quality of market risk measurement and management information that is currently provided by Jordanian commercial banks annual reports and assess the results in light of the disclosure requirements for market risks as put forward by the BCBS (Basel Committee on Banking Supervision).

### 1.3 THE IMPORTANCE OF THE STUDY

The importance of the study are to detect the concept and the adequacy of the market risk disclosure and the nature of the contiguity of the banking activity and imposed by this nature. And through the preparation of financial statements contain a high level of disclosure to market risk in order to enhance the transparency of banks and to strengthen the market system by encouraging banks to provide the public (public) and participants in the market (market participant) the information they need in order to assess the financial position of banks and the performance and activities and exposure to economic risk. The importance of this issue because of the weak practices in market risk management, which was the part from many reasons for the failure of banks and banking crises in the world (BIS, 1999).

### 1.4 PURPOSE OF THE STUDY

The purpose of this study is to measure the current level of disclosure for the Jordanian banks in market risk, through the examination of annual financial reports for Jordanian commercial banks and if the current practices comply with BIS and international practices.



**2 – LITERATURE REVIEW****2.1 MARKET RISKS: FRAMEWORK FOR DEFINITIONS AND DIMENSIONS**

Market risk is the risk of loss from adverse movements in market prices such as commodity prices, exchange rates and interest rates [Linsmeier and Pearson (1997)]. Given the frequency and magnitude of losses arising from market risk exposures experienced by several corporate and non-corporate entities in the last decade, there has been wide-spread concern about the adequacy of market risk disclosures [see for example, AIMR (1993), AICPA (1994), and Basle Committee (1995)].

In response to these concerns the Securities & Exchange Commission (SEC) and the Financial Accounting Standards Board (FASB) have issued new disclosure requirements pertaining to market risk. SEC (1997) mandates disclosure of quantitative as well as qualitative information about market risk exposure of registrants. The accounting standard on derivatives and hedging, SFAS 133, significantly changes the accounting for derivatives and requires disclosure of information on market risk exposures.

However, there is disagreement over the desirability or usefulness of market risk disclosures. For example, critics argue that investors may find the SEC (1997) disclosures misleading and uninformative [Culp and Miller (1996), Lehn (1997), Loman and Montgomery (1997)]. There is little extant evidence on the efficacy of quantitative market risk disclosures and no prior evidence on the efficacy of qualitative market risk disclosures primarily because firms generally don't voluntarily provide sufficiently detailed quantitative or qualitative market risk disclosures [see Schrand and Elliott (1998), Rajgopal (1998) and Rajgopal and Venkatachalam (1998) and Wong (1998)].

Commercial banks have been disclosing maturity gap data (a type of quantitative market risk disclosure) for some time. Ryan (1997) refers to these disclosures as the best extant example of ex ante risk disclosures. Banks also provide some qualitative information on their interest rate risk in their annual reports. We investigate the efficacy of maturity gap and interest rate risk management policy disclosures by commercial banks in indicating banks' interest rate risk. Barth (1998) argues that "although these disclosures are not available for most firms, they are suggestive about disclosures that would be useful to investors of nonregulated firms" [quoted in Schrand and Elliott (1998)]. Thus, our study provides preliminary evidence on the efficacy of market risk disclosures mandated by SEC (1997).

We focus on gap data because despite its prevalence, there is disagreement among banks about its usefulness. For example, a recent survey of risk management practices in the banking industry suggests a reduction in the use of gap disclosures because of their alleged limitations [McGuire (1998)]. On the other hand, gap data potentially help quantify the effect of interest rate changes on net interest income [Toevs (1983)].

Furthermore, they are relatively more objective than earnings sensitivity or value-at-risk estimates that require relatively extensive subjective assumptions. Thus, a priori, it is not clear that gap data are not informative about market risks.

With respect to qualitative disclosures we focus on studying risk management policy statements of banks because relative to other qualitative disclosures they are likely to be easier to interpret. If outsiders cannot meaningfully interpret policy statements, it is unlikely that they will be able to meaningfully interpret other qualitative disclosures such as the "context of an entity's overall risk management profile" required by SFAS 133.

**2.2 FRAMEWORK FOR DISCLOSURE OF MARKET RISK IN BASEL II****2.2.1 Market risk in the trading book**

The framework for disclosure of market risk in this section is given by the solvency requirements published in 1996 by the Committee in the "Amendment to the Capital Accord to incorporate market risks" (the Amendment hereafter).<sup>18</sup> This framework ensures a minimum degree of transparency and consistency of concepts used in the disclosures. The Amendment describes a standardized method and an internal models approach (IMA). The market risks covered are interest rate risk and equity risk in the trading portfolios and currency risk and commodity risk for the whole bank.

A-standardized approach, the Committee proposes to use the capital charge as the risk indicator, to allow comparison between different categories of risk and between institutions. Banks with approval from their supervisor to use internal market risk models for the calculation of the solvency requirement will also use these models to disclose the level and characteristics of market risk. The internal models are based on the value-at-risk concept, which will be used as the basis of disclosure. Appendix 4 provides greater detail on market risk disclosures, along with suggested templates.

A.1 The main qualitative core disclosure is the specification of the portfolios covered by the standardized approach and which of the available measurement methodologies within the standardized approach is chosen by the bank. For instance, whether the bank has applied the maturity or the duration method for the measurement of interest rate risk in the trading book.

A.2 The quantitative core disclosure gives information about the capital requirements for interest rate risk, equity position risk, foreign exchange risk and commodity risk. In addition, the capital charge for option positions is disclosed.

A.3 Supplementary quantitative disclosures give the capital charges specified for different risk categories and portfolios. For interest rate risk in the trading book the risk categories are the distinction between general and specific market risk and the different points on the yield curve. The different components of the capital charge for interest rate risk make use of these distinctions and disclosure of these components can be useful supplementary information. For equity positions the standardised approach gives risk weights for general and specific market risk and makes a further distinction between index and arbitrage positions. Supplementary quantitative disclosure of equity positions can give additional information using these concepts and definitions. In a similar way, positions in foreign exchange and commodities can be disaggregated.

A.4 An additional risk concept is the daily variability of profits and losses on the trading positions concerned. Especially for positions for which the standardised approach is not a very precise risk indicator, disclosure of the daily variability of profits and losses gives important additional information.

The movement of portfolios into the standardized approach and the IMA may also be disclosed.

**B- Internal Models Approach (IMA)**

The Amendment introduced the possibility for banks, after supervisory approval, to use their internal models for the assessment of the capital requirements for market risk as an alternative for the standardised approach. Since the IMA offers a consistent framework for value-at-risk calculation, the risk profiles of banks using IMA are, to a large extent, comparable, although banks have some discretion with respect to certain characteristics (e.g. the observation period).

B.1 The core qualitative disclosures give information about the coverage of the IMA, the characteristics of the models used and the stress test program. Banks disclose the (partial) acceptance given by the supervisor.

B.2 The core quantitative disclosures concern value-at-risk data and the back test results on an aggregated level. The value-at-risk measure provides a first indication of the level of market risk. The IMA uses back test results as an indication of the performance of bank's model during the review period. The supervisor may increase the multiplication factor, and thus the capital requirement, if the number of "outliers" or breaches is greater than four, and the model can be rejected if the number of outliers is greater than nine. The back test may use hypothetical or real data.<sup>19</sup> Both back tests are described in the Market Risk Amendment. The core disclosure is the result for the total IMA portfolio.

B.3 The purpose of the supplementary disclosures is to provide the market with more details about the coverage of the IMA, the characteristics of the risk models used, the most important aspects of the risk profiles and the components of back test results.

**2.3 MARKET RISK IN ACCOUNTING STANDARDS**

Accounting standards setters encourage incentives for improved risk management and its disclosure. Both International Accounting Standards (IAS)<sup>3</sup> and the Statements of Financial Accounting Standards (FASB Statements) contain extensive standards on the treatment of credit risk (IAS 30; FASB Statements 5, 15, 114, and 118), while disclosure on market risk is not explicitly regulated today. The increasing awareness of the relevance of other risks beside credit risk is reflected in IAS 30 paragraphs 50 to 52, dealing with general banking risks under which market risk can be assumed. These rules demand banks to report the amount set aside for future losses and other unforeseeable contingencies due to general banking risks as well as to abstain from including credits or reductions in such amounts in the net profit or/loss.

Also IFRS 7 indicates to put disclosures about market risk in the annual reports, which includes:

- a sensitivity analysis of each type of market risk to which the entity is exposed

- additional information if the sensitivity analysis is not representative of the entity's risk exposure (for example because exposures during the year were different to exposures at year-end).
- IFRS 7 provides that if an entity prepares a sensitivity analysis such as value-at-risk for management purposes that reflects interdependencies of more than one component of market risk (for instance, interest risk and foreign currency risk combined), it may disclose that analysis instead of a separate sensitivity analysis for each type of market risk

#### 2.4 WHY WE ASSESS BANK DISCLOSURE PRACTICES

Enhanced accounting disclosure leads to better transparency and stronger market discipline in the banking sector. The third pillar of Basel II, Basel Core Principles No.21, and recently the Policy Brief released by the OECD "Corporate Governance of Banks" Task Force, have explicitly asked for better disclosures by banks to allow the market to have a better picture of the overall risk position of the banks and to allow the counterparties of the banks to price and deal appropriately. More disclosures should reduce information asymmetry between those with privileged information and outside small investors, and facilitate more efficient monitoring, because sufficient information is necessary for market participants to exert effective disciplinary roles. 1 According to a McKinsey "Global Investor and Emerging Market Policymaker Opinion Survey on Corporate Governance", "accounting disclosure" was listed as the number one most important factor considered by 71% of investors surveyed, and "enhanced disclosure" was named as number one key progress area by 44% of policymakers.

Accounting disclosure is raised to a particularly high level of importance for banking organizations compared to non-financial firms, for banks are inherently more opaque. Accounting reports are almost the sole source of information for bank investors and other stakeholders. Banks own few physical and visible assets, and investors can acquire a sense of a bank's performance and asset quality only from accounting numbers. Earnings numbers alone are not adequate for assessing the valuation of banks, the main business of which is to take risks and to provide liquidity (and thus earnings can be inflated through doing more of them). Thus profitability does not give investors the whole picture of the bank's financial situation, until risk profile of the bank is holistically disclosed. Finally, aggregate accounting numbers (e.g., total profits, total loans) without reasonable level of breakdown is less informative for banks than it is for industrial firms, because the most important information usually lies in the details of the sources of income and expenses, or quality of assets. Investors need this information to make judgments on which incomes are sustainable and which expenses are recurring.

Finally, in our study we examine the market risk disclosure practices for Jordanian banks. We gather information from the 2010 annual reports of these institutions. We adopt a content-analysis approach, as information in risk management reports is predominantly of qualitative nature. The focus of our study is the disclosure of information on market risk measurement and management practices and methodologies in light of approaching implementation of the Basel II framework.

### 3 – RESEARCH DESIGN

In this chapter we will present the design of our research. First, the research factors which indicate for market risk sufficiency will be discussed. Second, the sample selection and composition is presented. Then, the empirical model we use to test our factors will be explained and analysis:

#### 3.1 RESEARCH FACTORS

Based on reviewing many literatures, Jordanian regulation, Basel II and best practices, we decided to measure the operational risk disclosure by defining the following three variables, Hierarchical issues, Regulatory Issues and Definition issues.

#### 3.2 SAMPLE SELECTION

In our sample we include all Jordanian commercial banks, so the study population includes all Jordanian banks up to the year (2010)'s which is (12) Jordanian commercial banks. The study sample included all of these banks, 's that represent sampling units.

### 4. DATA ANALYSES AND RESULTS

The following tables shows the disclosure items for all Jordanian banks and if comply with our research factors by match each factor with annual report for each bank.

TABLE -1

Disclosure Item	Assets & Liability management committee (ALCO)	Analyze cash flow exposures	Analyze Market Risk Exposures	Definition of Market Risk	The Governor of Market risk	Tools used for measuring & managing market risk	Details notes for market risk sensitivity analysis	Market risk impact on the income & owner equity
Arab Bank Group	√	√	√	√	√	x	x	x
Housing Bank for Trade and Finance	√	x	√	x	x	x	x	x
Ahli Jordan Bank	√	x	√	x	x	x	x	x
Cairo Amman Bank	√	√	√	√	√	x	x	√
Union Bank	√	x	x	x	√	x	x	x
Jordan Kuwait Bank	√	x	√	√	x	x	x	√
Bank Of Jordan	√	√	√	√	√	x	x	√
Jordan Islamic bank	√	√	√	x	√	x	x	x
Capital Bank	√	√	√	√	√	x	x	√
Arab Jordan Investment Bank (AJIB).	x	x	x	x	x	x	x	x
Islamic international Arab bank	√	√	√	√	√	x	x	√
Societe Generale de Banque / Jordanie	√	x	√	x	√	x	x	x

TABLE - 2

Disclosure Item	Mathematical Clarification for Basis piont value method in measuring market risk	Mathematical Clarification for Value at risk-VAR- method in measuring market risk	Stress Testeing – aims and calculation techniqes	exposures to fluctuations in variables such as interest rates, foreign exchange, and commodity prices	The effect of market risk in the trading book and banking book.
Arab Bank Group	x	x	√	√	√
Housing Bank for Trade and Finance	x	x	√	x	x
Ahli Jordan Bank	x	x	x	x	x
Cairo Amman Bank	√	√	x	x	√
Union Bank	√	x	√	x	x
Jordan Kuwait Bank	√	√	x	x	x
Bank Of Jordan	√	√	x	x	√
Jordan Islamic bank	x	x	x	x	x
Capital Bank	√	x	x	x	x
Arab Jordan Investment Bank (AJIB).	x	x	x	x	x
Islamic international Arab bank	√	x	x	x	x
Societe Generale de Banque / Jordanie	x	x	x	x	x

TABLE -3- SUMMERY

Disclosure item	% percentage
Assets & Liability managment committee (ALCO)	92%
Analyze cash flow exposures	50%
Analyze Market Risk Exposures	83%
Definition of Market Risk	50%
The Govrner of Market risk	67%
Tools used for measuring & managing market risk	70%
Details notes for market risk sensitivity analysis	0%
Market risk impact on the income & owner equity	42%
Mathmatical Clarification for Basis piont value method in measuring market risk	50%
Mathmatical Clarification for Value at risk-VAR- method in measuring market risk	25%
Stress Testeing –aims and calculation techniqes	40%
Exposures to fluctuations in variables such as interest rates, foreign exchange, and commodity prices	8%
The effect of market risk in the trading book and banking book.	25%

% percentage: equal the existence of item in banks divided on total number of banks

From the above table we found evidence that Jordanian banks have overall market risk disclosures, especially in disclosing risk management framework, establishing Assets & Liability management committee (ALCO), Analyze Market Risk Exposures and Analyze Market Risk Exposures. While we mention that there is a negative attitude for giving details about Market risk impact on the income & owner equity, Stress Testeing –aims and calculation techniques, and Exposures to fluctuations in variables such as interest rates, foreign exchange, and commodity prices

## 5- RESULTS

The previous sections of this chapter presented the results of our research. In this section, we will recap and analyze these results.

First, by analyzing Jordanian banks annual reports, we provide evidence that both extent and content of banks' disclosure on market risk are substantially good, reflecting the intensified risk management efforts of banks, supervisors, and other agents.

Second, we found evidence that, Jordanian banks primarily meet the requirement of central bank of Jordan relating to market risk disclosure and in some times enhance and exceed above the requirement.

Third, there are many discrepancies between Jordanian banks relating to formalize the financial report to present the market risk disclosure in the same format, in another word we found many difficulties to track where Jordanian banks disclose on market risk and in at what pages.

Fourth, the requirements of central bank of Jordan dose not enough when we compare it with the international bank of settlement.

Finally, under international accounting standards the disclosure on market risk is not explicitly regulated-insufficient- until today and the standards focused on credit risk.

## 6 – RECOMMENDATIONS

First, we advise central bank of Jordan to enhance the market risk disclosure requirements by impose on Jordanian banks to give more details on managing market risk.

Second, central bank of Jordan should require banks to have an effective system in place to identify measure, monitor and control market risks as part of an overall approach to risk management.

Finally, a higher level of disclosure would allow for an evaluation using a more detailed index especially quantitative disclosures related to market risk could provide a fruitful basis for future research.

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## CONTRIBUTION OF NON-MARKET WORKS IN BANGLADESH: CONSIDERING LOCATION, EDUCATION, FAMILY RELATION & MARITAL STATUS

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### ABSTRACT

Two conditions need to be necessarily fulfilled for the goods and services produced by the transformation of input to output- use value and exchange value. Nevertheless, a significant amount of goods and services are produced across the world without exchange value. But, these substantial amounts of value can not be justified by regular market framework. This study deals with the estimates of the "non-market production or works (NMWs)" of five factors: location, education, family education, family relation and marital status, consisting of men and women from different age groups and children. Besides secondary data this research took into account primary data and case studies. Two methods: works method and opportunity cost method, were incorporated to evaluate the NMWs in Bangladesh. Among the sub sectors of each factor the research showed that respondents taken from rural areas contribute significantly high (tk.3,375), a good volume of the average value of the NMWs was derived from less than primary to eight pass, respondents from the families of primary pass and class 9 to SSC as recognized the highest level of education provided more NMWs, a significant contribution was provided by wives (tk. 4,192) through average estimate and the unmarried people generated less value than the average value of NMWs.

### KEYWORDS

Exchange Value, Market Framework, Non-market Works, Opportunity Cost Method, Works Method.

### INTRODUCTION

The principles of economics are mainly based on the theoretical concept of circular flow. Again, the simple and fundamental concept of circular flow assumes a continuous interaction between producers and consumers. Producers represented by firms and consumers come out from households. The two parties' interaction goes on through the two market frameworks, such as goods market and factor market. Here, the two markets mainly justify the economic values of goods and services generated by producers and consumers. Firms provide consumers with goods and services in exchange for consumer expenditure and "factors of production" from households (Mankiw, 2001). Some work which produces significant values such as collecting water; cleaning and taking care of house; washing clothes; washing dishes; cooking and serving meals; taking care of children; taking care of the sick and the elderly, crop gleaning; collecting and making cow dung cakes and sticks etc can not be evaluated by the conventional market structure. So, such work can be mentioned as 'non-market work' (NMW). Among the various market structures, the value of product is evaluated by the characteristics of market structure, such as the number of buyers and sellers, quality of product, consumer's and producer's knowledge about product, mobility of factors of production, the degree of government intervention etc. But there is little scope to measure the value of NMWs.

This paper focuses on non-market activities of women, children and unemployed people. This paper approaches non-market activities mostly for unpaid labor. In this area, researches sponsored by Bangladesh Bureau of Statistics (BBS), have mainly focused on household activities. In revised estimates, 1989-90 to 1998-99 of National Accounts Statistics of Bangladesh, the data collected from different sector and sub-sector is based on the methodology of System of National Accounts (SNA) - 93 frameworks. According to the international definition adopted in 1993, the non-market sector or the informal sector, a sub-sector of the household institutional sector in the SNA and Non Profit Institutions Serving Households (NPISH) cannot include economic units of the informal sector. But all the production of the household sector cannot be imputed to the informal sector. The two types of non-market production ignore by SNA. The first type is non-SNA work providing unpaid services for own final use. Work providing unpaid domestic services for own final use within household such as cleaning, decoration, maintenance of dwelling occupied by the household; preparation and serving of meals; transportation of members of the household & their goods and work providing unpaid care-giving services to household members (care, training and instruction of children; care of the sick, infirm or old). The second non-market work is non-SNA work providing unpaid domestic services, care giving services and volunteer services to other households, community, NPISH. Here, researchers deliberately exclude non market work outside SNA. The 1993 definition of informal sector is based on the characteristics of the economic unit in which the person is working.

### OBJECTIVES

The main objective here therefore was to develop methods subsequently estimate these NMWs. The main objectives were –

1. To estimate the NMWs how NMWs affects by location, education, family relation and marital status.
2. To find out the comparative contribution of the NMWs made by people from each factor.

### THEORETICAL FRAMEWORK

There are three basic concepts in economics regarding works. These are formal sector (henceforth FS), informal sector (henceforth IS) and non-market works (NMWs). The regular market framework is capable of evaluating the value of formal economy. Informal sector is a growing sector in the South-Asian region and the economy of Bangladesh is a special example of this scenario. The IS in the developing countries has been significantly notable over the last couple of decades. Often the earnings and employment situation of IS workers are worse than those of the FS workers. The importance of the IS sector as an engine of economic growth and job formation, seeks to gather key conclusions from the theoretical and empirical literature related to the concept of the informal sector with the aim of discussing their policy implication (Blunch, Canagarajah, & Raju, 2001).

### ABOUT INFORMAL ECONOMY

The term is much more of recent coinage. The optimism of the modernization had led most people in the 1950s and 1960s to believe that traditional forms of work and production would disappear as a result of economic progress in the developing countries. As this confidence proved to be unfounded, researchers turned to study more closely on IS and finally they discovered that the traditional sector did not only continue to exist, but also came up to include new developments. In accepting that these forms of productions were there to stay, scholars started using the term informal sector, in Ghana (1973 by anthropologist Keith Hart) and Kenya (1972 by ILO). Since then, the informal sector has become an increasingly popular area of investigation, not just in economics, but also in sociology and anthropology. Arguably, the most influential book on 'informal economy' is 'The Other Path' by Soto's, (1989), which was published in English in 1989 with a preface by the Peruvian writer Mario Vargas Llosa. In the second half of the 1990s many scholars have started to consciously use the term "informal economy" instead of "informal sector" to refer to a broader concept that includes enterprises as well as employment in developing, transitional, and advanced industrialized economies. The IS has become a powerful analytical tool for analyzing the new complexities in the urban economy and the environment in general, and urban labor and housing markets in particular (Amin, 1996).



## DIFFERENT VIEWS ON NON-MARKET ACTIVITIES

There are different views regarding NMWs available in economic literature. According to Chadeau (1992), non-market production covers the goods and services of the household members and the productions for their own consumption, and combines their unpaid labor and, in some cases, the goods and services they acquire on the market. Hamdad (2003) defines household work as the goods and services resulting from such activities. He terms it a source of utility to the members of the household and other households and a contribution to their well-being. According to Abdel & Sirageldin (1969), household work means the value of housework, of home production (do-it-yourself) and the value of time spent by head of families and their wives on doing or receiving volunteer work or taking further education. The activities of NMW are very difficult to recognize and the patterns of work appear different from one locality to another; even the name of each NMW can not be unified. In Indian economic context, Charmes (2006) intend to explain how the informal sector is defined. The NMWs were identified by the researcher within the concept of SNA. NMWs outside SNA were excluded. The 1993 definition of SNA of the informal sector is based on the characteristics of the economic unit in which a person is working. Budlender (2004) stated a clear explanation of 1993 SNA and from the statement helps to recognize the market work, subsistence production and non market domestic work.

## NMWS IN BANGLADESH

The estimate of GDP for non-market activities is yet to find a complete shape. Some researches have been done on women household work (Hamid, 1989 & 1994) where 53% of non-market productions of women were identified. After defining market work, non market activities and house works that study used few tools (such as opportunity cost, informal wage) for the estimate. From the study of 'non-market work and national income in Bangladesh' Hamid (1994) argues that housework should be redefined as the economic services produced by household members. She defined 'work' as any activity that might be delegated to a paid worker and these activities may be executed in the market or the non-market. She includes all the agricultural and non-agricultural activities in the market work, and the subsistence work and house work in the NMW. A comprehensive study done by Bayes and Hossain (2007) introduced the time budget method to determine the use of labor. They collected data of four days of labor in the household, including the nature of work, working hours, earnings etc. A good number of variations in labor activities were observed in rural area, and the main activities indicated to sex-based labor involvement. However, all work exchanging for economic benefit. Moreover, the social structure of Bangladesh itself is working a barrier to incorporate the value of the NMWs (Hosen, 2012a). Hosen (2012b) estimated the monetary value of a graduate and female NMWs. He revealed that, on an average, a graduate generated tk. 3,594.41 per month, from exercised the Model 1:  $TVNMWOC = a + b EQD6 + e1$  (where,  $TVNMWOC = 2042.95 + 1551.46 EQD6$ ,  $TVNMWOC = 2042.95 + 1551.46 X1 = 2042.95 + 1551.46 = Tk. 3594.41$  per person/month, according to dummy variable,  $EQD6 = 1$ , recognized graduate level of education), while a female contributed tk. 2588.72 per month (based on the Model 2:  $TVNMWOC = c + d SEX + e2$ ).

## RESEARCH METHODOLOGY

### DATA COLLECTION

This study was based on primary data and case studies. The primary data were gathered from some rural and urban areas in Bangladesh. Here collected data were reexamined by the current sources of data of the conventional national income estimate adopted by Bangladesh Bureau of Statistics (BBS, 2008). The activities under NMWs appear to be different in rural and urban areas. To accommodate various NMWs, three types of sample locations were considered: i) urban, ii) rural and iii) semi urban or semi rural (mixed sample areas). The respondents were asked to fulfill a questionnaire having three administrative parts: one for household NMWs, one for NMWs outside the household and one for NMWs before begin employment. Workers were to identify their part and mention the names of the NMWs, duration of the NMWs etc. If a producers of NMWs got any return (in terms of money or other form return say: clothing, lodging, food, etc.), she of he declare on the respective questionnaire against the NMWs. Random sample technique was used. Data was collected from Dhaka, that represented the outline of NMWs of urban people and to cover rural and semi-rural pattern of sample this study was considered two areas from Gazipur: Sador and Tongi. There were four village of Sador and five locations of Tongi was covered and in Dhaka 18 locations were considered. In case study areas this research used participatory methods for data gathering and qualitative methods for data analysis. Semi-structured interviewing was a form of guided interviewing in which only some of the questions were predetermined and new questions were usually generated during the interview.

### ESTIMATION PROCEDURES

Initially, the study was examined of the information collected from the respondents through questionnaire. Respondents usually report the time long on their NMWs in terms of weeks or months, even years or seasons. That was converted into work in hours. The research has considered 8 standard hours for each day with two holidays and transforms each NMW of every individual by hour.

Two methods are considered to estimate the NMWs:

1. works method
2. opportunity cost method

### WORKS METHOD

The BBS (2008) survey 2007 evaluated some NMWs. This study was accredited the market value of NMWs of that survey and was taken into account as the yardstick of this method. From the 'Wage Survey-2007', it was observed that the highest total earnings of Tk. 3906 per month in the 40-49 working hours group has the highest standard deviation with a minimum of Tk. 450 and a maximum of Tk. 19800. As the earnings are mostly paid on a daily basis in the informal sector, daily wages have been given in the informal sector in the four working hour's group. This survey collects data of the daily wages/monthly salaries paid for specific occupations in the industry throughout the country. "Salary means the amount of taka that paid workers receive in cash or kind (including for food, housing and clothing) before any deduction for pensions, taxes or social security and on the other hand daily wage means the amount of taka that one receives in cash and non-cash remuneration for his one day labor. The salary includes any payment for time not worked (due to vacation, sick leave) and any additional payment such as bonuses and allowances, BBS (2008)". Average daily wage of day-laborers and monthly earnings/salary of the employee are estimated by occupation for the non-farm sector. To accommodate the study author has divided all the NMWs into three main categories. Among the three categories, different types of NMWS are included in each division. From sample survey, research found 16 (mention as 1 to 16), 17 (mentioned as 21 to 37) and o6 (mention as 41 to 46) types of NMWs which represents the three categories of **household NMWs** (see appendix-1, for more), **outside NMWs** (see appendix-2, for more) and **NMWS before employment** (see appendix-3, for more) respectively. Hourly wage of each category of NMW was determined to estimate the value of the NMWs under works method.

### OPPORTUNITY COST (OC) METHOD

To get a suitable estimate of NMW, opportunity cost method is used. OC method explores the potential of an economy. Author has identified three factors of a respondent: the level of education of a respondent, sample areas where a respondent is living, and the age of a respondent. Each factor provides a window to evaluate an individual. Three variables were considered to estimate OC method: educational qualification ( $w1$ ), sample area ( $w2$ ) and age ( $w3$ ). These three variables appeared differently for each respondent; it also varied from one respondent to another. To judge each variable for each respondent, other two variables remained the same. Finally, OC derived from the average value of  $w1$ ,  $w2$  &  $w3$ , i.e. OC named as the average wage,  $W = (w1+w2+w3)/3$ . It was required to take some assumptions to figure out the value of  $w1$ ,  $w2$  &  $w3$  (Hosen, 2012). The assumptions were

### EDUCATIONAL QUALIFICATION (W1)

According to the answers of the respondent, educational qualification was found between illiterate to masters degree. Eight categories of educational qualification were taken to assign the value against each level of education of an individual. The categories were illiterate, primary, eight pass, SSC pass, HSC pass, graduate, masters, and technical. Each level of education of a respondent was assigned an opportunity (cost) to do market works and this opportunity (cost) of a particular work mention by per hour wage.

**SAMPLE AREAS (W2)**

Individuals who live in the urban areas enjoy more works opportunities than the ones living in the rural areas. Three types of percentage values were introduced to find out the opportunity cost of three broad categories of sample locations. 100%, 85% and 60% of tk. 17.08 per hour and per day were assigned for the sample areas of urban, mixed and rural regions respectively.

**AGE (W3)**

Physical capability of a people may vary for many reasons. Level of age was the basic identity to evaluate the ability of a person to do works. Four age categories were identified to estimate the opportunity cost of age. Here, the identical wage of tk. 17.08 per hour and per day was also applied against the different age structures of the respondents. Finally, the OC estimate is derived from the average value (W) of w1, w2 and w3.

**CORRECTED BY DEDUCING ADDITIONAL SUPPORT**

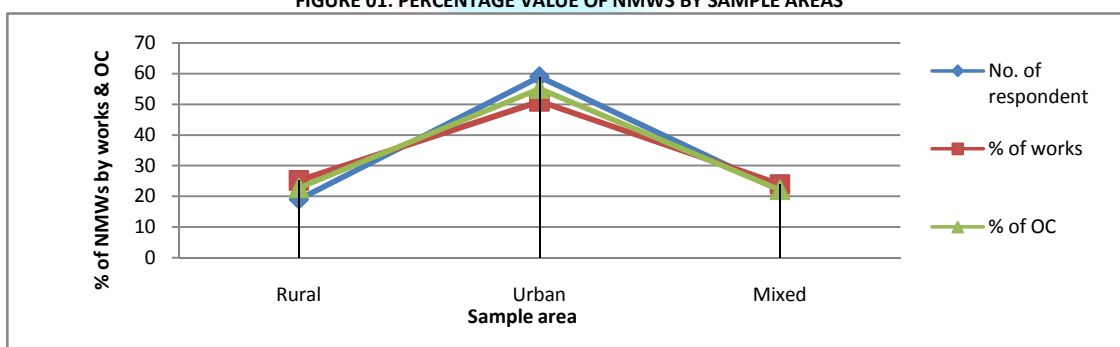
The respondent who got benefit of the additional support against the NMWs was to answer about the quality of support as minimum, below average, average and standard for food support, shelter support and clothes support. These monetary valuations of the additional support were derived by the average value of each support, and this average value indicated a regular and present cost of each support.

**THE STUDY AND ITS FINDINGS**

**SAMPLE AREAS**

Majority of respondents were from the urban area having of the total 59% and the rest of the respondents are covered from rural and mixed areas with certain similarities. It was observed that the value of the non market works (NMWs) of different sample locations, respondents taken from rural areas contribute significantly high in both estimates i.e. works estimate and OC estimate. An extraordinary value of the NMWs was derived by works estimate which secured the highest average value of Tk. 3375 per month. The second value (tk. 2766) was generated by semi urban (mixed) areas. People living in the rural areas contributed the highest average value of the non market activities (Tk. 2616 per month) according to the opportunity cost estimate. But the overall value of the NMWs mainly comes from the urban area. This is because most of the people live in the urban areas.

**FIGURE 01: PERCENTAGE VALUE OF NMWS BY SAMPLE AREAS**

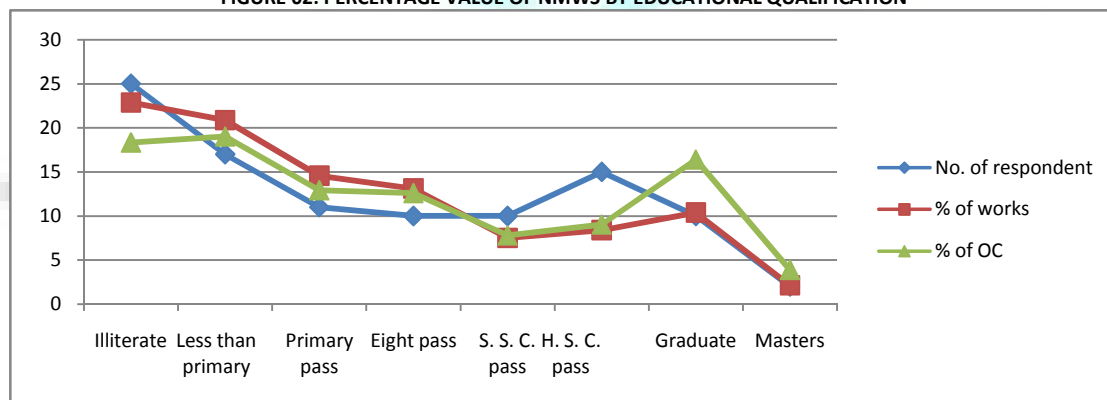


A little difference of the percentage of value of the NMWs is found from the rural and urban areas in works and OC measures. Comparatively a lower value of NMWs was extracted from the urban sample location in relation to the number of people. The situation was reverse in rural areas (see Table 04, for more). Only rural areas secured higher position for producing NMWs which was reflected by the average value of both the works and OC estimates. The overall trend of average measures showed that 'works estimate' derived more value than 'OC estimate'.

**EDUCATIONAL QUALIFICATION**

The study acquired eight categories of educational levels, among the respondents one-fourth reported to be illiterate. Respondents, between 10 to 15 percent, were covered by the most of the educational levels; the educational levels were indicated as primary, eight pass, SSC, HSC and graduate. Among the eight categories of the levels of education, more than 50% respondents were between primary pass and above the interval, 25% people were acknowledged to be illiterate. A competent volume of the average value of the NMWs was derived from less than primary to eight pass, measured by the estimates of works and OC methods. But, the respondents from SSC and HSC levels extract a lower value of the NMWs than the respondents of the other levels of education. According to the works estimate, less than primary, primary pass and eight pass respondents secured more or less the same value which is above the average (Tk. 2,544 per month). In contrast, the graduate and masters respondents did more NMWs, according to the OC measure.

**FIGURE 02: PERCENTAGE VALUE OF NMWS BY EDUCATIONAL QUALIFICATION**

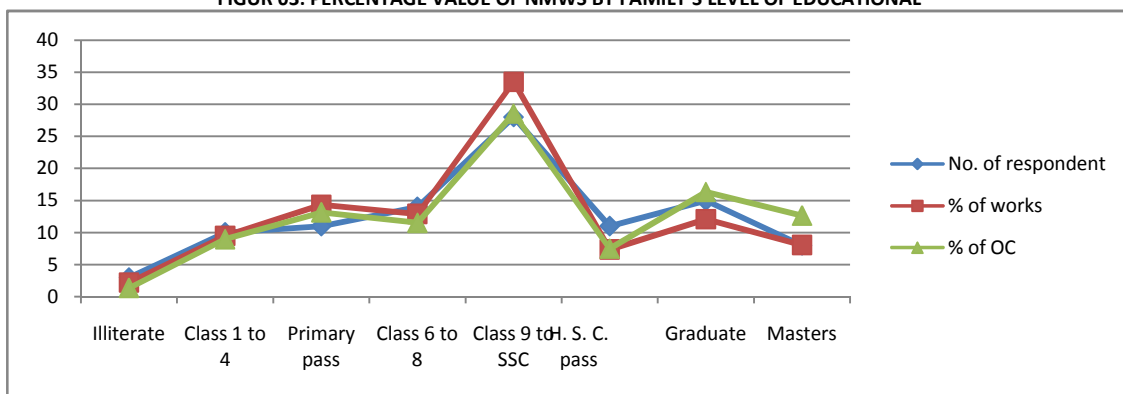


The OC estimate showed that a little higher contribution was done by the graduates and masters people. However, taking all the observations into consideration, it can be said that the works method did well with up to the HSC level; contrarily the OC method was at its best with the graduate and masters levels on average (see Table 05, for more).

**FAMILY'S HIGHEST LEVEL OF EDUCATION**

A respondent's contribution in the NMWs may differ because of family's highest level of education. Among the eight categories of educational levels, the majority (28%) were Class 9 pass to SSC pass, which was the highest level of educational stage in the respective families. According to the works estimates, respondents from the families of primary pass and class 9 to SSC as the highest level of education provided more NMWs. Again, respondents with graduation and masters did more NMWs in terms of the OC method. The average contribution was relatively higher up to HSC pass as family's highest level of education and monthly tk. 3317 can be derived by the family where primary pass recognized as highest level of education. In contrast, graduate and masters level of education gave more NMWs in respect to the average OC estimate.

FIGUR 03: PERCENTAGE VALUE OF NMWS BY FAMILY'S LEVEL OF EDUCATIONAL

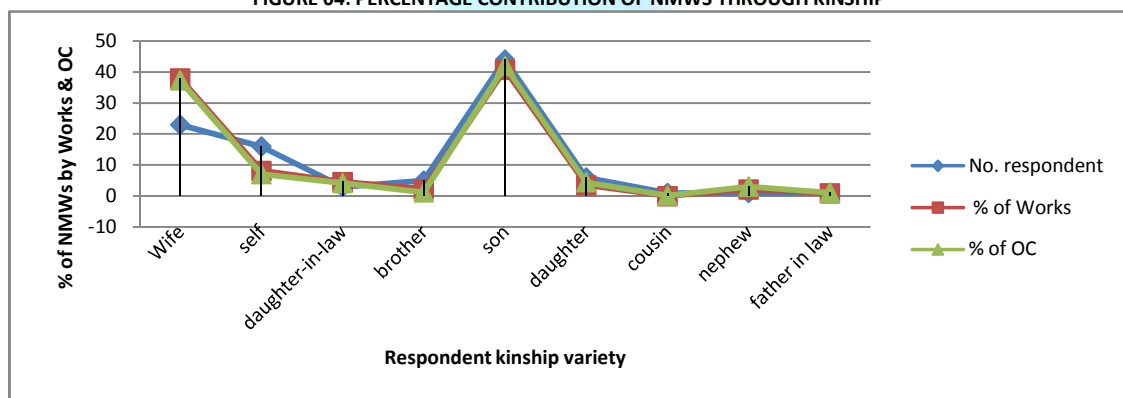


Persons having education between classes 9 and SSC contributed significant NMWS by percentage measure of the works and OC methods. The contribution was very low in the families which were illiterate (see Table 06, for more).

**RESPONDENT KINSHIP VARIETY WITH FAMILY HEAD**

About 44 respondents answered as son, 23 as wives, 16 as own (self) were significant among the kinship varieties of the respondents. According to the works estimate of average value of the NMWS, near about tk. 4,200 (monthly) was extracted by wives. The same estimate showed that the value generated by daughter-in-laws and nephews were higher than the other respondents. With a little discrepancy of the value of the NMWS, the OC estimate conferred the same result. In contrast, the contribution of brothers was significantly low in both estimates. Percent contributions of the NMWS, derived from wives and daughter-in-laws were significantly high with respect to the number of respondents. Meanwhile, brothers, self and daughters represented the reverse figure.

FIGURE 04: PERCENTAGE CONTRIBUTION OF NMWS THROUGH KINSHIP

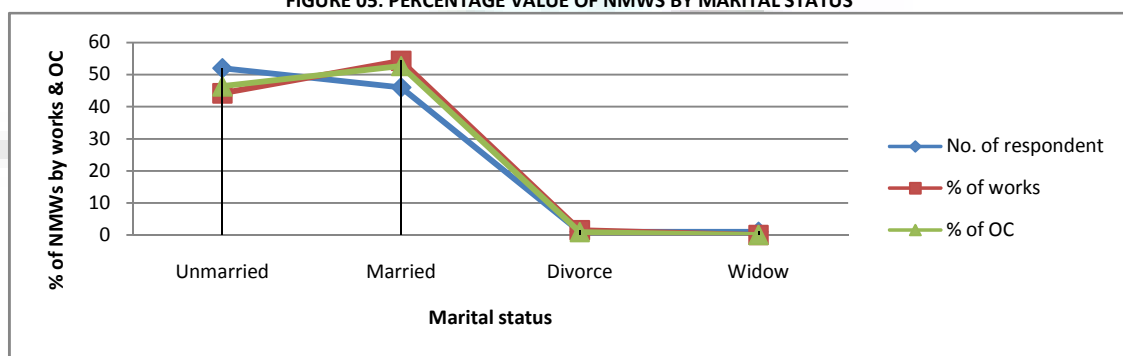


A significant contribution was provided by sons and wives through per cent estimate of both measures. Rest of the kinship did not play any significant role to produce NMWS. A little discrepancy appeared in the contribution of wives and self by percentage measure of the works and OC methods (see Table 07, for more).

**MARITAL STATUS**

The ratio of the married and unmarried respondents was almost same, which were 46% and 52% respectively. Because of the family responsibilities, the married people generated more NMWS than the unmarried groups and between the two estimates regarding married groups, the value of works estimate was higher than the value of the OC estimate. Works estimate NMWS secured higher value than OC estimate irrespective of all status. The married and divorced people generated Tk. 3,004 and Tk. 3,806 average value per month respectively which was higher than average value of works estimate, the unmarried people generated less value than the average value of both measures.

FIGURE 05: PERCENTAGE VALUE OF NMWS BY MARITAL STATUS



This picture showed the responsibility of the married people regarding the NMWS of household and the outside of household areas. On the other hand, to produce the NMWS, the percentage contribution of the unmarried was slightly lower than their number (see Table 08, for more).

**CONCLUSION**

There were five aspects have been judged to know how NMWS were produced. The factors were location, education, family's education, kinship and marital status. The research showed that respondents had taken from rural areas contributed significantly well through works estimates than urban and mixed areas. A good volume of the average value of the NMWS was derived from less than primary to eight pass, they monthly produced between tk. 3,126 to tk. 3,341 by the average value of works method and in OC method it limits tk. 2,443 to tk. 2,750. Respondents from the families of primary pass and class 9 to SSC as recognized the highest level of education provided more NMWS. Here, respondents came from primary pass as recognized the highest level of education produced tk. 3,317 per month and tk. 2,609 per month by the average value of works and OC method respectively. Again, this family group did well than the other level of

education in terms of percentage contribution. The contribution of wives was the top than other kinship, in both estimates of NMWs wife monthly generated tk. 4,192 and tk. 3,534 by average value of works and OC estimates. Finally, this research showed that, the unmarried people generated less value than married, the monthly contribution of NMWs of a married person were tk. 3,004 and tk. 2,501 by the average value works and OC method.

The value of the NMWs needs to be incorporated to the concept of development economics, which, in this way, can determine a really potential for an economy. To understand the real potential and strength of the real labour force of an economy, it is necessary to introduce and add the value of the NMWs to the conventional development concept (growth plus structural change, HDI index, etc.). The people who produce the value of NMWs are always being undermined by the families and society because they cannot get economic return against their NMWs. There are lots of scopes to work in that field. Bangladesh is the labor abundant considering both of formal and informal labor markets. Author found that, a significant number of unemployed people are producing NMWs and on the other hand, a huge number people derived from informal sector are also working to produce NMWs. These surplus labour some how engaged in NMWs to produce goods and services. A huge attention is required to evaluate the NMWs and new method of estimation is necessary to be considered as an alternative tool of market evaluation.

**APPENDIX**

**TABLE 01: HOUSEHOLDS NMWS**

Survey code	Survey occupation	BBS code	Industry by occupation (BBS)	Monthly wage (Tk.)	Daily wage (Tk.)	Hourly wage (Tk.)	Variation (24.125=100%)
1	2	3	4		5	6	7
1	Child care	F 149*	Accountant	5826.99	194.23	24.27	100.639
2	Teaching	F 133	Primary school teacher	3030.99	101.03	12.62	52.34
3	Washing up	40	Washer man	3540	118	14.75	61.14
4	Iron	25	Iron man	4020	134	16.75	69.43
5	Meal preparation	7	Household maid/workers	1950	65	8.12	33.67
6	Cooking	6	Cook/Chef	4230	141	17.62	73.05
7	Dish clearing	7	Household maid/workers	1950	65	8.12	33.67
8	Cleaning the house	7	Household maid/workers	1950	65	8.12	33.67
9	Sweeping	4	Sweeper	3720	124	15.50	64.24
10	Elder care	F 149*	Accountant	5826.99	194.23	24.27	100.63
11	Book-keeping	F 149	Accountant	5826.99	194.23	24.27	100.63
12	Sewing and repair clothing	10	Tailor	3660	122	15.25	63.21
13	Repair and maintenance of dwellings	20	Carpenter	4740	158	19.75	81.86
14	Poultry	F(011,016,025,041)*	(Average of different labor)	2493.48	83.11	10.39	43.06
15	Cow look after	F(011,016,025,041)*	(Average of different labor)	2493.48	83.11	10.39	43.06
16	Boat repairing	F 011,016,025,041)*	(Average of different labor)	2493.48	83.11	10.39	43.06

Source: Author's Field Work, April-August, 2009, F = Formal wage code.

**TABLE 02: OUTSIDE NMWS**

Survey code	Survey occupation	BBS code	Industry by occupation (BBS)	Monthly wage (Tk.)	Daily wage (Tk.)	Hourly wage (Tk.)	Variation (24.125 = 100%)
1	2	3	4		5	6	7
21	Vegetable cultivation	23	Gardener	2640	88	11.00	45.59
22	Cow boy	7	Household maid/workers	1950	65	8.12	33.67
23	Fishing	23*	Gardener	2640	88	11.00	45.59
24	Making fishing net	F 041*	Helper (knitting etc.)	2608.9	86.96	10.87	45.06
25	Harvesting	F 149 *	Accountant	5826.9	194.23	24.27	100.63
26	Gardening	23	Gardener	2640	88	11.00	45.59
27	Khata making & sewing	F 041*	Helper (knitting etc.)	2608.98	86.96	10.87	45.06
28	Mat making	F 041*	Helper (knitting etc.)	2608.98	86.96	10.87	45.06
29	Tailoring	10	Tailor	3660	122	15.25	63.21
30	Boutique design	F 039*	Cutting man (RMG)	3996.99	133.23	16.65	69.03
31	Look after business	16	Salesman in footpath	4140	138	17.250	71.50
32	Accounting business	F 149	Accountant	5826.99	194.23	24.27	100.63
33	Milk marketing	F(011,016,025,041)*	(Average of different labor)	2493.48	83.11	10.39	43.06
34	Farming	F(011,016,025,041)*	(Average of different labor)	2493.48	83.11	10.39	43.06
35	Kitchen shopping	F(011,016,025,041)*	(Average of different labor)	2493.48	83.11	10.39	43.06
36	Waiter	F 103	Waiter	2625	87.5	10.93	45.33
37	Hotel cleaner	F 100*	Room boy	2031.99	67.73	8.46	35.09

Source: Author's Field Work, April-August, 2009.



TABLE 03: NMWS BEFORE EMPLOYMENT

Survey code	Survey occupation	BBS code	Industry by occupation (BBS)	Monthly wage (Tk.)	Daily wage (Tk.)	Hourly wage	Variation (24.125=100%)
1	2	3	4		5	6	7
41	Training with adding up value	F 133*	Primary school teacher	3030.99	101.03	12.62	
42	Voluntary teaching	F 134	Pre- primary school teacher	1963.98	65.46	8.18	33.92
43	Gathering experience	F(011,016,025,041)*	(Average of different labor)	2493.48	83.11	10.39	43.06
44	Voluntary social work	F 143*	Nurse/midwives	3777.99	125.93	15.74	65.25
45	Automobile worker	F 080	Automobile worker	3457.98	115.26	14.40	59.72
46	Undefined work	(Average of all work)		3309.6	110.32	13.79	57.16

Source: Author's Field Work, April-August, 2009, \*= Arranged works

Ave Hourly wage 13.790

total No. of work 39

Adjusted Ave Hourly wage 15.077 (Considering inflation 2007/8)

Adjusted Ave Hourly wage 16.081 (Considering inflation 2008/9 June)

TABLE 04: NMWS COVERED FROM THREE SAMPLE AREAS

Sample Area	No. of respondent	Value of NMW by works (monthly)	Average value of works	% of works	Value of NMW by OC (monthly)	Average value of OC	% of OC
Rural	19	64,124	3,375	25.2	49,696	2,616	22.8
Urban	59	129,456	2,194	50.9	120,271	2,038	55.1
Mixed	22	60,848	2,766	23.9	48,291	2,195	22.1
Total	100	254,429	2,544	100.0	218,258	2,183	100.0

Source: Author's Field Work, April-August, 2009.

TABLE 05: NMWS VARY BY EDUCATIONAL LEVEL

Education level	No. of respondent	Value of NMW by works (monthly)	Average value of works	% of works	Value of NMW by OC (monthly)	Average value of OC	% of OC
Illiterate	25	58,195	2,328	22.87	40,043	1,602	18.35
Less than primary	17	53,148	3,126	20.89	41,532	2,443	19.03
Primary pass	11	37,106	3,373	14.58	28,225	2,566	12.93
Eight pass	10	33,414	3,341	13.13	27,500	2,750	12.60
S. S. C. pass	10	19,160	1,916	7.53	16,994	1,699	7.79
H. S. C. pass	15	21,410	1,427	8.42	19,697	1,313	9.02
Graduate	10	26,492	2,649	10.41	35,803	3,580	16.40
Masters	2	5,503	2,752	2.16	8,465	4,232	3.88
Total	100	254,429	2,544	100	218,258	2,183	100

Source: Author's Field Work, April-August, 2009.

TABLE 06: NMWS VARY BY FAMILY'S HIGHEST LEVEL OF EDUCATIONAL

Education level	No. of respondent	Value of NMW by works (monthly)	Average value of works	% of works	Value of NMW by OC (monthly)	Average value of OC	% of OC
Illiterate	3	5,626	1,875	2.21	2,993	998	1.37
Class 1 to 4	10	24,154	2,415	9.49	19,592	1,959	8.98
Primary pass	11	36,486	3,317	14.34	28,701	2,609	13.15
Class 6 to 8	14	32,855	2,347	12.91	25,134	1,795	11.52
Class 9 to SSC	28	85,235	3,044	33.50	62,280	2,224	28.54
H. S. C. pass	11	18,754	1,705	7.37	16,357	1,487	7.49
Graduate	15	30,778	2,052	12.10	35,615	2,374	16.32
Masters	8	20,540	2,567	8.07	27,587	3,448	12.64
Total	100	254,429	2,544	100	218,258	2,183	100

Source: Author's Field Work, April-August, 2009.

TABLE 07: NMWS DIFFER THROUGH KINSHIP OF RESPONDENTS

Respondent	No. of respondent	Value of NMW by works, '000' Tk.	Average value of works	% of Works	Value of NMW by OC '000TK	Average value of OC	% of OC
Wife	23	96.416	4,192	37.9	81.279	3,534	37.2
Self	16	20.692	1,293	8.1	15.301	956	7.0
daughter-in-law	3	11.509	3,836	4.5	9.113	3,038	4.2
Brother	5	5.699	1,140	2.2	2.573	515	1.2
Son	44	103.533	2,353	40.7	91.350	2,076	41.9
Daughter	6	8.776	1,463	3.4	9.583	1,597	4.4
Cousin	1	(0.038)	(38)	(0.0)	0.227	227	0.1
Nephew	1	5.502	5,502	2.2	6.522	6,522	3.0
father in law	1	2.339	2,339	0.9	2.308	2,308	1.1
Total	100	254.428	2,544	100.0	218.256	2,183	100

Source: Author's Field Work, April-August, 2009.

TABLE 08: NMWS CHANGE IN MARITAL STATUS

Marital status	No. of respondent	Value of NMW by works (monthly)	Average value works	% of works	Value of NMW by OC (monthly)	Average value of OC	% of OC
Unmarried	52	112,439	2,162	44.2	101,222	1,947	46.4
Married	46	138,184	3,004	54.3	115,035	2,501	52.7
Divorce	1	3,806	3,806	1.5	2,001	2,001	0.9
Widow	1	-	-	-	-	-	-
Total	100	254,429	2,544	100.0	218,258	2,183	100.0

Source: Author's Field Work, April-August, 2009.

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## EMPIRICAL EVALUATION OF QUALITY EDUCATION EARNING'S POTENTIAL AND THEIR ROLE IN POVERTY ALLEVIATION IN PAKISTAN

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### ABSTRACT

*The Paper examines the role of quality education earning potential in Pakistan. The study focused on two types of education prevailing in Pakistan namely English medium and Urdu medium contributing mainly to earning volatility. Primary data consisting of 25 observations is used, taken from Wah Cantt, Islamabad and other places of Pakistan. Analysis of Variance (ANOVA) Model is used to analyze the results. The study revealed that higher education elevate living standard of family and ultimately help to reduce poverty level. The study further shows that quality of education in cities like Wah and Islamabad are better than other part of the country. The second important variable which brings more variation in earning is English medium schooling. Based on the finding of the study it is recommended, that government should improve educational institutions or make access of every citizen to quality education.*

### KEYWORDS

Poverty, ANOVA Model, Quality Education and Earning Potential.

### INTRODUCTION

Education is not only an important factor of human capital formation but also very essential tool for the development of the economy. Economic growth is accelerated by getting better skills, increasing potential capabilities and efficiency. The benefits of education are not only for the individual but for the society as a whole. By removing social and economic inequalities education plays a vital role for the reduction of the poverty (Z. K. Kakar, 2011).

Higher education is a very important determinant of economic development which produces public as well as private benefits, higher education leads higher income which leads more saving and investment opportunities, more tax revenue generation and more developmental projects and entrepreneurial plans increases employment opportunities for the society (C. ÖZSOY 2008).

R. Rizk (2012) has supported the relationship between poverty and quality of institutions and proved that quality of education as an important determinant of poverty reduction. There are certain policies that a government has to follow for improving the standard of education and alleviating the poverty. (1) Governments must have to enlarge their investment in education so that more education can not only improve living standard but also economic growth. Educational subsidies play a vital role in reducing poverty gap. (2) For the purpose of reducing corruption in education sector, proper law must be introduced and also proper allocation of resources. (3) Gender inequality in educational institutions must be minimized because investment in female education will have a positive impact on productivity and economic growth.

Bramley (1995) in his study viewed that the skills, productivity, and living standard of poor families could be enhanced through investing in education. Poverty can also be a hurdle for educational achievement. Education has a significant positive impact on income because it enhances skills and knowledge of an individual which support him in attainment of higher wages.

Masood S. Awan (2011) study identifies the same relationship as that education is negatively correlated with poverty, if the education increases then not only the probability of being poor decreases but also it increases the earning potential of the individual. It is also proved that if an individual got more and effective education and experience that will enhances skills, expertise and capabilities that increases income and ultimately reduces poverty.

Davis-Kean (2005) proved in his study that parent's education play a vital role in the achievements of their child because they can structure a good environment for them. Family income also influence but it diminishes with age of the children, a closer look also have proved that if parents successfully provide a psychologically stable environment to their children's then their children's can execute well as well having limited financial resources.

Arnaud Chevalier (2005) examined the causal relationship between parental income and education and their impact on children's education. It is also examined that why children's left schools in early age (till 16) Arnaud Chevalier identified several reasons for that, it is due to (1) No permanent source of income (Parental support less or no income) (2) Parents less/not educated; especially maternal education has a large significant impact on children's education, more impact on sons than the daughters (3) No of shocks before 16 have a significant positive impact on early school leaving.

Adiqia Kiani (2011) proved that higher education programs have a significant positive impact on the economy development because efficiency can be only increased through higher education and it is the responsibility of the governments to do funding to the institutions, who educate and to prepare students so that they can adjust working in any sector, on the other side it is the responsibility of the students is to improve not only their living standard but also work for society by solving or at least provide recommendations for solving current issues.

In the present study two different choices available to get higher education namely English Medium and Urdu Medium schooling are included to find out their impact on poverty alleviation.

### OBJECTIVES

The main objectives are (i) To examine the inter-relationships that can be detected in this way between higher education and earning potential (ii) To detect links of quality education with better earning opportunity (iii) To see which type of education is more susceptible to poverty.

### DATA AND METHODOLOGY

Primary data consisting of 25 observations is used, taken from Wah Cantt, Islamabad and other places of Pakistan are used for analysis. Analysis of Variance (ANOVA) Model is used to analyze the results. The following ANOVA is used for estimation:

$$Y_i = b_1 + b_2D_{2i} + b_3D_{3i} + u_i \quad (1)$$

Where Y = Salary of Master Degree Holder

$D_2 = 1$  for basic education in English Medium

$= 0$ , otherwise (Basic education in Urdu Medium)

$D_3 = 1$  for Completed Education in Wah and in Islamabad  
 $= 0$ , otherwise (Completed education in other places of Pakistan)

Taking expectation of model (1)

$$E(Y_i / D_{2i} = 0, D_{3i} = 0) = b_1$$

Mean salary of MA degree holder, who did not got basic education in English medium and did not completed their education in Wah and Islamabad)

$$E(Y_i / D_{2i} = 1, D_{3i} = 0) = b_1 + b_2$$

Mean salary of MA degree holder having basic education in English medium but did not completed their education in Wah and Islamabad.

$$E(Y_i / D_{2i} = 0, D_{3i} = 1) = b_1 + b_3$$

Mean salary of MA degree holder who did not got basic education in English medium but completed their education in Wah and Islamabad.

$$E(Y_i / D_{2i} = 1, D_{3i} = 1) = b_1 + b_2 + b_3$$

Mean salary of MA degree holder who got basic education in English medium and also completed their education in Wah and Islamabad.

## RESULTS AND DISCUSSION

The results from the ANOVA model are given below

$$Y_i = 26,158 + 1734 D_{2i} + 3264 D_{3i}$$

$$S(e) = (1128.52) \quad (1435.95) \quad (1499.61)$$

$$t = 23.17 \quad 1.2078 \quad 2.177$$

$$p = (.0000) \quad (.233) \quad (.0349)$$

$$R^2 = .91$$

The result shows that average salary of MA degree holder is Rs 26,158 not matter from where he/she got education either from English or Urdu medium or from any school all over Pakistan. Those who got basic education in English medium are getting Rs 1,734 more salary than those who got basic education in Urdu Medium and also those who completed their education in Wah and in Islamabad are getting Rs. 3,264 more salary than those who completed their education from other area of Pakistan.

Coefficient of  $D_2$  is statistical insignificant, indicating that all those having MA degree will get same salary whether they got basic education in English medium or in Urdu medium. Coefficient of  $D_3$  is statistically significant indicating that those who completed their education in Wan Cantt and in Islamabad will get more salary by Rs. 3,264 than ordinary MA degree holder salary.

## CONCLUSION AND RECOMMENDATIONS

The present study revealed that higher education play important role in improving family living standard. Those having master degree mostly remain outside vicious circle of poverty. The results further indicate that the variation in earning is mostly explained by differences in education level. The variation in schooling system in cities and rural area also make big differences in earning potential. The results of study indicate two systems contributing in poverty alleviation, one directed from Urdu medium to poverty alleviation and another from English medium to better living standard. Mostly independent type relationships are detected and no bilateral relationship is found. The results indicate that better living standard is the outcome of English medium education.

Based on these evidences it is clear that in Pakistan Urdu medium schooling is more susceptible to poverty than English medium schooling. It is recommended to harmonize bot type of schooling system. Effective and smooth running of educational policies are required to reduce rely on costly schooling. The gap between private schooling ad public schooling required to reduce.

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**TOURISM: THE DEPTH OF ITS MEANING****PINKY PAWASKAR****LECTURER****DEPARTMENT OF HUMANITIES & MANAGEMENT****BITS PILANI KK BIRLA GOA CAMPUS****ZUARINAGAR GOA****DR. MRIDULA GOEL****PROFESSOR & HEAD****DEPARTMENT OF ECONOMICS****BITS PILANI KK BIRLA GOA CAMPUS****ZUARINAGAR GOA****ABSTRACT**

*The connotations associated with the term tourism are many and each nuance reflects the many dimensions of the activity. Over the years scholars have made several attempts to interpret the term, each viewing it from a different perspective and approach. Tourism has been a part of human life since the 1800s where people would travel to distant places to see works of art, architectural wonders, experience different cultures and cuisines. Today, tourism has become more common and has also spread to many uncommon activities like medical, spiritual, wildlife, nautical, war and space tourism. This makes the understanding of this term even more complex. Tourism is an industry in itself and to define it, one must consider all the players that contribute to its smooth functioning. This paper is an attempt to develop a holistic and workable definition of tourism that would help in future analysis of the challenges and opportunities in the sector.*

**KEYWORDS**

Definition, Dimensions, Dynamism, Holistic, Industry, Magnitude.

**INTRODUCTION**

Tourism was considered a luxury a decade ago, but in the fast moving and busy world of today, travel to different places has become a part and parcel of life. In recent years the demand for tourism has increased manifold and industry has been equally responsive. The socio-economic changes in different countries are largely responsible for this revolution. Economic development supported by industrialization and withdrawal of restrictions across borders has been accompanied with sociological changes like dual income households, nuclear families and consumerism. The transition to multinational organizations and resultant changes in people and motivation management increased the importance of travel and tourism. The spurt in demand led to the increase in accessible and popular tourist destinations.

World Travel and Tourism Council (WTTTC) estimates show that in 2002 travel, tourism and related activities contributed 11% to the world's GDP, rising to 12% by 2010. The industry is currently estimated to contribute 1 in every 12.8 jobs or 7.8% of the total workforce. This percentage is expected to rise to 8.6% by 2012. It is also the world's largest employer, accounting for more than 255 million jobs, or 10.7% of the global labour force.

Tourism is thus, one of the fastest growing industries, making it important for many countries, due to the large inflow of money and the opportunity for employment in the service industries associated with it. These service industries include transportation services, such as airlines, ships and taxis, hospitality, and entertainment. India has a tremendous potential to become a major global tourist destination and the Indian tourism industry is exploiting this potential. Travel and tourism industry contributes around 6.0% to India's GDP i.e. is about \$ 67.3 billion in 2009. By 2019, this is expected to grow to \$187.3 billion. (WTTTC 2009)

In order to measure and analyze the factors comprising it is essential to evolve a workable definition suitable to the contemporary nature of tourism. This paper is an attempt to analyze many of the earlier definitions and come out with a concept which would be able to encompass most of the benefits to an economy from tourism and also indicate the functions associated with the activity.

Although many of us have been "tourists" at some point in our lives, defining what tourism actually is can be difficult. Tourism has always been considered a luxury. Tourists would travel to places to enjoy and rejuvenate. People visiting distant places for sightseeing, recreation, adventure, etc also avail of Tourism. In the present scenario, tourism goes much beyond the traditional notion. Today we have tourism being branched out into Sustainable tourism, Ecotourism, Recession tourism, Medical tourism, Religious tourism, Educational tourism, Creative tourism, Dark tourism and several others. Space tourism is likely to be the new fad. In this new 'avatar' redefining the concept has become more complex and yet is integral to the study of tourism. As per the Oxford English dictionary tourism means:

- The practice of travelling for pleasure.
- The business of providing tours and services for tourists.

Merriam-Webster's dictionary defines Tourism as:

- the practice of travelling for recreation
- the guidance or management of tourist
- a) the promotion or encouragement of touring
- b) the accommodation of tourist

**DEFINITIONS FROM 1910**

The meaning of tourism has been defined according to 3 dimensions. The Economic dimension which identifies the monetary and business aspect, the Technical dimension which highlighted the tourist's perspective like the distance, purpose, motivations and desires of travel and finally, the Holistic dimension which made an effort to include every factor that encompassed tourism. These differences can be clearly seen in the following definitions.

One of the earliest definitions of tourism was provided by the Austrian economist Hermann Von Schullard, (1910)<sup>1</sup> who defined it as "*bob total of operators, mainly of an economic nature, which directly relate to the entry, stay and movement of foreigners inside and outside a certain country, city or a region.*"

This definition uses the term *operators* which relates to any and every individual who is involved in any function that facilitates Tourism (here the function referred to is production or service providers function). The operators would include the government, local community, private and public business people from various sectors like hospitality, entertainment, travel and trade, transportation to name a few.

The term *economic nature* highlights the fact that the activities or functions provided are monetary transactions in exchange for a monetary unit as a value to the services. These services are based on the demand and expectations of the customers.

The final phrase *the entry stay and movement of foreigners inside and outside a certain country, city or a region* deems to encompass both the inbound and outbound nature of tourism. The term *foreigner* is used for both international and domestic tourists.

This definition says that tourism comprises all the activities of the service providers which add economic value and which are directly related to the inflow, halt and outflow of tourists with regard to a particular tourist destination.

The definition gives an overview of the term tourism as a service but fails to throw light on the equally important dimension of consumption and on the main character in the activity. Also, the duration and purpose of the stay has not been clearly delineated. For example a person could travel to places on matters related to his/her job and cannot be considered as a tourist.

For any business to be successful the suppliers need to get a thorough idea of the customers' demands. In tourism as well its providers and other concerned parties like public policy makers, infrastructure providers should understand the factors that influence the tourists' decision while selecting a holiday destination. This would enable them to create a more satisfying experience for the tourist. From this perspective, the definition seems to give a nebulous idea of this huge industry.

Hunziker and Krapf, (1942)<sup>2</sup>, defined tourism as *"the sum of the phenomena and relationships arising from the travel and stay of non-residents, insofar as they do not lead to permanent residence and are not connected with any earning activity."*

The definition focuses on the tourist rather than giving insight on the function of tourism. It is expressed in a linear manner that adds up all the activities in tourism. Hunziker and Krapf has implied the major aspects of Tourism with the words *the sum of the phenomena and relationships* including experiences from the occurrence of events with all the factors involved in tourism. The factors could be economic, geographic, socio-cultural, political or/and technological. This brings out the fact that interaction between factors is necessary for the existence of an industry. However no specific light is thrown on what is the nature of these phenomena.

While identifying a tourist the authors have made use of the word *non-residents* thereby taking care of the Immigrant and Emigrant status. They have also clearly specified that tourists- are those who travel but *do not lead to permanent residence and are not connected with any earning activity*. These words clearly define who should not be termed as a tourist. People who travel to places in order to earn a livelihood or for permanent settlement cannot be considered as tourists since the income earned by them is paid by the country of residence and therefore the money spent by them is similar to money spent by any other resident/citizen.

The definition is complete, precise and covers the term tourist but it does not give an understanding of the components, their interactions, and their relationship to the concept of tourism.

The definition by National Tourism Resources Review Commission (1973)<sup>3</sup> defines tourist *as one who travels away from home for a distance of at least 50 miles (one way) for business, pleasure, personal affairs, or any other purpose except to commute to work, whether for an overnight stay or return the same day."*

This definition completely focuses on describing the characteristics of a tourist by travel criteria. Several other definitions highlight the maximum time one can stay away from his/her usual environment but have not commented on the minimum. In this definition the words like *one who travels away from home for a distance of at least 50 miles (one way)* try to suggest the minimum distance one should cover to be termed as a tourist.

The author has well described the purpose and motivation for travel through his words *for business, pleasure, personal affairs, or any other purpose* and also, brought out the point that commuting for work cannot be considered as tourist travel. Further, the words *an overnight stay or returns the same day* bring out minimum period of stay necessary for being called a tourist.

As against the rest, this definition highlights the minimum amount of distance and time one needs to travel and stay outside the home environment to come under the purview of the term tourist.

Tourism Society of England (1976)<sup>4</sup> defined *"Tourism is the temporary, short-term movement of people to destination outside the places where they normally live and work and their activities during the stay at each destination. It includes movements for all purposes."*

The definition of a 'tourist' uses the words *temporary, short-term movement of people* which puts across the fact that the travel and stay of people is for specific needs, after the fulfillment of which they move back to their origin of residence thereby not leading to any sustained earning activity. We could consider 'short term' to be less than a year because in case of an international tourist as per the United States rules, one of the reasons a person would be considered to have abandoned his permanent resident status is if he remains outside the United States for more than one consecutive year without obtaining a re-entry permit or returning resident visa. For a domestic tourist the period of movement would be still shorter since it is within the boundaries of the country. One could assume that, a stay longer than one year would generate less tourist revenue since the tourist would start being a part of the local community and also perhaps earn locally.

The author has mentioned that tourism includes *activities during the stay at each destination*, which implies that expenditure on each function: transport, accommodation, food, etc. would be included in the revenue from tourism. Thus, every action that leads to revenue generation for the host country can be considered to be a part of tourism.

The phrase *it includes movements for all purposes* clearly puts across that tourism cannot be confined to leisure alone (as it is conventionally understood) but it comprises of any/all reasons and motivation for a tourist to travel different destinations, from personal holidays to professional tours like business conferences, education, and health.

The dimensions of this definition are however, from the perspective of the tourist, and fail to highlight the concerns of the tourism providers. We could say that this definition clearly explains the tourist's side of Tourism.

The International Association of Scientific Experts in Tourism (1981)<sup>5</sup> defined it as *"particular activities selected by choice and undertaken outside the home environment. Tourism may or may not involve overnight stays away from home."*

The words *particular activities selected by choice* emphasize the fact that tourism largely depends on the motivation and desire of the tourist. The words *outside the home environment* put across the point that the act of going to office or other daily activities cannot be associated with tourism. Even for a domestic tourist it should be a movement away from his home environment and apart from his regular activity, whether or not the person returns home on the same day.

As per this definition, tourism seems to be an act of leisure (interpreted by the words *selected by choice*), therefore suggesting that business tours and educational trips solely for professional purposes have not been covered. Such tours would definitely be outside the home environment and generate tourist revenue but as they are not tied with leisure only they may not be part of tourism earnings.

Though we have demarcated the boundaries for a tourist as travel beyond home environment, it is not easy to define as to what distance needs to be actually travelled to be a tourist. This becomes extremely important for a domestic tourist since he can generate revenue to a location by frequent visits on certain regular purposes.

This is a narrow approach which does not talk about any other factor or party but only gives a traveler's perspective to tourism.

Professor Jafar Jafari (1990)<sup>6</sup>, defines tourism as *"Study of: man away from his usual habitat, the industry which responds to his needs, and the impacts that both he and the industry have on the host socio-cultural, economic, and physical environments."*

This definition has been put forth as a study of various dimensions of tourism. The words *study of* are used to take account of all factors and features of the different parties to tourism. By acknowledging the industry the author has accommodated the service providers, the government, public, hotels, restaurants, etc. Every industry has its influence on the society, the author has rightly integrated this phenomenon and considered the study of the *impacts that both he and the industry have on the host socio-cultural, economic, and physical environments* as an important factor in the definition.

The definition seems to give a holistic view of tourism by broadly identifying the factors one needs to consider to analyze the term. The definition however, does not mention anything about the activities of a tourist nor does it define the motives behind travel, leaving the study of these aspects completely to the discretion of the reader.

Theobald (1994)<sup>7</sup> suggested that *"etymologically, the word "tour" is derived from the Latin 'tornare' and the Greek 'tornos,' meaning 'a lathe or circle; the movement around a central point or axis.' This meaning changed in modern English to represent 'one's turn.' The suffix -ism is defined as 'an action or process; typical behavior or quality' whereas the suffix -ist denotes one that performs a given action. When the word tour and the suffixes -ism and -ist are combined, they suggest the action of movement around a circle. One can argue that a circle represents a starting point, which ultimately returns back to its beginning. Therefore,*

*like a circle, a tour represents a journey that is a round trip, i.e., the act of leaving and then returning to the original starting point, and therefore, one who takes such a journey can be called a tourist."*

This definition represents the Latin origin of the word tourism and describes the act from within the word. One can very much relate to this definition as it clearly explains the entire circle of the activity. The author has explained the origin of this word giving us the reason for using the term 'Tourism' for such kind of an act. Though the explanation can form a base for the understanding of the term, it does not clearly explain the time frame of the activity, which is very important for an international tourist.

Tourism is not just a circular movement but it is an industry that has many dimensions. The definition explains the reasons for using the term tourism but does not shed light on any of the other aspects or players involved. The definition basically focuses on the term tourism and not the industry.

An international forum held in 1936, the committee of Statistical Experts of the League of Nations, first proposed that a 'foreign tourist' is one who visits a country other than that in which he habitually lives, for a period of at-least 24 hours'. In 1945 the United Nations (which had replaced the League of Nations) endorsed this definition but added a maximum duration of stay of less than 6 months. The one definition that is most commonly used is the one by the United Nations World Tourism Organization (UNWTO-1994)<sup>8</sup>. The official definition is: "tourism comprises the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited".

This definition is comprehensive from a tourist perspective. The use of words like *activities of people* seems to reflect on all the actions and deeds (personal and official) individuals carry out during their stay outside their usual environment.

We could say that a tourist is a person who goes to another place for private interest or who is sent there (for example by a company for a conference/workshop/etc), but is not employed at that place. Travel to places for further education, excursion, field trips, etc. can come under educational tourism. Private tourists may go there for adventure, recreation, medical, pilgrimage or other purposes. A tourist can perform any of these acts on personal or organisation expense but without receiving remuneration from/at the place of visit, thereby, clearly distinguishing from the movement of people for earning purposes.

It covers both the same-day visitors (excursionists) and long holiday visitors. For example a domestic tourist can visit nearby tourist attractions within the same day. An international tourist however, as per the legal stipulations should come back to his/her place of origin within a year to be termed as a tourist.

This definition precisely identifies the criteria for being a tourist and mentions the activities that comprise tourism but on the other hand, there is no information about the tourism providers and their importance to the industry.

The definitions analysed by us span almost across a century giving us a perspective into the evolving perceptions of tourism over the period. The first definition from 1910 looks at tourism purely as an economic activity depending upon the action of the tourists. The economic factor was emphasised since tourism had begun with the idea of popularising destinations to increase earnings through this activity.

The period between 1912 and 1940 saw no significant developments in the definition of Tourism. There were several reasons for this, the important one being the slump in travel and tourism during this traumatic period. As we all know the WW1 (1914-18) was centred in Europe and involved all of the world's greatest powers. Nearly all the major countries were a part of the war and their economies were badly destroyed. It took several years for the world to recover from the consequences of this catastrophic incident thereby making the movement of people very minimal.

Before recovery was complete the world was again hit by WWII (1939-45). The affiliated countries placed their entire economic, industrial, and scientific capabilities in the service of the war effort thereby leading to a crisis situation. There was no welfare state until the 1940s and infections, illness and early death were the commonplace for nearly all but the relatively well-off. Nearly all holidaymakers in the 1940s had lived for several years under economic privations and wartime conditions in which money was always tight, food was rationed, leisure, entertainment and luxuries were seen as sinful and non-essential travel was actively discouraged. For the few that had cars before the war, driving for pleasure was banned and petrol rationing was brought into force in 1942 and enforced till 1950. 'Is your journey really necessary?' was a classic wartime slogan to make pleasure travellers feel guilty about wasting scarce resources.

The definition of 1942, highlights that, a tourist cannot be a permanent resident or be connected to any earning activity in the place of visit. The definitions could be guided by the fact that, given the economic conditions and state of livelihood, people migrated to places in search of jobs and social security. The war had increased awareness and familiarity with foreign places. The changes in definition probably reflected the need to separate the movement for tourism from other purposes.

It took several years after the War for the countries to recover and resurrect their economies. Technological developments in transportation were picking up. While travel across the continent was possible, overseas movement was slow and difficult. In the next decade and a half, overseas travel grew rapidly. Jets were introduced in the 1950s, encouraging movement and travel across the globe.

The idea of the "International Tourist Year" was sponsored in March, 1966 by the United Nations Economic and Social Council at the behest of the International Union of Official Travel Organizations, with a membership of 103 countries. This was a major step in the direction of fostering better understanding among people of diverse nationalities, creeds and cultures. This strengthened peace in the world by inculcating a greater awareness and bringing about a better appreciation of the inherent values of different cultures and civilizations which, collectively, are a common heritage of the human race. The slogan, "Tourism, Passport to Peace" was adopted for celebrating the "International Tourist Year—1967".

Until now tourism has been for the elite and affluent as the costs were high and other conveniences like phones/computers, weather predictions, reservation and information were still developing.

The decades after that saw a substantial increase in tourism and this time it was in the area of domestic tourism. The definition in 1973 focuses on the minimum distance traveled by a tourist, which reflects the growth of day-tourists and excursionists. Tourism had started to become a way of life with changes in average work-week from 48 hours to 38.

In the 80's, both business travel and travel for leisure was increasing with corporatization and economic growth. With all other support services flourishing (banking, transportation, telecommunication etc.) a wide variety of tourist destinations were added to the map. The growing demand was continuously fed with new destinations and this gave the benefit of choice to the tourist. The definition in 1981 has clearly captured this trend.

The decade of the 1990s added another dimension to tourism which highlighted the environmental effects of a tourist destination. There was realization that Tourism can pose threats to ecology. The definition in 1991 has tried to bring to our notice the impact of tourism on the destinations socio-cultural, economic, and ecological environments. There have been several studies around the world on the effects of tourism on the environment which has led to a realization that making tourism sustainable is important. Suppliers started to link their products to features of sustainable tourism. Protection of archeological heritage sites, tours to wild-life sanctuaries, flora and fauna excursions, trips to spice gardens are some attempts towards cashing in on sustainable tourism.

We have witnessed an exponential growth in global tourism over the past half century. 25 million international visitors in 1950 grew to an estimated 650 million people by the year 2000 (Roe et al 1997). Several factors have contributed to this rise. An increase in the standard of living in the developed countries, and elsewhere, greater allowances for holiday entitlements, declining costs of travel and ease to see and read information. Tourism is an important export for a large number of developing countries, and the principal export for about a third of these.

## THE PSYCHOLOGICAL DIMENSIONS OF TOURISM

The psychological aspect of tourism is often the distinguishing trait in the activity. In the following few definitions, tourism has been expressed at a spiritual, emotional and abstract level.

Dean MacCannell (1976)<sup>9</sup> sees tourism as a modern phenomenon in which tourists are on a quest to recover lost authenticity: it offers a way for modern man to explore the "real life" of others.

In this definition we can see that the experience of tourists has been highlighted and the motivations are termed to be a quest to recover lost authenticity. Here the tourist is a person who has the urge to discover other cultures and ways of life. Perhaps the suggestion relates to a search for identity and true meaning of life.



All places in the world have a historical origin. Some countries with rich heritage become destinations whose culture is explored by the *modern man* to get a feel of the past. The author seems to relate tourism to such places which have a distinct identity due to a strong culture and rich history.

The words *lost authenticity*, could also signify that the quest of the tourist traveler encourages the destinations to maintain and revoke the culture these places are known for, so as to promote tourism. There are several countries that spend millions to maintain and preserve their heritage and culture. The places, objects, people and forms of behavior are improved and styled to look "ethnic" in order to fit the tourist's preconceptions and perceptions. The tourists, in turn, consume these shows with their eyes, unaware (or?) that they have been tailored to their needs to be attractive and make them buy a souvenir and make a photo.

Today many of us have lifestyles that are mechanical and typical. This is possibly the reason that tourists are attracted to avail those opportunities that link with history and provide 'original experiences'.

MacCannell points out that "authenticity" are becoming a product which leads to the "reconstruction of ethnic identity". The author has defined Cultural tourism and related it with distinct motives as the reason for travel.

Maxine Feifer (1985)<sup>10</sup> adds the "*post-tourist phenomena, who sees tourism as a game and inherently inauthentic in its experiencing of another culture*" to the traditional concept of tourism. She suggests the term "post-tourist" for those who consciously "play" with the assumptions of authenticity in the tourist's solemn quest for different experiences.

This term is derived from the experiences of a 'modern tourist' who deliberately chooses "artificial" locations, such as Disney World or other such theme parks whose arrangements have been designed in precisely such a manner as to appeal to the mass tourist.

Maxine Feifer calls them (indeed!) post-tourists and says that they love the non-authenticity and artificiality of these worlds. These are conscious consumers who live in a hyper-consumption reality and know that markets, brands and images vie for their attention. The post-tourist knows that he has a choice and expects high quality service, comfort and predictability. He does not care about the artificiality of the attractions; he visits the historic culture of a destination as a part of tourist entertainment and not the actual lifestyle. For instance, folkdances in tradition attire are for tourist enjoyment rather than for the distinct experience of authentic culture. This definition implies that the tourist is aware of the fact that the preservation and expression of culture is for entertainment and satisfaction relies on the multiplicity of such experiences.

Mark Neumann (1988)<sup>11</sup> suggests that "*tourism is a metaphor for our struggle to make sense of our self and world within a highly differentiated culture*"

The words of Neumann take a very philosophical view of tourism. He believes it is an abstract feeling of an individual to know his own self better through his surroundings. The historical significance of every place develops ones culture and people have an innate need to know more of what they are by learning and experiencing new places. The activities and purpose of travel are all due to the hidden needs and wants of a person to make sense of his existence and identity.

This definition has a unique approach to tourism. It gives an insight into a different perspective which can be well explored by tourism providers to attract their customers. This definition emphasizes on cultural tourism which is a very important part of the whole industry.

Erik Cohen (1988)<sup>12</sup> offers a typology of tourists based on *their concept and concern with authenticity: existential, experimental, experiential, recreational, and diversionary tourists*.

Here the author has described tourism on the basis of the types of tourist that can be identified. Travel can be for different reasons and motives based on the ideology of the traveler which could be *existential, experimental, experiential, recreational, or diversionary*. These motives actually give rise to the different kinds of tourism.

For instance a book on Dark Tourism (Tourism, Leisure & Recreation) by Malcolm Foley and John Lennon (2000) explores the idea that people are attracted to regions and sites where "inhuman acts" have occurred. They claim that motivation is driven by media coverage and a desire to see for themselves, and that there is a symbiotic relationship between the attraction and the visitor, whether it be a death camp or site of a celebrity's death. Much of their focus is on ancient sites where "acts of inhumanity are celebrated as heritage sites (for example, the Tower of London, Edinburgh Castle and the Berlin Wall). It would be beneficial for marketers to keep a close watch on the purpose of travel of visitors so as to provide expected related services and enhance satisfaction while also, expanding markets.

Valene Smith (1989)<sup>13</sup> defines a tourist as "*a temporarily leisured person who voluntarily visits a place away from home for the purpose of experiencing a change*" (*Hosts and Guests*, p. 1). Smith also, *outlines a typology of tourists based on aspects of culture being explored and on the motivations of the tourist: ethnic, cultural, historical, environmental, or recreational*.

The author feels that the act of travel is a *leisure* activity. Here we can see that the definitions are from an emotional point of view describing the voluntary behavior of an individual for the purpose of experiencing change as a break from routine activities. Tourism is looked at as a tour one would take for relaxation and refreshing oneself from the anxieties of life. Valene Smith identifies various types of tourism (ethnic, cultural, historical, environmental, or recreational) depending on the interest and liking of individuals and the reasons for travel based on different motives as a function of the place of visit.

Smith however, seems to have completely over-looked the case of travel for business or for purposes other than leisure. This can be justified by the increasing focus on travel for leisure and recreation.

The definition refers to 1988 where the work weeks were reduced from 60 to 40 hours and in some occupations from 30 to 24. Employers had started providing paid vacation benefits, early retirement schemes and substantial pension. This gave people more time and money to spend with their family and loved ones. Woman employment had been seen as the next change in that century and this led to dual income household. With time to spare and money to spend, travel for leisure, had become more convenient and a highly demanded phenomenon.

John Urry (1990)<sup>14</sup> denotes "*tourism as a continuum of types of experiences involving otherness*."

This definition also looks at tourism to be a set of different *experiences* a visitor goes through in places and with people different from his own. It is more of a state of mind than a general understanding. This could mean that different tourists would react differently in similar destinations or that there is no universal experience that is true for all tourists at all times. It is the tourist perception and motive behind travel that could make him experience a place as they want it to be. We could say that 'Beauty lies in the eyes of the beholder'.

The author here has very well knit all types of tourism under the term *type of experiences* thereby giving activities under tourism a wider perspective. Urry has beautifully mentioned that it is the sum total of the tourist's expectations and interactions with the local population. The natives, who live off tourism, satisfy these expectations often by acting out not their traditions but stereotypes. On the other hand, by revitalizing certain traditions, the "tourist gaze" can revive the sense of identity of and origin the locals.

This definition reflects largely on the expectations of the tourist and the matching portrayal by the locals, neglecting the other dimensions of service providers of the industry. It is inclined to be an expression of reflexivity that challenges the centrality of the search for authenticity in conceiving the tourist-as-subject.

After carefully going through the definitions over the years we can see that tourism had been termed as an economic activity in the year 1910 thereby considering the operators and the consumers to be party to the activity. But as years went by the emphasis in the definition got shifted to the consumer i.e. the 'tourist' as to who could be called a tourist or to the time period of stay, the purpose of travel, or experiences of the traveller, etc. This focus of giving importance to the 'tourist' could arise because of:

- It is the consumer who moves away from his residence, to the tourist destination, to receive the services rendered by the host, for various reasons subject to each individual's preferences or motives.
- There are varied motives and purposes for travel to different destinations (cultural, medical, spiritual leisure, adventure, etc). Therefore, the service providers should align their functions with the needs of the tourists for enhanced satisfaction and creating revisits to a destination.
- Tourism is a well known economic activity, but for higher revenue generation the marketer should cater to the tourist segment that generates maximum returns. Thus, categorising tourists is important to optimise the earning potential of the industry.
- For any industry to flourish the goods or service providers should tap the needs and desires of its consumers to develop a product. The psychological dimension should therefore be acknowledged and attended.



Lastly the definition by Adrian Franklin (2003)<sup>15</sup> takes a composite view. He says any attempt to define tourism and to fully describe its scope, should consider the various groups that participate in and are affected by this industry, the consumers and the producers. Four distinct players in the tourism industry can be identified:

**The tourist:** The tourist seeks various psychic and physical experiences and satisfactions. The nature of these will largely determine the destinations chosen and the activities enjoyed there.

**The business providing tourist goods and service:** Business people view tourism as an opportunity to make a profit by supplying the goods and services that the tourism market demands.

**The government of the host community or area:** Politicians view tourism as a wealth factor in the economy of their jurisdictions. Their perspective is related to the incomes their citizens can earn from this business. Politicians also consider the foreign exchange receipts from international tourism as well as the tax receipts collected from tourist expenditures, either directly or indirectly.

**The host community:** Local people usually see tourism as a cultural and employment factor. Of importance to this group, for example, is the effect of the interaction between large numbers of international visitors and residents.

*Thus, tourism may be defined as the sum of the phenomena and relationships arising from the interaction of tourists, business suppliers, host governments and host communities in the process of attracting and hosting these tourists and other visitors.*

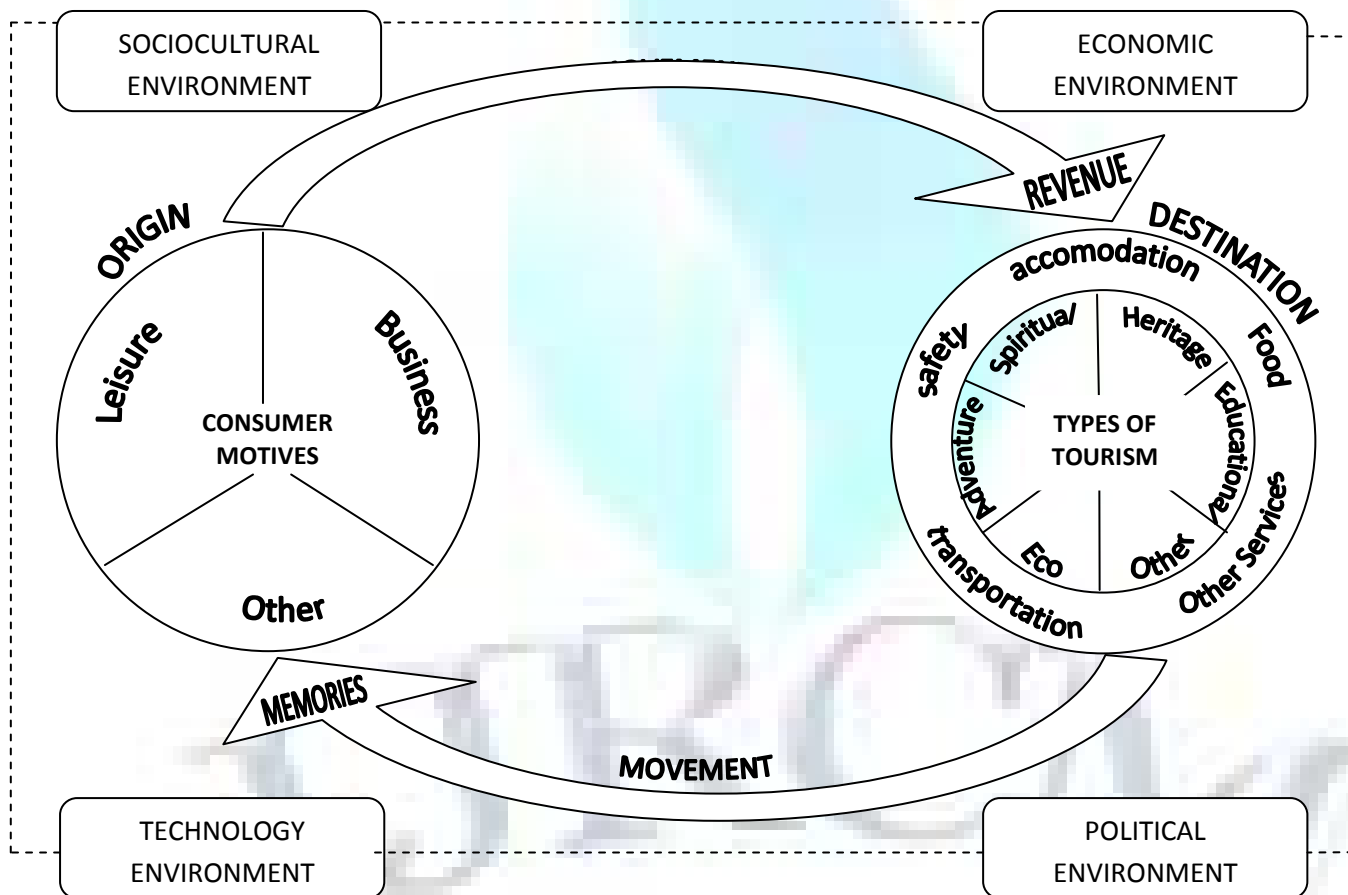
Tourism is a composite of activities, services, and industries that delivers a travel experience, namely transportation, accommodations, eating and drinking establishments, shops, entertainment, activity facilities, and other hospitality services available to individuals or groups who are travelling away from home. It encompasses all providers of visitor and visitor-related services. Tourism is the entire industry of travel, hotels, transportation, and all other components, including promotion that serves the needs and wants of travelers. Thus we can see an attempt by Adrian Franklin to include all the dimensions that are required to be studied and managed for a place to be a tourist destination. Though, Franklin has included all the dimensions he has neglected certain key factors of tourism: e.g. the distance travelled, time period of stay and motivation or purposes of tourism.

**CONCLUSION**

**FORMULATING A WORKABLE DEFINITION OF TOURISM IN THE MODERN CONTEXT**

After analyzing the various definitions and dimensions of tourism, one needs to consider the various components and flows, from the tourist to the providers and from the managers to the beneficiaries.

EXHIBIT 1



A workable definition can be derived from a study of all the linkages between the various components of tourism and the movement of tourists, services, revenue and expenditure:

***'Tourism is the defined movement of distinct consumers outside their usual environment to avail services rendered by the host destination for leisure, business and other purposes not related to activities remunerated from within the place of visit.'***

- Tourism is a kind of activity where the consumer needs to move to the supplier to use the service provided, therefore the feature of movement becomes important. The words *defined movement* takes into consideration the criteria of distance and time. As per WTO tourism comprises the activities of people traveling to and staying in places outside their usual environment not more than one consecutive year. Another argument by National Tourism Resources Review Commission is with regards to the excursionists whose stay is less than 24 hours can be considered as tourist because they contribute to the revenue of the place visited like any other tourist. We will consider the duration to be more than 24 hours and less than 1 consecutive year. The distance travelled is generally described as outside the usual environment which leaves the maximum limit unbound but does not establish the minimum consideration. In this definition we shall consider the minimum limit to be 50 miles.

- A Consumer is one who demands and avails of the products rendered by the supplier. Consumers can be segmented on the bases of demography, geographic origin, socioeconomic status, and psychographics. The words *distinct consumer* is used to express the varied categories of tourists for instance, the domestic and international tourist.
- The words *services rendered by the host destination* include all the parties involved in providing facilities to cater to the tourist needs. Transportation, accommodation, food, safety services, entertainment and interaction are a part of the whole system of tourism and only well coordinated service providers would culminate into creating a popular tourist destination. .
- A tourist would travel to places based on individual needs and desires. As the purpose of travel solely determines the selection of destination the host destination positions itself so as to cater to the demands of the consumers. The words *leisure, business and other purposes* have been used to accommodate all the different types of tourism as well as different purposes of tourism. Different types of tourism would include Sustainable tourism, Ecotourism, Recession tourism, Medical tourism, Religious tourism, Educational tourism, Creative tourism, Dark tourism and likewise leisure, business, educational, spiritual, rejuvenating would cover the different purposes of a tour.
- *Not related to activities remunerated from within the place of visit* clearly demarcates the intention of the movement to another destination, since individuals can travel to places for a job and get remunerated from the organizations in that place. This does not give rise to tourist revenue as he/she becomes a part of the local community.

The WTO states that '*Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, and biological diversity and life support systems*'.

When you see a lagoon floating with garbage or a once beautiful landscape paved with concrete you also realize that if principles of sustainable tourism are not put into action, then many such tourist attractions will lose their appeal, beauty and eventually their profitability. It is important that further growth in tourism should be in accordance with a sustainable tourism model and therefore we may consider redefining tourism as:

*'Tourism is the defined movement of distinct consumers outside their usual environment to avail services rendered by the host destination in a sustainable manner for leisure, business and other purposes not related to activities remunerated from within the place of visit.'*

## SUMMARY

The concept of tourism is too vast to have a unique and universal definition. Every definition mentioned has its own purpose and content. The purpose of our definition is to put forth the complex nature of the industry highlighting every element and aspect to get a more clear view of the varied dimensions of tourism. The definition could be applied to identify the broad components of the industry and in turn derive elements under each of these. As an industry needs to achieve proper coordination between its players for smooth functioning the tourism industry also need a synchronized effort of all its elements for fruitful results. Recognition of the elements would ease identification of issues and challenges in each of its factors which would facilitate the growth and development of tourism.

## NOTES

1. Hermann Von Schullard, the Austrian economist, recognized the role of multiple players as essential to providing tourism 'bob of operators', in one of the earliest definitions of tourism in 1910.
2. This definition was subsequently adopted by the International Association of Scientific Experts in Tourism (AIEST). Swiss colleagues Hunziker and Krapf were founders of the "Society for Tourism Science" which promoted scientific tourism research in the German linguistic area. According to Dr. Hunziker, "Social tourism is a type of tourism practiced by low income groups, and which is rendered possible and facilitated by entirely separate and, therefore, easily recognizable services". He proposed this definition during the second Congress of social tourism held at Vienna and Salzburg, Austria in May 1959.
3. The National Tourism Resources Review Commission was established by the International Travel Promotion Act of October 21, 1970, an amendment to the International Travel Act of 1961. The Commission advised on programs of federal assistance for travel promotion and prepared a forecast of the nation's accommodation needs for increased tourism anticipated for the 1970s. The Commission also studied the possibility of establishing an agency to coordinate all federal tourism activities.
4. With over 1000 members in the UK and worldwide, the Tourism Society of England was founded in 1977 with the aim of driving up standards of professionalism in a fast-growing global industry which can have far-reaching social, economic and environmental impacts on communities and nations.
5. Walter Hunziker and Krapf. They also helped to establish two tourism research institutes at the Universities of St.Gallen and Berne in 1941. AIEST may be considered as being the international catalyst of scientific activities in tourism.
6. Professor Jafar Jafari, Founding Editor, Annals of Tourism Research. One of his recent and important contribution to tourism is the book called Encyclopedia of Tourism which acts as a quick reference source to the wide range of basic definitions, concepts, themes, methods, and institutions embraced by tourism. According to him tourism means different things to different people – namely Advocacy, Cautionary, Adaptancy and Knowledge based which illustrate and analyse the different facets of tourism
7. The book by William Theobald- 'Global Tourism', explores the critical issues facing those involved in the tourism domain. It discusses the philosophical and social difficulties facing the tourism industry. Theobald is Professor and Chairman of the Interdisciplinary Graduate Programme in Travel and Tourism and the Leisure Studies Division at Purdue University, USA .
8. The World Tourism Organization, serves as a global forum for tourism policy issues and a practical source of tourism know-how. Its membership includes 154 countries, seven territories and more than 400 affiliate members representing local governments, tourism associations and private enterprise.
9. "In the establishment of modern society, the individual act of sightseeing is probably less important than the ceremonial ratification of authentic attractions as objects of ultimate value, a ratification at once caused by and resulting in a gathering of tourists around an attraction and measurable to a certain degree by the time and distance the tourists travel to reach it. The actual act of communion between the tourist and attraction is less important than the image or the idea of society that the collective act generates. The image of the Statue of Liberty or the Liberty Bell that is the product of visits to them is more enduring than any specific visit, although, of course, the visit is indispensable to the image. A specific act of sightseeing is, in itself, weightless and, at the same time, the ultimate reason for the orderly representation of the social structure of modern society in the system of attractions," elaborates Dean MacCannell in his book: 'The tourist' (1976). Dean MacCannell means to say certain places will only have true value to us if we consider them "authentic" in one way or another.
10. The term post-tourist was coined by Feifer responding to a street at Mont St Michel in Normandy full of 'creperies, Coca Cola stands, and tourist boutiques selling gimcrack souvenirs' where the tourist had 'come all this way to see something venerable, beautiful, and above all different [... to find only] an atmosphere of other tourists: the modern plight' (Feifer 1985). The post-tourist has learned to live with and enjoy this 'modern plight' as part of the tourist repertoire within a highly mediated environment: 'Via the mass media, one knows a little bit about a lot of things'.
11. Mark Neumann's writing "directs us to sites where people are at work making meaning, situating themselves in relation to public spectacle and making a biography that provides some coherency between self and world", cited in Edensor, 1998. The idea that an interaction with others reveals more about the self is a common theme in tourism studies.
12. Erick Cohen's paper on "Authenticity and Commoditization in Tourism" aims to investigate contemporary world city discourse, specifically in terms of how arts and culture have become relevant to understandings of urban regeneration. The paper also analyses the role of arts and culture in the context of African post-colonial cities. The analyses explore the ways in which language and policy play out within a uniquely African urban context. Erik Cohen has conceptualized the phenomenon of "emergent authenticity", whereby "a cultural product...which is at one point generally judged as contrived or inauthentic may, in the course of time, become generally recognized as authentic, even by experts".

13. Valene Smith's first edition of 'Hosts and Guests: the anthropology of tourism', published in 1977, was the pioneering work that legitimized the American academic study of tourism, and provided both preliminary theoretical perspectives and documented the impact of tourism. The second edition in 1989 addressed issues like the difficulty in differentiating between the role of modernization and tourism in the process of cultural change, and to assess the relative importance of tourism vis-a-vis modernization in acculturation.
14. In 'The Tourist Gaze' John Urry examines the concept of tourism from a sociological perspective, demonstrating that tourism is a unique and central element in contemporary society. With his primary focus on the changing nature of tourism, Urry reveals its connection to the broader cultural changes of postmodernism. "Places are chosen to be gazed upon because there is anticipation, especially through daydreaming and fantasy, of intense pleasures, either on a different scale or involving different senses from those customarily encountered. Such anticipation is constructed and sustained through a variety of non-tourist practices, such as film, TV, literature, magazines, records and videos, which construct and reinforce that gaze", Urry 1990. It is essentially a collection of signs creating the division between the ordinary/ everyday and the extraordinary. An earlier account of sign collection and 'gazes' can be found in Jonathan Culler's book from 1981 called *The Pursuit of Signs*.
15. Adrian Franklin in his book 'Tourism- An introduction' has fashioned a major synthesis of modern thought on tourism. He has broken the mould of approaching tourism as a self-contained compartment of contemporary life and treated it as a major and exciting cultural phenomenon. This is a landmark work in the study of tourism. Adrian Franklin is the editor of the acclaimed journal *Tourist Studies* (SAGE Publications).

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## MANAGEMENT OF DOMESTIC BIODEGRADABLE WASTE: A STUDY OF COMPOST PRACTITIONERS IN KOLHAPUR

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### ABSTRACT

*Inadequate Management of Solid Waste is one of the most serious environmental and health problems in many cities of developing countries. The disposal system has four aspects. (a) Control of waste at source (b) Segregation of waste at source (c) Collection and transportation system (d) Final disposal. There is opposition by villagers against dumping grounds/garbage processing plants. With increasing population and industrial developments, the collection, transportation and disposal of generated solid waste is a challenging task before Kolhapur Municipal Corporation where 1,10,000 households produce 40 MT solid waste per day. On this background the study was conducted of the practitioners who were managing domestic biodegradable waste. The objective was to study the domestic biodegradable compost practice, difficulties, benefits, and their suggestion to spread this eco-friendly practice. The study is based on primary and secondary data. The primary data were collected from 21 domestic biodegradable waste compost practitioners. The interview schedule was used to collect data. The practitioners were contacted with the snowball sampling. If the comparison is made with the households of 1,10,000 in Kolhapur, the number of households covered under the study practicing management of biodegradable waste is very less. But the domestic biodegradable waste has been successfully managed daily by these practitioners. It has been used for the garden and subsequently its share in the total garbage of the city Municipal Councils has been reduced.*

### KEYWORDS

Compost practitioners, Domestic biodegradable waste, Eco-friendly practice, Kolhapur, Management.

### INTRODUCTION

Waste collection and disposal is often seen as being the responsibility of the government or municipality. In many cases the municipality is unable to fulfil this role either due to financial constraints, lack of will or lack of organisational skills. In many cities, collection and separation of waste by the private or informal sector is seen as being too time consuming because of the content of the waste, often a mixture of organic and non-organic substances, such as plastic film. For there to emerge a successful organic waste reclamation process, it has been noted that it is of great help if the organic and non-organic waste is separated at source. It is here that the responsibility is thrown back onto the generator of the waste, the public (<http://www.practicalaction.org>).

The following are the major problems associated with present system of waste management.

1 Lack of awareness: The major problem to be addressed is lack of awareness among the community. It is because of lack of awareness; people are mixing up the hazardous waste and nonhazardous waste at source itself and also because of no civil information dissemination system on waste minimization techniques or procedures.

2 Lack of infrastructure: Collection, storage, transportation, processing and disposal: noticeable short comings like improper collection and disposal system, no house to hose collection system, inefficient waste collection and handling by the staff. Improper or no storage at household level, haphazard dumping by citizens, improper design of community collection bins, no quantification of waste, lack of infrastructure for processing the waste and finally absence of scientific disposal site like, engineered land fill facility (Y. Voegeli and C. Zurbrügg, 2008).

The general composition of solid waste being generated from the cities of India is 40% Food & Garden waste, 5% glass & Ceramics, 3% Metal, 15% inert, 4% Plastic/ Rubber, 6 % Textile, 27 % Paper. The disposal system has four aspects. (a) Control of waste at source (b) Segregation of waste at source (c) Collection and transportation system (d) Final disposal. The volume of solid waste will be greatly reduced if conscious people compost and utilise the daily organic waste in their kitchen-garden as manure. The domestic biodegradable waste is usually made up of food scraps, either cooked or uncooked, and garden waste such as grass cuttings or trimmings from bushes and hedges. How the domestic biodegradable waste (dbw) can be managed is the issue addressed in the paper.

### REVIEW OF LITERATURE

The section deals with the attempts made for the management of solid waste particularly in cities. In Pune, Magarpatta is a self-contained residential cum Industrial / Corporate settlement spanning over 700 acres of land. Magarpatta City has also won accolades for eco-friendly features and pollution free environ. Satish Magar, CMD, Magarpatta Township Development Corporation said "We convinced them that cleanliness is very important. Garbage has to be separated at the source. We have our own garbage disposal system. It is working very well" (<http://www.rediff.com>).

Daily Dump is the brand of a company called Playnspeakbased in Bangalore. As a service, Daily Dump helps to manage household waste and convert it to useful high-quality compost. The Daily Dump products are designed to compost at home, conveniently and hygienically (<http://www.dailydump.org>).

Nirmala Lathi from Pune has devised a method of vermiculture that enables plants to grow healthily using properly treated organic waste. The wet garbage is being used to nourish flower beds and pots, and kitchen gardens. Papayas, pomegranates, coconuts, sugarcane, betel nuts, roses, lotuses, ferns, lawns, house plants, leafy vegetables, tomatoes, chillies... they are all out there, growing healthily in treated wet household waste. That's Nirmala Lathi's method of vermiculture. Using no soil whatsoever, and using organic garbage treated with a specific type of bio-culture, she has developed a process that not only helps cultivate a bountiful garden, but which also effectively deals with the garbage generated ( Dhavse Rasika, March 2004).

The disposal of waste presents an increasing challenge to the administrative bodies of megacities. The Municipal Corporation of the Indian city Pune has introduced source separation systems and onsite organic waste composting. The citizens concerned are looking for practical ways to treat their organic wastes and they have found city farming to be a viable solution. An information exchange on innovations of waste-recycling techniques together with these new initiatives could benefit all types of city farming activities and broaden the effects of a decentralised disposal of organic wastes (Behmanesh Sohal, 2010).

### IMPORTANCE OF THE STUDY

Most of the municipal solid waste in low-income Asian countries which is collected is dumped on land in a more or less uncontrolled manner. Such inadequate waste disposal creates serious environmental problems that affect health of humans and animals and cause serious economic and other welfare losses. Composting is an excellent method of recycling biodegradable waste from an ecological point of view (Christian Zurbrügg, 2002).

Many cities in developing Asian countries face serious problems in managing solid wastes. The annual waste generation increases in proportion to the rises in population and urbanization, and issues related to disposal have become challenging as more land is needed for the ultimate disposal of these solid wastes (Azni Idris · Bulent Inanc · Mohd Nassir Hassan, 2004).

The Table on MSW Generation Sources in Kolhapur city (per day) in 2008-09 is given below:



**TABLE 1: MSW GENERATION SOURCES IN KOLHAPUR CITY**

Generation Source	Numbers	Quantity in MT
House hold	1,10,000	40
Slums	10,447	15
Shops and commercial Establishments	11,286	15
Street Sweeping	-----	20
Markets	31	20
Restaurants, Hotel, Eating place	1053	10
Stables (number of animals)	16,181	20
Garden and Parks	52	10
Industrial waste Building site	-----	10
Slaughter house	2	3

(Source: Kolhapur Municipal Corporation and Ramkey Group Pvt. Ltd.)

The table shows that the highest quantity of solid waste is generated in the households. Municipalities, which are responsible by law for adequate solid waste treatment and disposal, are increasingly under pressure to solve the waste problem in their cities. As land filling is prohibited, the other options need to be found. At the family level, if the food and garden waste this constitutes 40 MT of the solid waste per day needs to compost. The significance of the study lies in the fact that it shows the experiences of the Domestic biodegradable waste compost practitioners in Kolhapur who are following the eco-friendly way.

**OBJECTIVE**

The general objective is to study the domestic biodegradable compost practice, difficulties, benefits, and their suggestion to spread this eco-friendly practice.

**RESEARCH METHODOLOGY**

The study is based on primary and secondary data. The newspapers have reported the experiments carried out in this field. The practitioners were contacted and the snowball sampling was used for collecting data from such other practitioners. The assistance of NGOs working in the field of environment has been taken. The primary data have been collected from 21 domestic biodegradable waste compost practitioners who manage household waste and convert it to useful compost. The interview schedule was used to collect data. The data collection was also done in the places nearby Kolhapur city Municipal Area like Nerli-Tamagaon, Ratnappa-Kumbhar Nagar, and Ujalaiwadi. The entire data for the Project were collected by Ms. Jagdale Rucha, Project Fellow, UGC- SAP-DRS-Phase II. The secondary data from website material, books and journals have been used.

**RESULTS & DISCUSSION**

**PERSONAL BACKGROUND**

The data indicates that nearly half of the respondents were from the age group of 41-50 years. The number of respondents of 61+ age was also significant. One of the significant facts is that more than ¾ of the respondents were graduate and post-graduate. The other qualification includes ITI, Diploma or certificate courses. Majority of the respondents were employed in the government or private sector or doing their own business. The remaining respondents were housewives or retired from service. Majority of the respondents had up to 5 members’ family and few had more than 6 members’ family. Majority of the respondents were having monthly income of Rs. 21,000+ and 1/3 of them were having Rs. 31,000+. Majority of them were vegetarian. The details show that 3 (14.3) each respondents were having non-veg. food once/twice in a week.2 (9.5) each respondents were having non-veg. food fortnightly/ once in a month. The majority of the respondents had garden of 500 + square feet.

**INFORMATION ABOUT GARDEN** The Table 1 shows the area of sq. ft. and types of plants in the garden.

**TABLE 1: AREA OF SQ. FT. AND TYPES OF PLANTS IN THE GARDEN**

Area Sq ft	Fruit	Flower	Medicinal	Kitchen Usable	Decorative
100-200	Yes02 No 1	Y03 N 0	Y03 N 0	Y03 N 0	Y02 N1
201-300	Yes06 No 0	Y 06 N 0	Y06 N 0	Y05 N1	Y06 N 0
500+	Yes 09 No 3	Y 11 N1	Y 11 N1	Y 11 N1	Y12 N 0
Total	Yes 17 No4	Y20 N1	Y20 N1	Y19 N2	Y20 N1

The table shows that the respondents were having fruit, flower, medicinal, kitchen usable and decorative plants. The flower, medicinal and kitchen usable plants have been reported by almost all the respondents. The table shows that majority of the respondents were having more than 500 sq. ft. space available and so due to larger space, these respondents had planted different types of plants.

**Number of Trees in Garden**

Majority of the respondents had fruit (13), medicinal (14) and Kitchen usable plants (15) numbering 1-10 trees in their gardens. The 7 respondents had more than 51 plants which show that quantitatively also this is good number.

**TYPE OF MANURE USED** The question was asked what type of manure is being used by the respondents. As the respondents were having their biodegradable waste composted, 17(81.0) respondents reported that they use only organic manure. The 4(19.0) respondents were using chemical manure also because the area of garden is more and the biodegradable compost is not sufficient.

**AVERAGE WET GARBAGE USED FOR GARDEN** The data regarding this aspect are presented in Table 2.

**TABLE 2: AVERAGE WET GARBAGE PRODUCED**

Average wet garbage in Gms.	No. of respondents	Percentage
100-200	5	23.8
201-300	2	9.5
301-400	1	4.8
401-500	5	23.8
501+	8	38.1
Total	21	100.0

(Average per person per day 500gms.)

The table indicates that majority of the respondents 13 (61.9) were using 401+gms. average wet garbage for their garden. This indicates that the garbage created daily has been used for the garden and subsequently its share in the total garbage of the city municipal Councils has been reduced.

**WATER MANAGEMENT AND ANNUAL EXPENDITURE:** The question was asked regarding water management for garden and it was reported that 17 (81.0) of the respondents were making reuse of water for the garden. For the remaining respondents it was not applicable. The details on annual expenditure on garden are presented in Table 3.

TABLE 3: ANNUAL EXPENDITURE ON GARDEN

Amount Rs.	No. of Respondents	Percentages
100-500	4	19.0
501-1000	4	19.0
1001-3000	4	19.0
3001-5000	7	33.3
Not Appli.	2	9.5
Total	21	100.0

The table indicates that the annual expenditure is very less. Nearly 1/5 of the respondents had annual expenditure Rs. 100-500 only. The practice of garbage management at domestic level is eco-friendly and the annual expenditure is also very less if we take into account 365 days in a year.

**BENEFITS OF DOMESTIC BIODEGRADABLE WASTE MANAGEMENT:** These are presented in the table 4.

TABLE 4: BENEFITS OF DOMESTIC BIODEGRADABLE WASTE MANAGEMENT

Benefits	Yes	Percentage	No	Percentage	Total
Financial	15	71.4	6	28.6	21
Fruits	14	66.7	7	33.3	21
Vegetables	13	61.9	8	38.1	21
Vermicompost	12	57.1	9	42.9	21
Mental Satisfaction	21	100.0	--	--	21
Own creativity	18	85.7	3	14.3	21
Hygienic practice	19	90.5	2	9.5	21
Environmental	21	100.0	--	--	21

The table clearly indicates that majority of the respondents have reported benefits of domestic biodegradable waste management which are in financial terms and also getting fruits, vegetables and vermicompost. Apart from this majority of the respondents have reported benefits of own creativity and hygienic practice. All the respondents have reported mental satisfaction and also environmental benefit by reduction in solid waste of Municipal Corporation.

**COMPOST PRACTICE:** The methods used by the respondents are presented in Table 5.

TABLE 5: METHODS OF COMPOST PRACTICE

Compost Practice	No. of respondents	Percentages
Comp. Artificially	3	14.3
Vermicompost	12	57.1
Bhavalakar's Method	2	9.5
Other	3	14.3
Bhavalakar's + Other	1	4.8
Total	21	100.0

The table shows that majority of the respondents use vermicompost practice followed by compost artificially and by other methods. One of the methods is of Bhavalakar's. It has Earthworm Research Institute at Pune. The Institute has done work in Vermiculture biotechnology and farm-scale vermicomposting. Nature knows better how to manage organic/inorganic residues in an eco-friendly manner. Healthy soil that has earthworm activity, can process the wastes effectively. In such vermiculture ecosystems, wastes become feed for the soil-processing earthworms that produce balanced plant nutrients, in a need-based manner. Plants show healthy growth when they get balanced nutrition. During such eco-processing, there is no production of heat, greenhouse gases and toxic leachate that is common in unscientific waste management. This system also produces value-added vermicast with biosanitizer properties.

**TIME SPENT FOR WASTE MANAGEMENT:** Majority of the respondents 15 (71.4) were spending upto 30 minutes only in a day for compost process. Thus the time required for biodegradable waste is not much.

**MOTIVATING FACTORS FOR INITIATING PRACTICE:** More than 1/3 of the respondents (8 i.e.38.1) have started the biodegradable waste management at the domestic level through their own initiative. Apart from this, 3 respondents were having motivating factors of own, readings from Newspaper/ Book and relatives as motivating factors for this practice. All the respondents have reported that there were no difficulties experienced at various stages of domestic biodegradable waste management.

**MOTIVATION TO OTHERS:** The question was asked to the respondents whether they have motivated others to do such waste management? 9(42.9) respondents told that they had motivated others to do such a practice. Majority of the respondents 12 (57.1) were unable to motivate others to follow such practice. But at the same time it shows that 6 of respondents (28.6) motivated to follow this practice to 1 to 3 persons. 2 respondents (9.5) motivated to follow this practice to 7+ persons. Thus they are motivating others to follow this practice.

### DIFFICULTIES REGARDING BIODEGRADABLE WASTE MANAGEMENT FOR GARDEN

5 Respondents reported no difficulties. The total of 26 difficulties has been reported as some of the respondents have reported more than one difficulty. The problems of extra vermicompost culture and decompose problem and lack of place was reported by 3 respondents each. The problem of mosquito and bad odour and complaints by neighbour was reported by 2 respondents each. All the remaining difficulties were reported by one respondent and these were: sorting problem for waste collected from neighbours, difficulty in doing heavy work during garden work, lack of manpower, wastage of meal & water due to lack of knowledge about waste management, no cooperation from neighbours, problem of insects and flies, problem of fungus, plant decompose problem, problem of *mongoose*, ants and labour charges and garden doesn't look clean & beautiful.

### CASES OF SOME PRACTITIONERS

The following section presents cases of some respondents who were practicing different methods of composting for biodegradable waste at the domestic level.

#### 1. MRS. SHEELA KRISHNAJI JOSHI

Mrs. Sheela Joshi a housewife from Ruikar colony, Kolhapur. She is 65 years old--a senior citizen. She has degree of Bachelors of Arts. The family members are vegetarian. She is living with her husband advocate by profession, now retired. Her son is well settled in Goa, and daughter got married and living in Pune.

Mrs. Sheela Joshi wanted to do something. One day 10 years ago their neighbour took her to attend a workshop of household waste management arranged by their society members in a society hall. The workshop motivated Mrs. Sheela Joshi to do the waste management. She called the expert to establish the unit at their home. That was starting point for doing biodegradable waste management. Then slowly Mrs. Joshi started doing the process. After three months the result was so good that till now the process is ongoing. She did the process into two small size drums in her house backyard. She uses compost for garden of 300 sq.ft. She also sends compost to her daughter at Pune.

She has got much more profit from fruit plants/ trees. She gets coconuts thrice in a year. The flowers are always blossom on the decorative plants. The main thing that was happened in her life was she is now so free and confident that she is now motivating others to do the same. Now she has joined the non- formal school called 'Surujan Anand' in Mukta Sainik Vasahat.

**2. MR. ANIL DNAYNDEV CHOUGULE** Mr. Anil Chougule, a social activist in environment is living in Mahalaxmi Nagar. He is 39 years old with a degree of Bachelor of Commerce. The total members in family are 11. All members are non vegetarian. Best thing of him was that every member in the family is involved in the process of biodegradable waste management. The monthly income of his family was Rs. 15,000 to 20,000. He is not just a social activist but by profession he is a Gokul Milk distributor, small nursery owner and running a mess for college students. Mr. Anil is a multi talented personality. He is working in environment protection work for about 10-12 years.

He motivates and creates awareness in almost every field. While doing motivational work he came to know that the household waste management/ wet garbage disposal process and making compost out of it. Thus it started the wet garbage compost. Mainly, he is running a mess, many a times food gets waste. He started collecting all the wet waste into a pit of 2ft.X4ft. in front of his house for creating compost.

As he is a milk distributor he started collecting empty milk bags from the customers and in exchange of 350bags, he gives 1 liter milk free. The reason behind this was he wanted to start his own small nursery of rare plants, fruit, flower etc. Mr. Anil and his wife started making saplings with the help of compost and reuse of milk bags. The result is so much good that the economic level increased and they got mental satisfaction.

**3. MRS. JAYASHRI SUDHAKAR TODKAR** Mrs. Jayashri Todkar a business women living in Shukrawar Peth. She is 42 years old with degree of commerce. The total members in family are four with monthly income of Rs. 40,000/- . All the family members are pure vegetarian. Mrs. Jayashri Todkar has started working on household waste management 5 years back. She has studied the method of scientist Bhavalkar and practicing on it. She also discovered her own method for decomposing the waste with the help of bacteria. She has studied much on bacteria.

The method of Mrs. Todkar's waste decompost is different from others. She uses seven plastic drums with naming week days Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday. She collects biodegradable waste from her neighbours and in each drum the waste is collected for particular day. The bacterial culture is being added that makes the waste to decompose faster within 15 days. Thus process doesn't take much time to decompose in comparison to other waste compost methods which results in creating more organic manure out of it.

She has planted sugarcane, bajra, medicinal plants, fruit plants, flower plants, vegetable plants and almost all type of decorative indoor and outdoor plants.

She is also social worker. From 3 years she is motivating the housewives working women, students from nearby areas. She delivers lectures on wet garbage management for various classes, colonies, societies, colleges. Every Monday from 3.00 p.m. to 6.00p.m. she and her daughter-in-law takes motivating and awareness creating lectures free of charge for women from all classes at her home.

**4. CHITRA AJIT DESHPANDE** Mrs. Chitra Deshpande a housewife living with her husband and two children at Khari Corner, Kolhapur. She is 45 years old with degree of commerce. Her family monthly income is about Rs.30, 000/-. She belongs to Brahmin family therefore all the members are vegetarian. The main reason in developing the terrace garden and doing waste management is for stress management, to get mental satisfaction and to reduce the responsibility on KMC.

Mrs. Deshpande lives in apartment where she has purchased the terrace about 800-850 sq.ft. coming right above on her flat. She had built the brick beds of 1.5ft of height along the sides on terrace.

Her method of waste decompost is different from others. She has prepared the necessary material in the bed. Then she started collecting all the kitchen waste in it. After the proper decomposition and the vermiculture is done, and then she started planting the plants/ trees in it. She is continuing with using direct waste to the plants which are very much useful to preserve the moisture needed for plants to grow healthy.

She has planted various kinds of flower plants, fruit plants, vegetables plants and decorative indoor and outdoor plants on terrace. While developing the terrace garden she has made use of all the reusable things like broken tea cups/ mugs, earthen pots, plastic box, coconut covers, shells etc. She had also grown a lawn on terrace in a corner. She is also going in Gokhale College as visiting teacher for gardens course students on tray gardening, terrace gardening. She also helps people in developing their ground level gardens and terrace gardens.

## FINDINGS

Nearly half of the respondents were from the age group of 41-50 years. More than ¾ of the respondents were graduate and post-graduate. Majority of the respondents were employed in the government or private sector or doing their own business. Majority of the respondents had up to 5 members having monthly income of Rs. 21,000+. Majority of them were vegetarian and had garden of 500 + square feet. Thus the personal background factors show that the graduates with better financial conditions with garden space have been engaged in this composting of domestic waste at their own places.

The respondents were having fruit, flower, medicinal, kitchen usable and decorative plants. Majority of the respondents were having more than 500 sq. ft. space available and so due to larger space, these respondents had planted different types of plants. Majority of the respondents had 1-10 fruit, medicinal and kitchen usable plants in their gardens and they reported that they use only organic manure.

Majority of the respondents were using 401+gms. average wet garbage for their garden. This indicates that the garbage created daily has been used for the garden and subsequently its share in the total garbage of the city municipal Councils has been reduced. The volume of garbage by vegetarian is more while the weight of garbage by non-vegetarian is more. Majority of the respondents were making reuse of water for the garden.

The practice of garbage management at domestic level is eco-friendly and the annual expenditure is also very less. Majority of the respondents have reported benefits of domestic waste management which are in financial terms and also getting fruits, vegetables and vermicompost. All the respondents have reported mental satisfaction and also environmental benefit by reduction in solid waste of Municipal Corporation.

Majority of the respondents use vermicompost practice followed by compost artificially, Bhavalkar's method and by other methods. Different sizes of pits have been made by the 9 respondents and it was dependent on the area in garden available. Apart from the pits the respondents were also using plastic buckets and PVC tanks to make composting. Majority of the respondents were spending up to 30 minutes only in a day for compost process. Thus the time required for biodegradable waste is not much.

More than 1/3 of the respondents have started the waste management at the domestic level through their own initiative. Majority of the respondents were unable to motivate others to follow such practice. They have reported difficulties and given suggestions for eco-friendly practice.

The cases of some respondents who were practicing different methods of composting for biodegradable waste at the domestic level confirm the eco-friendly practice of management of solid waste management in Kolhapur city.

## SUGGESTIONS

There were 56 suggestions as some of the respondents have given more than one suggestion. There were no suggestions from 2 respondents. Sorting of wet and dry garbage has been suggested by the highest number of 3 respondents. Composting wet garbage at home itself & planting trees, everybody should try to keep environment clean, making use of all types of wet kitchen garbage, Corporation should give educational & awareness creating lectures/messages, making compost of wet garbage, education to women was suggested by respondents twice.

All the remaining suggestions were suggested once which includes: use less plastic, use cotton carry bags, produce vermicompost & use for producing fruits & vegetables, give information to other, keep surrounding clean & plant usable trees & grow, think it as responsibility & not as a work, understand the benefit of biodegradable waste management, get habitual to separate dry & wet garbage, don't make issue of insects or flies, they are element for fertility, involve every family member into process of bwm, keep waste into closed situation, make use of all types of wet kitchen garbage, use dry leaves for making compost fertilizer, there should be compulsion from corporation, corporation should create awareness through lectures/messages, make compost under tree as it requires less transport, litter cover protect moisture, everyone should do bwm at home, bwm should done with community and not alone, it is necessary to take initiative of women's self help groups, the concept of methane + compost should be implemented, bwm is profit giving work, the waste water of utensils and cloths should be used for garden/ plants, continuous message/information should be passed for bwm, while developing garden fruit trees should be planted, rain water harvesting and use of water for garden/ plants, housewives from apartment should start doing bwm, collect wet garbage into pots and plant rose plants, neighbours should cooperate, collect milk bags and give for recycling, there should be positive process book on bwm, proper bwm practitioners should be

exempted from house tax, for bwm project there is no need of hectic work & financial tension, proper training for bwm will give more benefits, it takes time but it gives more fruits, flowers, bwm is the need of today's world, it should be understood by everyone.

## CONCLUSIONS

The Management of Solid Waste is one of the most critical environmental issues in Indian cities. Along with the increasing population, the solid waste is going to be increased in that proportion. The Municipal Corporations are finding it difficult to find out places for disposal of solid waste and unable to transport all the wet garbage to process it into bio fertilizers through contract. So the issue of MSW which is related to the health of the people, if not treated properly may lead to serious health issues.

If the comparison is made with the households of 1, 10,000 in Kolhapur, the number of households covered under the study practicing management of biodegradable waste is very less. But the domestic biodegradable waste has been successfully managed daily by these practitioners. It has been used for the garden and subsequently its share in the total garbage of the city Municipal Councils has been reduced.

## ACKNOWLEDGMENTS

The author is thankful to the officials of U.G.C., New Delhi for providing the financial assistance for carrying out the Research Project under UGC-SAP-DRS-Phase II at the Dept. of Sociology, Shivaji University, Kolhapur (Maharashtra). The author is grateful to all the biodegradable waste compost practitioners who gave their time to get interviewed and showed their way of management of domestic biodegradable waste.

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## MANAGEMENT OF COMMON PROPERTY RESOURCES THROUGH PEOPLE'S PARTICIPATION UNDER JOINT FOREST MANAGEMENT: A MICRO LEVEL ANALYSIS IN ODISHA

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### ABSTRACT

*In this study, an attempt has been made to analyze the benefits of forest dwellers and the people's participation on the management of Common Property Resources (CPRs) on different category of households through working on Joint Forest Management (JFM) among four villages in Keonjhar district of Odisha. Our study has covered 200 households (120 poor and 80 non-poor) comprising of landless and agriculture labourer, marginal and small farmers (poor households), and middle and large farmers (non-poor households) from four villages of two different blocks where JFM are operating since 2000. The household level benefits have been estimated in terms of employment generation, income from timber and non-timber forest products (NTFP), and fuel wood collection from community managed forests. It has been found that the income and employment opportunities among poor households are more than non-poor households in the study area since the establishment of JFM. Our results have also established that the voluntary collective action through people's participation as an alternative solution to village communities and government in management of common property resources through JFM. Measures are required to ensure retention, regeneration and sustainable utilization of CPRs to provide livelihood security to the CPR dependent rural communities.*

### KEYWORDS

Common Property Resources, Joint Forest Management.

### INTRODUCTION

In a developing economy like India, the development of rural economy through effective and proper management of Common Property Resources (CPRs) such as forests has increasingly become an integral part of sustainable development policy in the past couple of decades. This policy initiative has become popular due to strong disillusionment with the performance of central management policy to provide sufficient incentives to the users to manage CPRs in a sustainable way. Some researcher (Jodha, 1986; Wade, R. 1987; Chopra et al., 1990) found that the well organized community-based institutions can play a significant role in overcoming the socio-economic problems faced by the rural economy and can avoid the tragedy of commons as envisaged by Hardin (1968). In this context, an identification and preservation of community-based forest resources through granting community property rights over local natural resources deserves serious concerns in so far as they can be highlighted as an instrument to enhance for poverty alleviation, environmental conservation and economic development.

The recognition of community-based forest has led to the devolution of forest resource management from centralized to local level user groups in India (Behera, 2006). In fact, Government of India adopted a participatory approach in management, protection and development of forest resources under the aegis of joint forest management (JFM) that was introduced in the National Forest Policy of 1988 followed by June 1990 circular issued by the Government of India in this regard. Till date, almost 22 states have issued requisite orders to facilitate implementation of the JFM elicit people's participation in managing the forest resources. JFM is a policy-based programme, which seeks to establish management 'partnerships' between village forest dependent communities and the state for the sustainable management and benefit sharing of forest. With the introduction of Joint Forest Management (JFM) in the 1990s, a policy sought the involvement of village communities and voluntary agencies in the regeneration of degraded forest land. Under JFM, the forest department (mostly a local forest official as the secretary of the committee) and the village community enter into an agreement to constitute a committee to jointly protect and manage the village forest. The key understanding in the arrangement is that in return for protecting forest land and helping in the regeneration and management of the said forest, people will be entitled to usufruct rights over dead fuelwood, timber, NTFPs as well as a significant share ranging between 25 to 50 per cent (it varies from state to state) of timbers (in cash or kind) on final harvesting. But the community and the forest department are expected to share not just the benefits, but the responsibilities too. In other words, JFM strategies bring local forest users, NGOs and the forest department into a common platform for the management of forest. The institutional framework and the procedure of operation, to a certain extent, vary from state to state as each state has issued its own JFM resolution. The JFM programme, over the past decade, has spread all over the country. The area under JFM is now 17, 331, 955.12 hectare and the number of groups involved 84,632 (India State of Forest Report, 2009).

Joint Forest Management (JFM) was introduced into Odisha on 1st June 1988 by JFM resolution and subsequently into other states like West Bengal, Bihar, Gujarat, Rajasthan, Andhra Pradesh, Madhya Pradesh, and Karnataka. This is a co-operative experiment where the foresters, NGOs and the local communities are involved in the protection, regeneration of degraded forest land and management of resources. The stakeholders are ensured property rights in the management of forest resources under the system of JFM. Under this policy initiative, the degraded national forests were handed over to the forest protection committees (FPCs) as community forest under a community based property rights regime. In response to the national forest policy and to ensure equity and social justice, the state governments, which are responsible for forest management under Indian constitution, have started encouraging the communities living nearby the state forests for formation of forest protection committees (FPCs) under JFM. With regard to implementation of the new forest policy, a comparative analysis among the states of India shows that a poor and tribal dominated state like Odisha, which is located in the eastern part of India, is the first state to introduce the participatory approach in the forest management by forming a number of FPCs in a bid to revive the degraded forest resources in the early 1990s. Till date, Odisha has the largest FPCs among all the Indian states. Forest Protection Committee (FPC) is constituted for this purpose by the DFO. The members will be selected from the concerned villages; the villagers will get 25 percent of benefits and can collect all the fallen twigs, grass, fruits, flowers, seeds (excluding cashew) and leaves. Though JFM gives back some of the original rights to the local communities, it still retains the power centre with the forest department.

### OBJECTIVES

- To examine the relationship on participatory approach among poor and non-poor households under JFM;

- To determine the contributions of common property resources from community-based forest resource management under joint forest management (JFM) to the livelihood of rural poor and non-poor;
- To suggest policy measures for sustainable utilization of CPRs to provide secure livelihood to rural poor.

## REVIEW OF LITERATURE

Poverty, property rights and people's participation on the management of CPRs are increasingly becoming a major subject of debate, discussions and investigations, particularly on the issues of local collective actions or community based natural resource management over the past couple of years. One group of researchers advocate that common property resource users can create and sustain the local level institutions that ensure equitable access to, and income from resource management. Furthermore, CPR literature claims that poor people are more dependent on natural resources; they derive higher income and benefits from CPRs. Some researchers', on the other hand, advocates that compared to the non-poor, the poor people may depend more on common resources, but in absolute terms their dependency is lower. Thus, the problems and policies on the participation of local people and institutions on the management of CPRs deserve serious concern in the various studies undertaken by different scholars over the years.

Anderson (1995) found that wealthy and influential villagers in the control of forest councils use these resources for their personal use and poor do not gain from this JFM. A study based on the 180 households in 20 villages of Andhra Pradesh found that the rich households get larger chunk of income from the commercial exploitation of NTFPs by influencing the decision of the FPCs in their favour. In a similar study, Hill and Shields (1998) observed on 130 households in Andhra Pradesh, Madhya Pradesh and Rajasthan that the main losers in the JFM are fuelwood loaders who are often the poorest sub-group within the village studied. Sreedhar and Bhaskar (2000) were found that in their studies of covering a sample of 10 percent of Vana Samrakshana Samithis (VSS) in Anantapur Forest Circle of Andhra Pradesh JFM had considerable impact on forest regeneration and on the livelihoods of the participant households encompassing economic, social, political and environmental domains by using observation and interview method. The forestry works alone generated as much as Rs. 1.89 lakh person days of additional employment through which a sum of Rs. 75.4 lakhs was paid to the members in the form of wages. Furthermore, some members could benefit by the sale of non-timber forest products (NTFPs) while others could get subsidiary occupations. Besides these, VSS activities contributed the way for the emergence of collective and social consciousness among the people, creating a positive attitude towards education, health, family planning and leadership among men and women at the grassroot level. It was also found that people's involvement was not up to the desired level and effective community participation, flexibility in operation and promotion of income generating programmes (IGPs) through the women groups need to be ensured for the sustainability of JFM for initiatives of forest department.

Kumar (2002) found that in his studies on six villages of Ranchi district of Jharkhand the rich who gain under Joint forest management (JFM) is more than the poor who are the net loser in this process by using cost-benefit analysis. The study uses around 3 percent social discount rate (SDR) while estimating the future cost and benefits at present value in terms of social preference to different stakeholders. The low SDR is justified in the study that the future flow of forest in perpetuity is not reduced while extracting as much as forest produce as we desire. The 40 years time horizon has been taken in this study keeping in mind the long gestation period of the forestry projects. In addition, the different weights of 0.58, 0.82, 0.88, 1.34, are attached to different households by stratifying the households into large farmers (more than 4 ha of land), medium farmers (2-4 ha), small farmers (1-2 ha), marginal farmers (0-1 ha) and landless farmers respectively.

In a study of two districts of Nepal, Adhikari (2002) identified that the poor stake holders are currently benefitting less in terms of average annual gross and net income from community forestry than the relatively better off households. Rath and Sahu (2004) have also identified in a poor state like Odisha that there is a good scope for harnessing of CPRs in Odisha. They found that proper utilization of CPRs would bring improvements in the standard of living of the people, particularly the poor and landless labourers and tribals in terms of increasing employment and income generation from them. They have also studied that the success of rural development policy depends on the active people's participation and stakeholders should be granted more management rights over the CPRs, more particularly in the rural area.

## STUDY AREA, METHODOLOGY AND DATA COLLECTION

India, the second highest populated country of the world, inhabits about 16.08 percent of the total world population with 2.47 per cent of world's landmass and about 7 per cent of world's forest area. As per the India State of Forest Report, 2009, the total forest cover of the country (2007 assessment) is 690,899 sq. km and this constitutes 21.02 percent of the geographical area of the country. Of this, 83,510 sq km (2.54 per cent) is very dense forest; 319,012 sq. km (9.71 per cent) is moderately dense forest, while 289,377 sq. km (8.77 per cent) is open forest cover. An examination of the forest coverage area of major states in India reveals that the state of Odisha is well endowed with forest resources in comparison to other major states of India. Odisha, the fifth largest state in terms of forest coverage area is 48,855 sq km. in India, which accounts for 7.07 per cent of the total forest area of the country. Madhya Pradesh accounts for the largest forest cover of the country (11.24 per cent), followed by Arunchal Pradesh (9.74 per cent), Chhatisgarh (8.08 per cent), Maharashtra (7.33 per cent), Andhra Pradesh (6.53 per cent). In fact, the recorded forest area of the country is 769,512 sq. km, accounting for 23.41 per cent of the Country's geographical area. Of this, 430,582 sq km (55.95 per cent) is reserved forests; 206,219 sq. km (26.79 per cent) is protected forests, while 132,711 sq. km (17.24 per cent) is unclassified forests cover.

Though the forest area in the state during 1998-99 was 58,135 sq. km., which constitutes 37.34 per cent of the total geographical area of the state, it had declined over the years. As per the *State Forest Report*, 2009, the state has only 48,855 sq. km of forest cover, i.e., 31.38 per cent of the total geographical area of the state. Further, the grouping of the forest area into different components shows that 7,703 sq. km. (15.76 per cent) is very dense forest, 21,394 sq. km (43.79 per cent) is moderately dense forest and 20,388 sq. km. (47.13 per cent) is open forest. In fact, though the recorded forest area is 58,136, which constitutes 37.34 per cent of the total geographical area of the state. Of this, 26,329 sq km (45.28 per cent) is reserved forests; 15,525 sq. km (26.70 per cent) is protected forests, while 16,282 sq. km (28 per cent) is unclassified forests cover. The total protected and unclassified forest land is 31, 807 sq. km., which constitutes 51.71 per cent of the total recorded forest area on CPR forest land. One of the salient features of the National Forest Policy is to associate people actively in the protection, conservation and management of forests. The National Forest Policy stipulates that 33 per cent of the geographical area should be under forest cover. With a view to enhance the forest coverage area, the State government has initiated many measures and compliance with the provisions made by the National Forest Policy of 1988, it has promoted Village Forest Committees (VFCs), Village Forest Protection Committees (VFPCs), Vana Samrankhyan Samities (VSSs) in different districts of the state. Village Forest Committees (VFCs) were formed under Odisha Forest Rules, 1985. Forest Protection Committees (FPCs) were formed under the National Forest Policy of 1988 and Vana Samrankhyan Samities (VSSs) were formed under 1993 and 1996 resolutions. After from these there are several unregistered committees functioning simultaneously. There were about 1,199 JFM committees in 2005, managing around 14 per cent forest area. Nearly 17 million families were involved in this programme of which around 0.7 million families belonged to tribal communities. By the end of 2010-11, 11,915 Vana Samrankhyan Samities (VSSs) and 398 Eco-Development committees (EDC) were formed in the state for protecting and regenerating forest areas of around 11238 Sq. Km. of forest area for protection through Joint Forest Management approach. All 11,428 families are members of these VSS and EDC (Economic Survey, 2011-12, Government of Odisha). After the Joint Forest Management (JFM) resolution implemented by the state government, so far there have been 9,055 VFCs, 5,520 VFPCs and 640 unregistered groups formed in the state and they are involved in taking care of the management and protection of around 1,21,460 hectares, 6,51,545 hectares and 89,864 hectares of forest area in the state forest respectively (Department of Forest and Environment, Government of Odisha, 2011).

In spite of these natural endowments, the state is regarded as one of the most backward state in India. The state's economy is characterized by low per capita income, low capital formation and inadequate exploitation of plentiful natural resources and poor development of socio-economic infrastructure. Moreover, poverty along with severe unemployment is also widespread in the state. As per the estimates of the planning commission, 47 per cent of population is below poverty line in contrast to all-India average of 26 per cent. Unemployment is also a formidable problem. It had been estimated that the total backlog of unemployment at the beginning of 1999-2000 was of the order of 8.27 lakh. The magnitude of unemployment would be severe in future owing to growing

population and lower employment opportunities being generated in the state. It is also observed that forests are yet to be fully utilized by the state over the last five decades to mitigate the magnitude of poverty and unemployment, due to a number of social, political, economic and climatic factors.

The primary purpose of this micro-level study was to investigate into access of the forest dwelling population into the forest resource and the management in the context of emerging changes in the forest policies, and also their impact on the sustainable livelihood of forest dependent communities. Therefore we adopted multi-stage sampling method to select poor and non-poor households among participant and non-participant households for protecting village forest land. The study was carried out Keonjhar district of Odisha where community based forest resource management institutions under the aegis of JFM has been established since 1995. Four tribal dominated villages in Anandapur and Ghasipura blocks in Keonjhar district of Odisha were selected on the basis of largest forest coverage area under CPRs, largest percentage of CPR area declining and their participatory development on Forest Protection Committees (FPCs) under JFM. The sample villages were finally selected on the basis of operation of JFM area and their participation of both poor and non-poor households for protecting the village forest land in consultation with the local D.F.Os and senior forest officials. The selected villages were Kantipal and Kolimati in Anandapur block and Madanpur and Birgovindpur in Ghasipura block.

The study is based on primary and secondary sources of data. Primary data on household level variables, their dependency on forest land under CPRs for their livelihood and management of community forestry were collected in four villages through three different structured schedules, namely; village schedule, household schedule, schedule for local level institutions and NGOs pertaining to the year 2009. A separate schedule was also canvassing all the households seeking answers to a multiple objective types question pertaining to their perception and understanding of forest Act, Rules, Policy forest conservation, access to forest resources, participation in the protection of village forest and plantation of degraded forest land through JFM on different category of households. In the field investigation, 200 households were covered by using household schedule covering four important areas demographic, land holding pattern, dependency on CPRs for their livelihood and their participation on management of CPRs and utilization. The households were classified into two groups: poor and non-poor. The poor households include landless labourers, agricultural workers, artisans, small farmers ( $\geq 1.00 \leq 1.99$  ha. of land) and marginal farmers ( $\leq 0.99$  ha. of land). The non-poor households include servicemen and small entrepreneurs, very large farmers ( $> 9.99$  ha), large ( $\geq 5.00 \leq 9.99$  ha.), upper middle ( $\geq 3.00 \leq 4.99$  ha.) and lower middle ( $\geq 2.00 \leq 2.99$  ha.) farmers. Sample households were then selected from each village after giving proper weightage to each category. The total number of households for intensive field survey was 200 household: 120 poor and 80 non-poor. Agriculture was the primary occupation of all the sample households in the study villages. All the sample households belonging to different class and caste were dependent on CPRs for their livelihood for collection of fuel wood, food, fodder, timber and non-timber forest product (NTFP) such as harida, bahada, mahula, kendu, sal leave, mango, jamu, jackfruit, sal seeds, medicinal and herbal plants for their domestic consumption and sale. They sell their products through middleman who are mostly non-tribal. The land use pattern of the study villages are categorized as cultivated land, area not available for cultivation, village forest area, and culturable waste and grazing land. Apart from this classification these four villages have provided access rights to the protection and management of state forests. Though caste structure is heterogeneous and comprising various castes, such as, *Brahmins, Khandayat, Teli, Sudras and Tribals*, but the tribal constitute the dominant group in all the study villages. Moreover, it has been found that a large proportion of the total populations in these villages are subsistence farmers and forest dwellers. During the lean agricultural season, when there was no agricultural work, they also earned their livelihood as wage labourer in the construction village road through Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Gram Sadak Yojana (PMGSY) and other poverty alleviation programmes. The villages were surrounded by forest from all sides. But the main occupation of STs in the sample villages were hunting, food gathering from CPRs for their personal uses and sell these products to outside traders and also encroachment on CPR land for cultivation.

Under secondary data, information about sample JFM village and the history of their establishment, their land use pattern, demographic trend and to forest resources were collected from their respective forest blocks. A lot of valuable secondary source information was collected from the Department of Forest and Environment, Government of Orissa, SC and ST Welfare Department, Principal Chief Conservation of Forest Office, Economic Survey, Statistical Abstracts, Statistical Hand books, periodicals and journals etc.

**PEOPLE’S PARTICIPATION UNDER JFM IN THE STUDY VILLAGES**

Joint Forest Management (JFM) as a programme had its beginning in the district of Keonjhar in 1995 in eleven selected villages. Our four sample villages namely Kolimati, Kantipal, Madanpur and Birgovindpur reported to have adopted JFM in 2000. Accordingly, around 177 hectares of land was taken up for the purpose of plantation and protection of existing forests under social forestry programme as reported by the Sarpanch and other village leaders. Various groups were formed and responsibilities were distributed among them. One male and one female from each JFM household of the village were nominated as members of JFM. The JFM committees initially resolved to form protection group to watch and ward in order to prevent illegal feeling of trees. However people of all JFM households in all sample villages were very enthusiastic to protect their village forest land. The village Birgovindpur has an highest JFM household member i.e., 63 per cent (34 household member) followed by Kolimati almost 52 per cent (26 household member), Madanpur 50 per cent (23 household member) and Kantipal 42 per cent (22 household member). Almost 55 per cent (66 household members) of sample poor households were the member of JFM whereas it was around 49 per cent (39 household members) of non-poor household. But in overall it was 52 percent (105 household members) under JFM households as shown in Table-1.

**TABLE-1 :PARTICIPATION ON CATEGORY OF SAMPLE HOUSEHOLDS ON JFM(VFCS/VSSS/FPCs)**

Name of the Village	Category of Households	No. of Households	JFM (VFC/VSS/FPC) Households (No.)	Percentage of Participation on JFM Households to total Households	Active Participation Households on JFM (No.)	Percentage of Active Participation JFM Households to total Households
Madanpur	Poor	26	12	46.2	7	26.9
	Non-poor	20	11	55	5	25
	All	46	23	50	12	26
Kolimati	Poor	30	18	36.7	12	40
	Non-poor	18	8	44.4	6	33.3
	All	48	26	54.2	18	37.5
Birgovindpur	Poor	32	21	65.6	14	43.7
	Non-poor	22	13	59.1	7	31.8
	All	54	34	63	21	38.8
Kantipal	Poor	32	15	46.9	8	25
	Non-poor	20	7	35	4	20
	All	52	22	42.3	12	23
All Villages	Poor	120	66	55	41	34.1
	Non-poor	80	39	48.8	22	27.5
	All	200	105	52.5	63	31.5

Source: Field Survey

During 2000-01 people of all these sample villages among JFM households were engaged in watch and ward of their forest on rotation basis. But, since 2004, JFM committees have engaged paid watchers with payment of Rs. 700/ per month in Kolimati, Rs.500/ per month in Birgovindpur since 2003, Rs. 600/ per month in Madanpur since 2004 and Rs. 800/ per month in Kantipal since 2005 for protection of the forest due conflict between participant and non-participant households under JFM. The watchers carry out other activities as per the needs and decisions, of the JFM committee. The village members are provided with



requisite permission by the committee to collect NTFPs and wood as per their household requirements. The timber for the construction of houses by the villagers is primarily examined and permitted by the village committee. Genuine needs of the villagers for the festivals and occasions with respects to such materials are collected from the protected forests.

Table 1 revealed that around 31 percent household members (63 out of 200 sample households) on all villages are actively participated on Joint Forest Management (JFM). The active participation on JFM by the poor is nearly 34 percent (41 out of 120 sample households) than the non-poor households is around 27 percent (22 out of 80 sample households). The active participation on JFM among four sample villages is varied between about 23 percent (in Kantipal village) to nearly 39 percent (in Birgovindapur village). There are village forest committees since 2000 in all sample villages consisting of 105 household's members in pen and paper but work is being done by the forest department to involve the local people (only 63 members) in the management of forest. There were various problems in all sample villages. First, Forest Protection Committees (FPCs) were set up in haste, superfluous action without adequate consultation with other local community except 63 members. Second, there is a conflict among different caste and tribal groups, for instance Juang and Bhuiyan, SCs (Pana) and OBCs (Teli, Gopala), sometimes leading to violence for protection of village forest area. Third, the forest dwellers were getting small timber and firewood from forest formally or informally. But they did not get any additional incentive in these items for their own use under JFM scheme. A Government of Odisha resolution in 1993 on JFM offered 50 percent share in any major/final harvest and 100 percent of intermediate products to forest protection committee, called as Vana Sanrakhyan Samiti. Joint Forest Management seeks to involve and treat local communities as equal partners in the task of protection and management of forest. But the misbalanced power relationship between Forest department and local communities in all sample villages makes this a remote reality. Local communities find JFM unacceptable since this tends to erode decision making at community level and also disregards the traditional knowledge system of the community. The restriction on sale of gathered firewood or small timber was unrealistic as many of the poor forest dwellers depend on sale of these forest produce for their subsistence. Under JFM, Forest Department plays an important role in decisions relating to forest. Fourth, in absence of general body, the Forest protection Committee was not always representative of all different sections of forest users of the village. Fifth, the rights and tenures of the community over forest patch were not specified. Only certain concessions for fulfilling the requirements were spelt out; there was no mention of any share in the intermediate or final harvest in the sample villages.

Apart from protecting the CPRs from further degradation, their participative management, involving all the rural households, particularly the rural poor, promotes the social bond across families at the village level. This will help both poor as well as the non-poor. For example, in the past the poor maintained the livestock of the rich on common grazing lands and in turn used to pay for their services in terms of cash, fodder, fuelwood and livestock. This was both a means to strengthen the social bond at the village as also an assured source of income to the poor. In our study villages, though the development agencies have tried and succeeded in protecting and regenerating the degraded CPRs, they have failed in involving all sections of the rural society in such developmental programme. It appears that the share of poor households in the biomass from the CPRs may further decline as the quantity and quality of biomass from it increases. This is because it is the non-poor who have an absolute control over the use and management of such resources. Even while taking up the degraded CPRs for development it appears that all the households were never consulted or involved. No doubt the officials along with representatives of the rich might have persuaded one or two poor households to accept the scheme. In reality, however, there was no active involvement or participation. The poor as a result of their socio-political and economic submission to the non-poor hardly express their clear views. Keeping the poor in the background a few representatives of the rich try to commercialize and gain from the CPRs. In one village, the forest officials have tried to form the village committee to manage the CPRs, by involving all households. But in practice no committee is active. The leader of the village (elite) plays his own games as does the leader of the poor.

Further, it may be interesting to understand how actually the rural poor perceive the CPRs. In other words to what extent do they protect the CPRs by their participation in the use and management, if equal chance is given. What we have noticed through our own discussions with the poor households in the sample villages is that, even these households largely prefer the available CPRs to be distributed among them as private property resources (PPRs). The reasons for this reaction may be due to: (1) Unequal distribution of PPRs (land and livestock) among the rural families, (2) Lack of CPR-based PPRs among the poor, (3) Neglect of non-market forces in the rural economy, and (4) Lack of proper policy by the government about CPRs, particularly, regularization of the encroached CPRs. Thus, in such a situation promoting participation from all sections of the rural society in the use and management of CPRs seems to be a difficult task.

### INCOME AND EMPLOYMENT FROM CPRs UNDER JFM HOUSEHOLDS

The total dependency of households on the CPR forest land has been calculated by summing up the total income derived from fuelwood, food, fodder, and small timber and non-timber forest products (NTFPs). The average total income received by the households who are participating in the JFM activities is presented Table-2. An examination of the data in table 2 indicates that poor household gets maximum benefits than non-poor household in terms of income from CPRs which are being managed by the forest protection committees under JFM. It can be seen from Table 2 that poor households derived on an average gross income of ₹ 11,550 per household from CPRs and non-poor households derived ₹ 11,651 under JFM. The average gross annual income of the poor households from the CPRs ranged between ₹ 8,546 and ₹ 12,621 in different study villages during the reference period. The CPR income for the non-poor ranged between ₹ 9,651 and ₹ 13,432.

TABLE -2: AVERAGE GROSS INCOME GENERATED FROM CPRs UNDER JFM HOUSEHOLDS ( ₹ PER ANNUM)

Name of the Village	Category of Households	No. of JFM Households	Average Gross Income per Household from all Sources	Average Gross Income per Household from CPRs	CPR Income as a Percentage of Average Gross Income per Household
Madanpur	Poor	12	18456	8546	46.3
	Non-poor	11	22731	9651	42.5
	All	23	20501	9074	44.3
Kolimati	Poor	18	19452	12561	64.6
	Non-poor	8	21849	12697	58.1
	All	26	20190	12603	62.4
Birgovindpur	Poor	21	21753	11634	53.5
	Non-poor	13	26542	11742	44.2
	All	34	23584	11675	49.5
Kantipal	Poor	15	20672	12621	61.1
	Non-poor	7	25561	13432	52.5
	All	22	22228	12879	57.9
All Villages	Poor	66	20280	11550	57
	Non-poor	39	24328	11651	47.9
	All	105	21784	11587	53.2

Source: Field Survey

In our study villages, apart from the benefits of the development it is the non-poor who exploit the available CPRs to a greater extent. Though the poor households get much less average gross income per household from CPRs as compared to the non-poor household, it is relatively more important in their household budget in all the study villages. But the share (per cent) of average gross income per household from CPRs to average gross income per household from all sources is higher among the poor as compared to the non-poor households in our study villages managed by FPCs under JFM. However, despite the non-



poor getting greater absolute benefit, a greater proportion of the household income of the poor was derived from CPRs under JFM. This proportion varied from 46 per cent of the gross income per household in Madanpur village to 64 per cent in Kolimati village and for all the sample poor households it was 57 per cent of their income from CPRs managed by FPCs under JFM. Hence, on an average more than half of the income of the poor was derived from the CPRs, whereas it was 48 per cent for the non-poor and 53 per cent for the entire household in the reference period. Even in the case of the non-poor, the contribution of CPR income as a proportion of gross income per household varied from 42 per cent in Madanpur to 58 per cent in Kolimati under JFM. An examination of the data in the table indicates that poor household's gets maximum benefits in terms of income from CPRs which are being managed CPR forest land by the forest protection committees under JFM due to effective participation and proper functioning in our study villages.

The data in Table 3 establish the fact that the poor households under JFM substantially gain from the employment opportunities generated due to effective and proper functioning of FPCs in our study villages. It is found that the poor households under JFM gain 168 days of employment in the forest-related activities per year in all the study villages as compared to non-poor households engaged 109 days but in overall under JFM households it was 146 days per year. In fact, JFM is very effective and successful in these villages due to more participation on poor household than non-poor and the implementation of micro plan for plantation and proper commercialization of NTFPs are instrumental in creating huge employment opportunities throughout the year for all the participants of 105 households irrespective of their standard of living. Furthermore, it is found that poor households also get a substantial number day's employment and on an average more than four people engaged of CPRs per year from the forest related activities as compared to three people of non-poor households under JFM. Therefore it can be concluded that an effective FPC plays a pivotal role in generating ample employment opportunities and income compared to the non-participant households under JFM in our study area.

**TABLE-3: AVERAGE DAY EMPLOYED , TIME SPENT AND DISTANCE COVERED FROM CPRs UNDER JFM HOUSEHOLDS**

Name of the Village	Category of Households	No. of JFM Households	Annual Average Day Employed per Collection of CPRs (No. of Days)	Annual Average People Employed of CPRs	Average Time Spent per Collection of CPRs (Hours)	Average Distance Covered per Collection of CPRs	Accessibility (Percentage of People who felt CPRs is Open)
Madanpur	Poor	12	128	5	4.54	3.03	33.3
	Non-poor	11	86	6	6.04	3.12	27.3
	All	23	108	5	5.26	3.07	30.4
Kolimati	Poor	18	198	6	6.42	3	33.3
	Non-poor	8	134	5	5.31	3	37.5
	All	26	178	6	6.08	3	34.6
Birgovindpur	Poor	21	151	5	5.27	2.48	57.1
	Non-poor	13	98	4	5.01	3.52	46.2
	All	34	131	5	5.17	2.88	52.9
Kantipal	Poor	15	186	5	5.67	2.88	40
	Non-poor	7	136	4	6.42	3.37	57.1
	All	22	170	5	5.91	3.04	45.5
All Villages	Poor	66	168	6	5.54	2.81	42.4
	Non-poor	39	109	5	5.62	3.27	41
	All	105	146	6	5.57	2.98	41.9

Source: Field Survey

Table 3 also shows that the distance between the place of dwelling (habitation) and source of fuel wood collection (forest) was around 3 km, but to collect fuel wood, the people had to go deep into the forest due to degradation of forests and congestion of fuel wood collectors. It was observed in the study villages that women and children aged between 10 and 15 belonging to the poor households browse over three to four km in JFM household of CPRs (including road sides) for dead and fallen wood, twigs, thorny bushes, dry leaves, roots etc. If wages on labour days spent on such type of fuel wood collection are calculated, even a child has to be paid more than the average wage rate in many other villages. This resulted in an increase in the time spent on fuel wood collection. The average time spent per collection of fuel wood varied between a minimum of four hours and a maximum of seven hours in case of poor households and five to seven hours of non-poor households under JFM

It is generally understood that CPRs like a forest are completely accessible to the people. But in reality people do not have total access to all types of forests. Forest authorities (the forest department) regulate accessibility to the forest area specially when these are under reserve forest or protected area category. Nearly 42 per cent of the poor, 41 per cent of non-poor and 42 per cent of all households in the study villages felt that the CPRs was open for fuel wood collection without any restriction under JFM household.

## CONCLUSIONS AND POLICY IMPLICATION

In this study, we examined the relationship between poor and non-poor households with the income and employment opportunities from CPRs and also their participation through JFM committee. It is found that the poor households on participation of FPCs derive larger benefits from the CPR forest produces in contrast to the non-poor households. Further, the larger number of employment opportunities generated from the CPRs on FPCs goes to participating on poor households. CPR income accounted for on an average more than half of the total income of the poor households and almost 39 percent of the total income of the non-poor households. Around 42 percent of the surveyed JFM households reported that the forest CPR was open for fuel wood collection. About only 52 per cent households are participated on JFM committee and where as only 31 percent of sample households actively participated in the management of CPRs through Joint Forest Management (JFM). Effective participation of local populations, NGOs, panchayat raj and equitable distribution of benefits did not happen in these villages, mainly due to institutional weaknesses.

The important policy implication of this exercise is that both the state and central government should adopt strict JFM policy for implementation at the grass-root level and also encourage the stakeholders to form community based management institutions like FPCs under JFM policy for proper and effective utilisation of CPRs by adopting participatory approach in the rural area. In protection, regeneration and developmental aspects of common property resources more power should be entrusted to NGOs and the panchayati raj institutions with active participation of all the local community to ensure equitable distribution of benefits. The government should integrate the JFM policy with our ongoing poverty alleviation programmes in the forested area by providing both financial and logistic support for the effective management of the forest resources to accomplish the sustainable development goals in the forthcoming years. Further, it should vigorously implement JFM policy in the tribal and poverty ridden forest areas with a view to generate additional income and employment base of the rural economy. JFM should be encouraged to participate in the tribal areas of India and to empower them and more and more FPCs should be formed to participate in the management of CPRs, such as forests, whereby both physical as well as socio-economic environment will improve significantly. Formation of self-help group should be encouraged to meet the credit needs of the local people. Adequate storage facility for primary collectors of CPR products should be provided with assistance from financial institutions. The rural households that derive benefits from CPRs should be convinced about the benefits of regeneration of CPR and sustainable utilization which will inspire the people to protect and regenerate them.

**SCOPE FOR FUTURE RESEARCH**

If the present CPR use structure is continued unaltered, then the future for common property resources in the study villages appears bleak. Due to the degradation of CPRs, many households are already facing shortage of fuelwood and fodder. Many households have therefore started shifting towards other fuels such as dungcake- which constitutes wastage of precious potential manure- and inferior fuels like crop residue for cooking. The degradation of CPR forest increased the time required for fuelwood collection and resulted in the neglect and overexploitation of CPRs, which further accelerated the degradation of CPRs. Thus, there has been a vicious circle of degradation and overexploitation of CPRs. If this vicious circle is not broken, then the 'tragedy of common property resources' is certain to occur.

**ACKNOWLEDGEMENTS**

The paper is a part of Ph.D. work of the first author that was undertaken at NKC Centre for Development Studies (An ICSSR Institute), Bhubaneswar. The first author also thanks ICSSR, New Delhi for awarding a doctoral fellowship to him for conducting the study. The first author is grateful to the forest dwellers and village leaders for their active participation in the collection of data at village level of Ph.D. work.

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**ECONOMIC VALUE ADDED PRODUCTIVITY OF MCL**

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**ABSTRACT**

*Cement industry is known to be one of the key industries for economic development. A well developed Indian cement industry built almost totally on domestic capital formation is modern, efficient and reasonably new and today accounts for a total production of around one hundred million tonnes. The industry is fully capable of meeting the demand of the country. The availability of cement however is kept a pace with increase in demand. The Madras Cements Limited (MCL) is one of the best units among the cement producing units. It maintains productivity to boost the production. The MCL considers the labour productivity, administration, selling and distribution productivity and so on. Productivity is one of the major parameter to cover the business activities. It is one of the key determinants of cost and price – competitiveness of firms and industries. Policy makers are interested in productivity movement particularly in the cement industry. In this paper an attempt is made to measure the operational efficiency in terms of productivity of MCL with the help of EVA productivity. It is calculated for the period from 2000-01 to 2010-11. It is used to ascertain whether the MCL's operational efficiency is high or low. Higher the percentage, higher is the efficiency.*

**KEYWORDS**

Economic Value Added Productivity, MCL.

**INTRODUCTION**

The Madras Cements Limited (MCL) is one of the best units among the cement producing units. It maintains productivity to boost the production. The MCL considers the labour productivity, administration, selling and distribution productivity and so on. Productivity is one of the major parameter to cover the business activities. Productivity is a measure of the economic soundness of the means of production. It is one of the key determinants of cost and price – competitiveness of firms and industries. Policy makers are interested in productivity movement particularly in the cement industry. Productivity is the relationship between physical output and one or more of the physical input used in production process. It is expressed as a ratio to reflect how efficiently resources are used in creating outputs. Productivity measurement enables the firms to compare themselves and provide perspective of firm's financial data. In this paper an attempt is made to measure the operational efficiency in terms of productivity of MCL with the help of EVA productivity. It is calculated for the period from 2000-01 to 2010-11. It is used to ascertain whether the MCL's operational efficiency is high or low. Higher the percentage, higher is the efficiency.

**STATEMENT OF THE PROBLEM**

The cement industry is highly a capital and energy intensive industry. Lime stone is its basic raw material and cement is a highly price sensitive commodity. Hence, the location of a cement plant is determined by the availability of limestone and proximity to the market. Coal is a basic necessity but the industry does not claim any priority on the supply of coal for its use. The entire requirement of coal by the cement industry is met with full allocation of linkage quality. Power is another important input, which the cement industry needs. The state electricity boards are permitted to raise cost of power while supplying to cement industries and the cement industry continues to suffer on this account. Cement is made by combining limestone, clay, gypsum and laterite in specific proportions grinding the mixture and then heating it to a high temperature. It is used as a raw material for construction of buildings, dams, canals, laying of roads, preparing for cement tubes and so on. In India, cement industries are owned by the State Government, Central Government and Private entrepreneurs. Cement industry plays a vital role in the economic development of the country. Finance is required for all business. The MCL is not an exemption too. Equity shares, retained earnings and reserves and borrowed capital are the main sources of funds for MCL. It utilizes the funds effectively. It has remarkable achievements in production, productivity, profitability and selling of cement. Hence an attempt has been made to analyse the operational efficiency in terms of productivity of MCL with the help of EVA productivity.

**REVIEW OF LITERATURE**

There are number of studies which have been undertaken previously. Such studies are highly useful to identify the areas already investigated and formulate insight into the present study. A review of few important studies is given under below:

I.C. Arya<sup>1</sup> has dealt in his article the returns to scale, the marginal productivity of inputs and their relative contribution and elasticity of output with respect to inputs in Indian cement industries.

Balaji K. Moorthy and A.V. Dharmakrishnan<sup>2</sup> dealt in their paper that the Indian cement industry is second in the world in terms of quality, productivity and efficiency. The industry leaders have never hesitated in investing in technology to ensure not only quality and productivity but also protection of the environment.

G.K. Devaraj<sup>3</sup> has pointed out in his article that the productivity was the key determinant in production of a mill and it applied equally to labour as well as machine productivity.

C.B. Gupta<sup>4</sup> has rightly pointed out that productivity is the ratio of net value of output to the net value of input, all expressed at constant prices. He advocated factor productivity indices to measure the efficiency of individual operations or specific factors of production. Productivity indices for individual inputs were computed.

A.K. Jain<sup>5</sup> in his paper focussed the technological improvements, energy conservation, environmental practices, marketing and distribution of cement.

H. Kaynak and M.J. McCracken<sup>6</sup> have examined the quality, productivity, relationship using a production simulation game which discussed a variety of measures of both quality and production, including the relative cost of materials and labour. Their article finds that as quality increases, productivity increases, thus productivity and quality are directly related.

S. Muthukrishnan<sup>7</sup> has stated that the Indian cement industry is the fourth largest in the world after China, US and Japan. China accounts for roughly one-third of the global capacity while India is close to six per cent share. The sector-wise analysis of operational efficiency has revealed that the performance of private sector cement companies was more outstanding than that of the public sector cement company. He has found out that the growth of labour productivity and capital intensity was more in the private sector than in the public sector.

National Productivity Council Research Division<sup>8</sup> has analysed the Productivity and Performance of the Industry with a view of identifying the major problem areas and the prospects of solving them.

B.K.S. PrakashRao and B.H. Venkateswara Rao,<sup>9</sup> in their article enlightened that the vigorous growth of the cement industry has been facilitated by a substantial increase in consumption from infrastructure, housing and industrial projects. The industry can expect to see good years ahead in the longer time.

S. Rajamohan and T. Vijayaragavan<sup>10</sup> have stated that India exports cement to around 25 countries, which include not only SAARC countries but also countries in West Asia, Africa, Europe, Australia and few Islands of the Indian Ocean. Commencing with a mere 1.5 lakh tonnes in 1989-00, exports grew to 9 million tonnes in 2003-04 and further to 10 million tonnes in 2004-05.

S. Rajamohan and T. Vijayaragavan<sup>11</sup> have described the production, capacity utilization and per capita consumption of cement over the years.

R.K. Sharma<sup>12</sup> pointed out in his paper that "The Overall Efficiency and Productivity of an Organization are the Outcome of the Effectiveness of Workforce".

## OBJECTIVES OF THE STUDY

The objectives of the study are:

1. To examine the productivity management of MCL
2. To offer suggestions based on findings of the study

## SCOPE OF THE STUDY

The Madras Cements Limited is engaged in the production of cement and limestone. It has four branches spread over in Tamil Nadu, Andhra Pradesh and also in Karnataka. Besides, it undertakes development works in many areas. However the accounts are prepared and submitted under one head namely "Annual Account of Madras Cements Limited. The study is undertaken from the point of view of "Economic Value Added Productivity of MCL."

## METHODOLOGY

This study is the blend of both the descriptive and the analytical methods. Annual reports for the ten years have been collected to study the EVA productivity of this unit. Besides, the researcher has met some of the officials of the study unit to identify its significance.

### FRAMEWORK OF THE ANALYSIS

The MCL is one of the top most cement manufacturing company in India. They perform the work on target. They accept the changes and challenges. They maintain productivity, solvency and profitability in all the years of study. Hence, the simple tools like ratios, mean, standard deviation, co-efficient of variation, linear growth rate, compound growth rate and annual growth rate have been used for analysing the data.

### ECONOMIC VALUE ADDED (EVA) PRODUCTIVITY

Productivity is the real index of efficiency of an organisation. It is considered to be a good proxy for efficiency. Economic Value Added (EVA) productivity has been used to analyse the operational efficiency of the study units. It is a powerful measure of performance through an operational profitability, as profitability is related to productivity. Hence, EVA productivity has been determined by using the following:

$$EVA = \text{Net Profit after Tax} - \text{Cost of Capital}^1$$

### COST OF CAPITAL

The term 'Cost of Capital' refers to the minimum rate of return a firm earns on its investment. The cost of capital is computed by using both the cost of equity and the cost of debt. The MCL has equity shares and debt capital for which these two capitals are used to compute cost of capital.

### COST OF EQUITY

The equity share holders invest money on shares with the expectation of getting dividend from the company. The market price of the equity shares normally depends on the companies return. The term 'Cost of Equity' refers to the minimum rate of return that the firm must earn on the equity financed portion of an investment. The cost of equity is computed by adopting the following formula:

$$K_e = \frac{DI}{NP} \times g$$

Where,  $K_e$  = Cost of equity rate,  $DI$  = Dividend for the period

$NP$  = Net proceeds of equity,  $g$  = Dividend growth rate

### COST OF DEBT

The debt capital is the safest financial asset. This may be issued and redeemed at par, at premium or at discount. The term 'Debts' include the secured and unsecured loans. The cost of debt is computed by using the following formula:

$$K_d = \frac{I}{NP} (1-T)$$

where,  $k_d$  = Cost of debt rate,  $I$  = Interest paid in period

$NP$  = Net proceeds of debts,  $T$  = Company tax rate

### CAPITAL STRUCTURE WEIGHTS

Capital structure weights are determined by dividing the book value of each capital source by the sum of the book value of the long term capital sources and expressing them as a rate. Two rates namely, equity rate and debt rate are determined by using the following formula:

$$\text{Capital structure weights for } K_e = \frac{S}{S+B} \times K_e$$

$$\text{Capital structure weights for } K_d = \frac{B}{S+B} \times K_d$$

where,

$S$  = Total book value of equity,  $B$  = Total book value of debt

$S+B$  = Total book value of the firm,  $K_e$  = Cost of equity

$K_d$  = Cost of debt

### RESULTANT COST OF CAPITAL

This is the next step to ascertain EVA productivity. The resultant cost of capital is not a cost of capital but it is computed based on the cost of capital. It is one of the important tool which is used to measure the efficiency of any organization. It can be calculated by using the following formula:

Resultant Cost of Capital = Total capital x weighted average cost of capital

weighted average cost of capital = (Equity capital x capital structure weight) + (Debt capital x debt structure weight)



**ECONOMIC VALUE ADDED (EVA) PRODUCTIVITY**

Economic Value Added (EVA) productivity is the quantum of economic value generated by a company in excess of its cost of capital. Mathematically, it is the difference between the net profit after tax and capital charge. Economic Value Added (EVA) productivity is one of the range of performance measurement tool. Anyhow more the net profit and more will be the EVA. Similarly less the resultant cost of capital and more will be the EVA productivity.

**CORRELATION MATRIX**

The MCL is one of the best manufacturing company in India. It is giving importance to productivity. There are number of variables involved to improve the productivity. Hence, in order to find out how these factors are correlated with each other, the correlation matrix has been used. There are 5 variables which are given both in rows and columns. The results are given in two ways such as over all correlation between the variables and the degrees of significant relationship at 5% and 1% level.

**FINDINGS OF THE STUDY**

This paper presents the findings in list form because EVA productivity management is analytical in character.

1. The difference between the net profit and cost of capital is called EVA. In order to compute EVA, the cost of capital, cost of equity, cost of debt, capital structure weights and resultant cost of capital are taken into consideration. Because these are the components of EVA. The result of such variables are given below:
  - a) The MCL has declared the dividend of Rs.725.70 lakhs initially for the period of two years and thereafter they have increased. In all the study period the dividend of MCL declare a consistent dividend. It is important to note that the company maintained the dividend growth rate of 0.105 per cent in all the years of study. It had not issued further shares because, there were only little changes in equity capital. The cost of equity is fluctuating between Re.0.7060 and Rs.0.1820
  - b) The debt capital, interest and cost of debt were fluctuating in trend because these are closely related. Of the 10 years, the company maintain more than the average cost of debts in four years. The linear growth rate, compound growth rate and annual growth rate are in negative.
  - c) The capital structure weight for cost of equity and debts were in fluctuating trend because it depends on book value of equity, debts and its cost. The average capital structure weight for cost of equity and cost of debts are Re.0.0099 and Re.0.0356 respectively.
  - d) The resultant cost of capital is in fluctuating trend which are ranging between Rs.4593.77 lakhs and Rs.8963.23 lakhs.
  - e) It is found that the EVA productivity was negative in two years. The maximum EVA productivity was Rs.37490.74 lakhs in 2007-2008 followed by Rs.29342.36 lakhs in 2006-2007.
  - f) The EVA productivity stood at Rs.-1727.54 lakhs increased to Rs.12134.77 lakhs in 2010-2011. The average EVA productivity was Rs.14386 lakhs with the standard deviation of Rs.14567 lakhs.
2. Capital structure weight of cost of equity and cost of equity (0.995) have high degree of positive correlation and EVA productivity and capital structure weight of cost of debt (-0.6948) have negative correlation. It is also found through correlation matrix that capital structure weight of cost of debt (0.3683) and cost of debt (0.6998) have a significant effect at 5 per cent level. EVA productivity (1.000) and cost of equity (-0.714) have significant effect at 1 per cent level.

**SUGGESTIONS**

"No pain, no gain", holds good in manufacturing companies. The MCL is not an exemption too. Of course, this industry is doing its level best to boost production, sales, profit, reduce cost of production, maintain quality of products and provide good services to the consumers. It has good and qualified team of officials to do the necessary services. The following are the important suggestions of the study:

1. In order to get betterment in overall productivity, the reduction in administration and selling and distribution expenses is very essential. Over the study period, the said expenses have increased gradually year by year. Therefore, MCL should concentrate to control these expenses.
2. The MCL should use modern material handling and production techniques to get better productivity.
3. Cement industries require more energy for production. Hence, they should form solar plant to generate electricity.
4. The present paper is a novel attempt to study the EVA productivity management of MCL. The findings and suggestions of the present study will be highly useful to the officials of MCL to improve the financial position.

**CONCLUSION**

Productivity is a measure of the economic soundness of the means of production. The measurement levels of productivity and the growth rate of productivity assume critical importance. The EVA is used to study the operational efficiency. The cost of equity, cost of debt, capital structure weight and soon have been used to ascertain EVA.

**TABLE – 1: COST OF EQUITY OF MCL**

Year	Dividend (DI) (Rs. in lakhs)	Net Proceeds of Equity (NP) (Rs. in lakhs)	Dividend Growth Rate (G) (%)	Cost of Equity (Re.)
2001-02	725.70	1207.55	0.105	0.7060
2002-03	725.70	1207.78	0.105	0.7059
2003-04	907.13	1207.78	0.105	0.8561
2004-05	1209.50	1207.78	0.105	1.1064
2005-06	1814.25	1207.79	0.105	1.6071
2006-07	1814	1207.78	0.105	0.1577
2007-08	2419	1109.27	0.105	0.2133
2008-09	2383	2379.69	0.105	0.1051
2009-10	3575	2379.69	0.105	0.1577
2010-11	4125	2379.69	0.105	0.1820

**RESULT**

Mean (Re.)	Standard Deviation (Re.)	Co-efficient of Variation (%)	Linear Growth Rate (%)	Compound Growth Rate (%)	Annual Growth Rate (%)
0.5797	0.5072	87.49	-3.6	-12.69	-7.422

Source: Annual Report of MCL

**TABLE – 2: COST OF DEBT OF MCL**

Year	Interest (I) (Rs. in lakhs)	Net Proceeds of Debts (NP) (Rs. in lakhs)	I-T (%)	Cost of Debt (Re.)
2001-02	7750.48	73609.60	0.60	0.0632
2002-03	6617.58	70499.98	0.65	0.0329
2003-04	4960.34	61421.20	0.65	0.0525
2004-05	3588.92	69096.50	0.65	0.0338
2005-06	3435.16	60244.19	0.65	0.0371
2006-07	2283	67733	0.65	0.0219
2007-08	5170	163564	0.65	0.0205
2008-09	11001	246345	0.65	0.0290
2009-10	15088	256651	0.65	0.0382
2010-11	13928	279117	0.65	0.0324

**RESULT**

Mean (Re.)	Standard Deviation (Re.)	Co-efficient of Variation (%)	Linear Growth Rate (%)	Compound Growth Rate (%)	Annual Growth Rate (%)
0.0362	0.0131	36.19	-130	-6.46	-4.8734

Source: Annual Report of MCL

**TABLE -3: CAPITAL STRUCTURE WEIGHT FOR COST OF EQUITY (KE) AND COST AND DEBT OF (KD) OF MCL**

	Capital Structure Weight for Cost of Equity				Capital Structure Weight for Cost of Debt			
	S (Rs.in lakhs)	(S+B) (Rs.in lakhs)	Ke (Re.)	C.S.W.for (Ke(Re.))	B (Rs.in lakhs)	(S+B) (Rs.in lakhs)	Kd (Re)	C.S.W.for Ke
2001-02	1207.55	74817.15	0.7060	0.0114	73609.60	74817.15	0.0632	0.0622
2002-03	1207.78	71707.76	0.7059	0.0119	70499.98	71707.76	0.0329	0.0323
2003-04	1207.78	62628.98	0.8591	0.0165	61421.20	62628.98	0.0525	0.0515
2004-05	1207.78	70304.28	1.1064	0.0190	69096.50	70304.28	0.0338	0.0332
2005-06	1207.79	61451.98	1.6071	0.0316	60244.19	61451.98	0.0371	0.0364
2006-07	1207.78	68940.78	0.1577	0.0028	67733	68940.78	0.0219	0.0215
2007-08	1109.27	164673.27	0.2133	0.0014	163564	164673.27	0.0205	0.0204
2008-09	2379.69	248724.69	0.1051	0.0010	246345	248724.69	0.0290	0.0287
2009-10	2379.69	259030.69	0.1577	0.0014	256651	259030.69	0.0382	0.0378
2010-11	2379.69	281496.69	0.1820	0.0015	279117	281496.69	0.0324	0.0321

**RESULT**

Mean (Re.)	Standard deviation (Re.)	Co-efficient of variation (%)	Linear Growth Rate (%)	Compound Growth Rate (%)	Annual Growth Rate (%)
0.0099	0.0103	104.04	-170	-18.36	-8.6842
0.0356	0.0128	35.96	-140	-6.4	-4.8392

Source: Annual Report of MCL

**TABLE – 4: RESULTANT COST OF CAPITAL OF MCL**

Year	Total Capital (Rs. in lakhs)	Weighted Average Cost of Capital (Re.)	Resultant Cost of Capital (Rs. in lakhs)
2001-02	74817.15	0.0614	4593.77
2002-03	71707.76	0.0320	2294.65
2003-04	62628.98	0.0508	3181.55
2004-05	70304.28	0.0330	2320.04
2005-06	61451.98	0.0363	2230.71
2006-07	68940.78	0.0212	1459.64
2007-08	164673.27	0.0203	3338.26
2008-09	248724.69	0.0284	7072.48
2009-10	259030.69	0.0375	9704.74
2010-11	281496.69	0.0318	8963.23

**RESULT**

Mean (Rs. in Lakhs.)	Standard deviation (Rs. in Lakhs)	Co-efficient of variation (%)	Linear Growth Rate (%)	Compound Growth Rate (%)	Annual Growth Rate (%)
4515.9	2995	66.32	0.0007	6.91	9.5117

Source: Annual Report of MCL

**TABLE – 5: ECONOMIC VALUE ADDED (EVA) PRODUCTIVITY OF MCL**

Year	Net Profit after Tax (Rs. in lakhs)	Resultant Cost and Capital (Rs. in lakhs)	EVA (Rs. in lakhs)
2001-02	3866.23	4593.77	-727.54
2002-03	2148.20	2294.65	-146.45
2003-04	4997.80	3181.55	1816.25
2004-05	5202.44	2320.04	2882.40
2005-06	8352.03	2230.71	6121.32
2006-07	30802	1459.64	29342.36
2007-08	40829	3338.26	37490.74
2008-09	36352	7072.48	29279.52
2009-10	35368	9704.74	25663.26
2010-11	21098	8963.23	12134.77

## RESULT

Mean (Rs. in lakhs)	Standard Deviation (Rs. in lakhs)	Co-efficient of Variation (%)	Linear Growth Rate (%)	Compound Growth Rate (%)	Annual Growth Rate (%)
14386	14567	101.26	0.0002	157.59	176.79

Source: Annual Report of MCL

TABLE – 6: CORRELATION MATRIX

Particulars	EVA Productivity	Capital Structure Weight for ( ke)	Capital Structure Weight for ( kd)	Cost of equity ( ke)	Cost of debt ( kd)
EVA Productivity	1.00				
Capital Structure Weight for ( ke)	-0.6917	1.00			
Capital Structure Weight for ( kd)	-0.6948	0.3683	1.00		
Cost of equity( ke)	-0.7140	0.9950	0.3795	1.00	
Cost of debt( kd)	-0.6998	0.3758	0.9990	0.3866	1.00

Source: Compiled from Annual Report of MCL

Note: Statistical Computations have been done through SPSS

Note: (\*) Significant at 5% level

Note: (\*\*) Significant at 5% level

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## DOES BANK CREDIT CAUSE ECONOMIC GROWTH IN THE LONG-RUN? TIME-SERIES EVIDENCE FROM ETHIOPIA

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### ABSTRACT

*The issue of causal relationship between bank credit and economic growth is very crucial in a small open economy like Ethiopia especially during the global credit crisis. The objective of this paper is to examine the long-run relationship between bank credit and economic growth for the period 1971/72 – 2010/11 applying the Johansen cointegration analysis taking into account the maximum eigenvalues and trace statistics tests and Granger casualty tests, respectively. Bank credit is measured by credit to the private sector as a ratio of GDP. Economic growth proxied by Real GDP per capita income. The Augmented Dickey Fuller (ADF) and Phillips and Perron (PP) unit root tests indicate that the variables of the study are stationary in their first differences. The Johansen cointegration test suggests the existence of a significant long-run equilibrium relationship between bank credit and economic growth in Ethiopia. In the Vector Autoregressive (VAR) framework, the application of Granger Causality test provides evidence that there is a unidirectional causal relationship between bank credit and economic growth with the direction from bank credit to economic growth for Ethiopia Thus, the policy implication is that Ethiopia needs to give policy priority to promoting bank credit to the private sector to propel long-run economic growth..*

### KEYWORDS

Bank Credit, Economic Growth, Ethiopia, VAR model Model, Granger Casualty.

### 1. INTRODUCTION

Long-term sustainable economic growth depends on the ability to raise the rates of accumulation of physical and human capital, to use the resulting productive assets more efficiently, and to ensure the access of the whole population to these assets. Financial intermediation supports this investment process by mobilising household and foreign savings for investment by firms, ensuring that these funds are allocated to the most productive use, and spreading risk and providing liquidity so that firms can operate the new capacity efficiently.

The Ethiopian financial system, which is dominated by the banking sector, has gone through several changes in last few years. The financial sector was a highly regulated one prior to the onset of structural reforms in 1992. At that time all of the banks were government owned, interest rates completely regulated, a substantial portion of the credit was earmarked for priority sectors, and there was a flourishing unorganized market for credit. In 1992 Ethiopia adopted development strategies that prioritize the modernization of its financial systems to provide better financial services, and to increase its gross domestic product (GDP) growth rate. Since then, the country has implemented reforms policies in its financial systems within the context of structural adjustment proposed by the Bretton Woods institutions. These reforms ought to foster financial development through the reduction of governmental intervention in the financial sectors and participation of private banks in order to promote economic growth through higher mobilization of savings and increase in domestic and foreign investments.

However, little information is available about the activities of the financial industry and how they affect the economy where they operate. Specifically, the relationship between bank credit and economic growth has attracted little attention from researchers in Ethiopia. The position of the country makes it somehow important to see the contribution of the financial sector in stimulating growth within the economy. In essence, can we say that the financial institutions are well positioned to assist the economy in generating growth thereby improving the well being of the population? Thus, this paper is an attempt to fill such gap and stimulate ideas within this relatively under researched areas using time series data. Based on the aforementioned, it may be apt to state the research questions as follows:-

- 1) Is bank credit a significant instrument for generating economic growth in Ethiopia in the long-run?
- 2) Is there a long-run causal relationship between bank credit and economic growth in Ethiopia?

Therefore, looking at the importance of bank credit in Ethiopian economy, the main objective of this study is to investigate the long-run relationship between bank credit and economic growth in Ethiopia using the Johansen cointegration and Granger casualty tests.

The remainder of the paper proceeds as follows: Section two provide review of related literature. Then, the data and the specification of bivariate VAR model are described. The empirical results of Johansen cointegration and Granger causality tests are presented analytically and discussion issues resulted from this empirical study are developed in section four, while in the final section conclude the study.

### 2. REVIEW OF LITERATURE

The relationship between the size of a country's financial sector and its rate of economic growth has been the subject matter of research since last few decades. However, the empirical evidence on the impact of finance upon economic growth has been mixed and remained a debated subject. Central to this debate is the question of whether strong economic performance is finance-led or growth driven. The question is germane because the determination of the causal pattern between finance and growth has important implications for policy-makers' decisions about the appropriate growth and development polices to adopt. Keynes



(1930) as cited in Arestis (2005), in his 'A Treatise on Money', argued for the importance of the banking sector in economic growth. He suggested that bank credit is the pavement along which production travels, and the bankers if they knew their duty, would provide the transport facilities to just the extent that is required in order that the productive powers of the community can be employed at their full capacity. In the same spirit Robinson (1952) as one of the initial supporters of the demand-following hypothesis argues that financial sector has minor effect on growth. Economic development creates demand for financial intermediaries leading to growth in lending facilities of the credit institutions.

On the other hand, Schumpeter (1934) emphasized the importance of banks and credit in economic development as early as 1911. According to Schumpeter, banks channel savings to firms and entrepreneurs who offer feasible and profitable investment projects. By doing so, banks and financial institutions may affect economic growth and development. However, one should note that increased saving is not necessary in this view; supplying and allocating available savings more efficiently to firms and entrepreneurs might also spur economic growth (King and Levine, 1993; Bloch and Tang, 2003). Gurley and Shaw (1955) as the initial supporters of the supply-leading hypothesis underline the effects of financial system on macroeconomic growth.

Stiglitz and Weiss (1981) were the first to consider the importance of banks in allocating credit efficiently, particularly to new and innovative investments. A high risk premium would only encourage the riskier borrowers, as the higher the risk the higher the expected return from investment. The expected return of the borrowers is an increasing function of the riskiness of their projects. This fact would discourage less risky investments from taking place, although they could be more productive (selection effect). Safe borrowers, which deal with banks only, will be left with no other choice. At times of high interest rates, investors would favour investments with a high probability of default (incentive effect). Reducing opportunities to innovate will have a negative impact on economic growth in the long run.

There is a substantial literature on the role of credit market frictions for economic growth (e.g. Greenwood and Jovanovic, 1990 and Bencivenga and Smith, 1991). Their common view is that a higher level of financial activity spurs economic growth. They also stressed the financial sector in an economy can be important in determining the average productivity of capital, itself being one of the main channels of economic growth. The screening and monitoring of investment projects, which the financial system routinely engages in, are likely to help boost the efficiency of investment (Pagano, 1993). Fry (1995) also demonstrates that the development of financial system has positive effects on (i) the long-run rate of economic growth or (ii) the volume or efficiency of investment. However, the causal nature of this relationship is now known to exhibit considerable variation across countries, which indicates that institutional factors or policies may play a critical role in determining how the process of financial development affects economic growth in a given country (Arestis and Demetriades, 1997).

King and Levine (1993) use bank credit to the private sector as one of the measures of bank development for several countries and find that bank based financial structure development can spur economic growth in the long run. However, some economists still would argue that finance and growth are unrelated. A good example of this view is Lucas (1988) who argues that economists 'badly over-stress' the role of the financial system, thereby reinforcing the difficulties of agreeing on the link and its direction between finance and growth. Khan and Senhadji (2000) also used domestic credit to the private credit as a share of GDP as one of the variables to measure financial depth in their study of financial development and growth relationship in 159 countries over the period 1960-1999 and found that it has statistically significant affect economic growth. Further Levine, (2002) shows that the impact of bank credit on economic growth acts mainly through total factor productivity rather than through capital accumulation or savings rates and concludes that 'maybe Schumpeter was right'. He also emphasized the critical importance of the banking system in economic growth and highlight circumstances when banks can actively spur innovation and future growth by identifying and funding productive investments.

A somewhat different conclusion, albeit supportive for the general direction of the argument is that of Aghion et al (2005) who claim that financial development explains whether there is convergence or not but it does not exert a direct effect on steady-state growth. An increasing number of recent contributions including, Beck and Levine (2004), Loayza and Rancière (2006), and Saci et. al (2009) have also provided evidence (for a variety of sample periods, sample of countries and techniques) in favour of a negative (and significant) impact of banking sector activity upon economic growth in the short-term, although the impact becomes positive and significant in the long run. Beck and Levine (2004) initially constructed a panel with data averaged over five-year intervals over the period 1986-1998 for 40 countries. The averaging was aimed at removing the effect of the business cycle. This study found that both financial markets and banks did indeed play a positive and significant role in influencing economic growth, even when selected control variables were added to the model. However, the relationship between financial variables and economic growth broke down, in particular for the banking variable when using annual data. They tentatively suggested that this was due to "credit surges" that had also been found to be good predictors of banking crises and subsequent economic slowdowns.

In a recent paper, Loayza and Rancière (2006) empirically investigated and provided supportive evidence to Beck and Levine (2004) in this apparent debate. They empirically proved that the relationship between financial variables and economic growth (measured by the rate of growth of GDP per capita) is significant and positive only in the long-run using a model with domestic credit by banks and other financial institutions as a percentage of GDP as their financial development variable and a number of other well established control variables (always included in cross-section study). The technique they adopted was a panel error-correction model that allows the estimation of both short and long-run effects from a general Autoregressive Distributed Lags (ARDL) model. Their sample consisted of annual data with 75 countries over the period 1960-2000. Saci et.al (2009) estimated the relationship for 30 developing countries with annual data over the period 1988-2001 applying two-step GMM. They found that domestic credit by banks and other financial institutions as a percentage of GDP has a significantly negative coefficient with stock market traded value over GDP. When stock market traded value over GDP is replaced by, stock market turnover ratio, the effect of domestic credit by banks and other financial institutions as a percentage of GDP became insignificant. However, in each case the effect of the stock market variables on growth is positive and significant.

A Granger Causality test designed by Mishra et.al (2009) to test credit market development and economic growth reveals that the direction of causality run from credit to the private sector to economic growth in India for the period of 1980-2008. In other words they provide evidence in support of the fact that credit market development spurs economic growth. However, the findings of Pradhan (2009) provides evidence for a bidirectional causality between economic growth and bank credit in India using monthly data set for the period 1993 - 2008. Unlike Mishra et.al (2009), who use annual time series data on real GDP and credit to the private sector as a ratio of nominal GDP in their analysis, the empirical investigation of Pradhan (2009) uses the index of industrial production as a proxy for economic growth (for monthly data for GDP is not available) and bank credit, as a measure of economic growth and credit market development, respectively. But nothing is mentioned whether bank credit represents total bank credit or bank credit to the private sector only in the later work.

Vazakidis and Adamopoulos (2009) investigated the relationship between credit markets development and economic growth in Italy for the period 1965-2007 using Vector Error Correction Model (VECM). The empirical results indicated that economic growth had a positive effect on credit market development, while inflation rate had a negative effect. Bank development was determined by the size of bank lending directed to private sector at times of low inflation rates leading to higher economic growth rates. The study by Dişbudak (2010), which examine the relationship between financial development and economic growth in Turkey for the period 2001-2008 using the ARDL technique indicates that a higher level of bank credit has caused economic growth between 1961 and 2002 in Turkey, but it has inversely worked between 2003 and 2008.

In Africa, the most recent studies about the subject include the Ghirmay (2004), Agbetsiafe (2004), Abu-Bader and Abu-Qarn (2008), Balamoune-Lutz (2008), Atindehou et.al (2005), Odhiambo (2007), and Ezzo (2010). As it is elsewhere, there is no consensus on direction of causality between financial development and economic growth. For example, the results by Ghirmay (2004) provided evidence in support of finance-led growth in eight out of the thirteen Sub-Saharan countries investigated. In the same way, Agbetsiafe (2004) found unidirectional causality running from financial development to economic growth in seven African countries lending credence to finance-led growth hypothesis. Abu-Bader and Abu Qarn (2008) equally provided evidence in support for finance-led growth in Egypt, Morocco, and Tunisia. However, Odhiambo (2007) found conflicting results for three Sub-Saharan African countries investigated. He found evidence in support of demand-following hypothesis in Kenya and South Africa while in Tanzania the supply-leading hypothesis was supported. Similarly, Balamoune-Lutz (2008) obtained mixed results for North African countries. Atindehou et al (2005) however, found weak causal relationship in almost all the twelve West African countries included in their study.

Esso (2010) examine the cointegrating and causal relationship between financial development and economic growth in the ECOWAS countries for the period 1960 - 2005. The study uses real gross domestic product per capita and credit to private sector as a ratio of GDP as a measure for economic growth, and financial development, respectively. The results show that there is a long - run relationship between financial development and economic growth in five countries, namely, Cape Verde, Cote d'Ivoire, Ghana, Guinea and Liberia. In addition, the Granger casualty results provide evidence that GDP per capita significantly causes financial development in Cote d'Ivoire (demand following hypothesis) while financial development 'leads' economic growth in Ghana, Guinea, Liberia and Mali. There is bidirectional causality in the case of Cape Verde and Sierra Leone

**3. DATA AND METHODOLOGY**

The data that are used in this study are annual time series data spanning the period from 1972 to 2011 for Ethiopia regarding 1999/2000 as a base year. All the data were obtained from the Ministry of Finance and Economic Development (MoFED), National Bank of Ethiopia (NBE) Macro database (2010/11) on Ethiopian economy, and International Monetary Fund (IMF)- (2012) CD-ROM.

This study adopts the Vector Autoregressive Model (VAR) to estimate the direction of causality between credit market development and economic growth in Ethiopia. To this end, we used the log of credit to private sector to gross domestic product (GDP)<sup>1</sup>. According to (Shan and Jianhong, 2006), credit to private sector ratio is an appropriate measure of financial development because it is associated with mobilizing savings to facilitating transactions, providing credit to producers and consumers, reducing transaction costs and fulfilling the medium of exchange function of money. This ratio stresses the importance of the role played by the financial sector, especially the deposit money banks, in the financing of the private economy. It isolates credit issued to the private sector from credit issued to governments, government agencies, and public enterprises. Also, it excludes credits issued by the Central Bank (Levine et al, 2000 and Vazakidis, 2006). The underlying assumption is that credit provided to the private sector generated increases in investment and productivity to a much larger extent than the credits to the public sector. It is also argued that loans to the private sector are given under more stringent conditions and that the improved quality of investment emanating from financial intermediaries' evaluation of project viability is more significant for private sector credits (Levine and Zervos, 1998). Following, the study by Esso, (2010) we used the log of real GDP per capita income as a measure of economic growth. Thus, the VAR model is given as follows:

$$\ln RGDPY_t = \alpha_0 + \beta_1 \ln PBC_{t-1} + \epsilon_t \dots\dots\dots (1)$$

Where, *RGDPY* is real GDP per capita income as a proxy for economic growth and *PBC* is bank credit to private sector as a percentage of GDP in Ethiopia. Both *RGDPY* and *PBC* variables are expressed in national currency.  $\alpha, \beta,$  and  $\epsilon_t$  are the drift term, estimated coefficients, and the error term, respectively. In this study, PcGive 12.0 econometrics software is for regression estimation.

**3.1. STATIONARY TEST**

The pre-requisite of cointegration test is the stationarity of each individual time series over the sample period. The conventional Granger causality (Granger, 1988) test based on VAR is very conditional with respect to stationarity of the variables. Hence, if the time series are non-stationary, the stability condition of VAR is not met, implying that the test statistic of Granger causality is invalid. In this case, cointegration and Vector Error Correction Model (VECM) are recommended to investigate the relationship between non-stationary variables. So the first and prime condition of VAR process is to test the stationarity of the variables. The modelling procedure of unit root test of the series at their level is described as follows:

$$\Delta Y_t = \alpha_0 + \alpha_2 Y_{t-1} + \sum_{i=1}^p \delta_i \Delta Y_{t-i} + \epsilon_t \dots\dots\dots (2a)$$

Where Y is the variable of choice;  $\Delta$  is the first- difference operator;  $\alpha_i$  (for i = 1 and 2) and  $\delta_i$  (for  $i = 1, 2, \dots, p$ ) are constant parameters; and  $\epsilon_t$  is a stationary stochastic process. *p* is the number of lagged terms chosen by Akaike Information Criterion (AIC) to ensure that  $\epsilon_t$  is white noise. The hypotheses of the above equation form are:

- $H_0 : \alpha_2 = 0$  , i.e., there is a unit root – the time series is non-stationary.
- $H_1 : \alpha_2 \neq 0$  , i.e., there is no unit root – the time series is stationary.

If the calculated ADF test statistic is higher than McKinnon's critical values, then the null hypothesis ( $H_0$ ) is accepted this means that a unit root exists in  $Y_{t-1}$  and  $\Delta Y_{t-1}$ , implying that the series are non-stationary or not integrated of order zero, i.e., I(0). Alternatively, the rejection of the null hypothesis implies stationarity of the underlying time series. Failure to reject the null hypothesis leads to conducting the test on the difference of the time series, so further differencing is conducted until stationarity is achieved and the null hypothesis is rejected (Harris, 1995). Hence, in order to determine the order of integration of a particular series, equation (2a) has to be modified to include second differences on lagged first and *k* lags of second differences. This is as follows:

$$\Delta^2 Y_t = \psi_1 \Delta Y_{t-1} + \sum_{i=1}^p \theta_i \Delta^2 Y_{t-i} + \xi_t \dots\dots\dots (2b)$$

In this case, the hypotheses to be tested are:

- $H_0 = \psi_1 = 0$  , i.e., there is a unit root – the time series is non-stationary.
- $H_1 = \psi_1 \neq 0$  , i.e., there is no unit root – the time series is stationary.

If the time series are stationary in their first differences (that is  $\psi_1 \neq 0$ ), then they can be said integrated of order one, i.e., I (1); if stationary in their second differences, then they are integrated of order two, i.e., I(2). To test for stationarity, the Augmented Dickey Fuller (ADF) [Dickey and Fuller, 1981] and Phillips and Perron (PP) [Phillips and Perron, 1988] tests are applied to equations (2a) and (2b).

<sup>1</sup> The measures of bank credit used in this study address the stock-flow problem of financial intermediary balance sheets items being measured at the end of the year, while nominal GDP is measured over the year. To circumvent any inconsistency when employing a ratio of a stock and a flow variable, a number of authors have attempted to deal with this problem by calculating the average of the financial development measures in year *t* and *t – 1* and dividing by GDP in year *t* (King and Levine 1993).

3.2. COINTEGRATION TEST

The necessary criterion for stationarity among non-stationary variables is called cointegration. Testing for cointegration is necessary step to check if our modelling empirically meaningful relationships (Gutierrez et.al, 2007). In financial economics, two variables are said cointegrated when they have long-term, or equilibrium relationship between them (Engle and Granger, 1987). Thus, in this study Johansen (1988) cointegration analysis has been performed to investigate long term relationship between bank credit and real economic growth in Ethiopia. The purpose of the cointegration test is to determine whether a group of non-stationary series is cointegrated or not. The vector autoregressive (VAR) model as considered in this study is:

$$Y_t = A_1 Y_{t-1} + A_2 Y_{t-2} + \dots + A_p Y_{t-p} + B X_t + \varepsilon_t \tag{3}$$

Where  $Y_t$  is a  $k$ -vector of non-stationary I(1) endogenous variables;  $X_t$  is a  $d$ -vector of exogenous deterministic variables;  $A_1 \dots A_p$  and  $B$  are matrices of coefficients to be estimated and  $\varepsilon_t$  is a vector of innovations that may be contemporaneously correlated but are uncorrelated with their own lagged values and uncorrelated with all of the right hand side variables. Since most economic time series are non-stationary, the above stated VAR model is generally estimated in its first-difference form as:

$$\Delta Y_t = \Pi Y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta Y_{t-i} + B X_t + \varepsilon_t \tag{4}$$

Where,  $\Pi = \sum_{i=1}^p A_i$  and  $\Gamma_i = -\sum_{j=i+1}^k A_j$

Granger's representation theorem asserts that if the coefficient matrix  $\Pi$  has reduced rank  $r < k$ , then there exist  $k \times r$  matrices  $\alpha$  and  $\beta$  each with rank  $r$  such that The method states that if  $\Pi$  matrix has reduced rank  $r < k$ , then there exists  $k \times r$  matrices of  $\alpha$  and  $\beta$  each with rank  $r$  such that  $\Pi = \alpha \beta'$  and  $\beta' Y_t$  is  $I(0)$ .  $r$  is the number of co-integrating relations (the co-integrating rank) and each column of  $\beta'$  is the co-integrating vector and  $\alpha$  is the matrix of error correction parameters that measures the speed of adjustments in  $\Delta Y_t$ . The Johansen approach to cointegration test is based on two test statistics, viz., the trace test statistic, and the maximum eigenvalue test statistic, as suggested by Johansen (1988) and Oseterwald Lenum (1992).

**Trace Test Statistic:** The likelihood ratio statistic (LR) for the trace test ( $\lambda_{trace}$ ) as suggested by Johansen (1988) can be specified as:

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^k \log(1 - \hat{\lambda}_i) \tag{5a}$$

Where,  $\hat{\lambda}_i$  is the  $i^{th}$  largest eigenvalue of matrix  $\Pi$  and  $T$  is the number of observations. In the trace test, the null hypothesis is that the number of distinct cointegrating vector(s) is less than or equal to the number of cointegration relations ( $r$ ). In this statistic  $\lambda_{trace}$  will be small when the values of the characteristic roots are closer to zero.

**Maximum Eigenvalue Test:** The maximum eigenvalue test as suggested by Johansen (1988) examines the null hypothesis of exactly  $r$  cointegrating relations against the alternative of  $r + 1$  cointegrating relations with the test statistic:

$$\lambda_{max}(r, r + 1) = -T \ln(1 - \hat{\lambda}_{r+1}) \tag{5b}$$

Where  $\hat{\lambda}_{r+1}$  is the  $(r + 1)^{th}$  largest squared eigenvalue. In the trace test, the null hypothesis of  $r = 0$  is tested against the alternative of  $r + 1$  cointegrating vectors. If the estimated value of the characteristic root is close to zero, then the  $\lambda_{trace}$  will be small.

An important aspect of empirical research based on VAR is the choice of the lag order, since all inference in the VAR model depends on the correct model specification. The most common traditional information criteria being the Akaike Information Criteria (AIC), Schwarz Criterion (SC), Hannan and Quinn's (HQ) and the likelihood ratio (LR). As a result, since Johansen's cointegration tests are very sensitive to the choice of lag length, the optimal lags required in the cointegration test were chosen using the AIC.

3.3. VECTOR ERROR CORRECTION MODEL (VECM)

Since the variables included in the VAR model are found to be cointegrated, the next step is to specify and estimate a vector error correction model (VECM) including the error correction term to investigate dynamic behaviour of the model. Once the equilibrium conditions are imposed, the VEC model describes how the examined model is adjusting in each time period towards its long-run equilibrium state. The dynamic specification of the model allows the deletion of the insignificant variables, while the error correction term is retained. The final form of the vector error-correction model (VECM) was selected according to the general to specific methodology suggested by Maddala, (1992), and Harris (1995). The size of the error correction term indicates the speed of adjustment of any disequilibrium towards a long-run equilibrium state (Engle and Granger, 1987). The general form of the vector error correction model (VECM) is the following one:

$$\Delta \ln RGD PY = \alpha_0 + \sum_{i=1}^k \beta_1 \Delta \ln RGD PY_{t-i} + \sum_{i=1}^k \beta_2 \Delta \ln PBC_{t-i} + \gamma ECT_{t-1} + \varepsilon_t \tag{6}$$

Where  $\Delta$  is the first difference operator,  $ECT_{t-1}$  is the error correction term lagged one period,  $\gamma$  is the short-run coefficient of the error correction term ( $-1 < \gamma < 0$ ),  $\varepsilon_t$  is the white noise term.

3.4. LONG-RUN GRANGER CASUALTY TEST

This study uses Granger Causality test for testing the causality between bank credit and economic growth in Ethiopia in the long-run. The Granger procedure is selected because it consists the more powerful and simpler way of testing causal relationship (Granger, 1986). This test in the VAR framework formulates the null and alternative hypotheses as:

$H_0$  : No causal relation between bank credit and real economic growth

$H_1$  : There is causal relationship between bank credit and real economic growth

The above hypotheses are tested in the context of the VAR of the form:

$$\ln RGDPY_t = \alpha_1 + \sum_{i=1}^p \beta_i \ln RGDPY_{t-i} + \sum_{i=1}^p \delta_i \ln PBC_{t-i} + \varepsilon_{1t} \tag{7a}$$

$$\ln PBC_t = \alpha_2 + \sum_{i=1}^p \lambda_i \ln PBC_{t-i} + \sum_{i=1}^p \psi_i \ln RGDPY_{t-i} + \varepsilon_{2t} \tag{7b}$$

where  $RGDPY$  is the dependent and  $PBC$  is the explanatory variable in log form and  $\varepsilon_t$  is the white noise error term in (7a) while  $PBC$  is the dependent and  $RGDPY$  is the explanatory variable in (7b). Moreover,  $t$  is the sample size and  $P$  is the lag length of the unrestricted VAR model.

According to Seddighi et al. (2000: 310), there exists a unidirectional causality if only  $\{\delta_{11}, \delta_{12}, \dots, \delta_{1k}\} \neq 0$  and  $\{\psi_{21}, \psi_{22}, \dots, \psi_{2k}\} \neq 0$  in equation (7a) and (7b) and bi-directional causality if both  $\{\delta_{11}, \delta_{12}, \dots, \delta_{1k}\} \neq 0$  and  $\{\psi_{21}, \psi_{22}, \dots, \psi_{2k}\} \neq 0$  in the two equations, respectively.

4. RESULTS AND DISCUSSION

Before applying the unit root tests the logarithm of variables are taken because log variables give us elasticities and reduce the impact of outliers and smoothes out the time series (Maddala, 1992). A necessary but not sufficient condition for cointegration is a test for unit root. Hence, prior to conducting the long run estimation among variables concerned, we examined the time series characteristics of the data using ADF test and PP test to all the variables in levels and in first difference. The results of ADF test summarized in Table 1 shows show that the null hypothesis of the presence of a unit root is rejected for all the variable of study when they are transformed into their first differences. That is, the variables are stationary and integrated of order one, i.e., I(1). Thus, if the variables are I(1), then Johansen cointegration test is used to find out whether there exist a long-run relationship between the variables or not. The linear combination of I(1) variables will be stationary if variables are cointegrated (Vuranok, 2009).

TABLE 1: UNIT ROOTS TEST RESULTS WITHOUT TREND

Variables	ADF Statistics		PP Statistics		Inference
	Level	Difference	Level	Difference	
$\ln RGDPY$	0.1666	-3.901**	0.8733	-3.794**	I(1)
$\ln PBC$	-2.609	-3.708**	0.2098	-3.688**	I(1)

**Note:** ADF: Augmented Dickey Fuller Test; PP: Phillips-Perron Test; I (1): Integrated of order one; \*\*: Indicates Statistical Significance at 1% significance level, and other notations are defined earlier

Since it has been determined that the variables under study are integrated of order one, then the Johansen cointegration test is performed to see whether there exists a long-run equilibrium relationship among the variables included in the model. The testing hypothesis is the null of non-cointegration against the alternative of existence of cointegration. It is well known that Johansen’s cointegration tests are very sensitive to the choice of lag length. Given this type of asymmetric lag structure in the VAR, we have computed the information criteria statistics for every possible combination of lag lengths in order to determine the lag structure of the VAR. The lag structure that generates the minimum AIC is selected as the optimal lag structure (see Annex 1). As can be seen from Annex 1,

the AIC suggest that the optimal lag length should be 7 ( $p = 7$ ) as opposed to lag 2 as suggested by LR, SC, and HQ information criteria (see Appendix 1).

The results of the Johansen’s Cointegration test are shown in Table 2. The cointegration vector of the model of Ethiopia has rank  $r < n(n = 2)$ . The process of estimating the rank  $r$  is related with the assessment of eigenvalues, which are the following for Ethiopia:

$$\hat{\lambda}_1 = 0.655168, \hat{\lambda}_2 = 0.16018$$

The table also indicates that the critical values for the trace statistic defined by equation (7a) are 15.7 for  $H_0 : r = 0$ , and 9.2 for  $H_0 : r \leq 1$ , while critical values for the maximum eigenvalue test statistic defined by equation (7b) are 20.0 for  $H_0 : r = 0$  and 9.2 for  $H_0 : r \leq 1$  both at the significance level 5%.

TABLE2: THE JOHANSEN COINTEGRATION TEST BETWEEN LRGDPY, AND LPBC (VAR=7)

Testing hypothesis	Country: Ethiopia			
	Johansen Test Statistics			
	$\lambda_{trace}$	Critical value (5%)	$\lambda_{max}$	Critical value (5%)
$H_0 : r = 0 \quad \& \quad r = 1$	40.9**	15.7	35.14**	20.0
$H_0 : r \leq 1 \quad \& \quad r = 2$	5.761	9.2	5.761	9.2

**Note:** r indicates the number of cointegrating relationships; CV: Critical values. \*\*: Indicates Statistical significance at 1%.

The Trace test indicates the existence of one cointegrating equations at 1% level of significance. Moreover, the maximum eigenvalue test makes the confirmation of this result and hence the two variables included in the study – real GDP per capita and domestic bank credit to the private sector to GDP ratio have long-run or equilibrium relationship among them. Thus, the number of statistically significant cointegration vectors for Ethiopia is equal to one and the estimated cointegration relationship is:



$$\ln RGDPY = 8.7020 + 0.74469 \ln PBC$$

t-prob.                      [0.0001]\*\*\*                      [0.0000]\*\*\*

The estimated equation shows that an increase in bank credit to the private sector boosts real GDP per capita income significantly in the long-run (see Appendix 2 for the computation of the t-probability). Moreover, the magnitude of the estimated coefficients is quite large indicating that bank credit strongly determines the magnitude of real economic growth in the long-run. The existence of a cointegrating relationship between bank credit and economic growth for Ethiopia suggests that there must be causality between these variables in at least one direction in the long-run.

The error-correction model with the computed t-values of the regression coefficients is reported in Table 3. The dynamic specification of the model allows the deletion of the insignificant variables, while the error correction term is retained. The results reveal that the coefficient of bank credit to the private sector is significant in affecting real GDP per capita income growth. From the short-run supply elasticity of bank credit in Table 3 we can see that a short-run increase of bank lending to the private sector by 1 percent induces an increase in economic growth by about 0.08 percent in Ethiopia. However, unlike in the long-run, the magnitude of private bank credit coefficient is quite small and insignificant indicating that bank credit partially determines the magnitude of real economic

growth in the short-run. Likewise, the estimated coefficient of the saved residual from the Johansen cointegration estimation ( $ECT_{t-1}$ ) was statistically significant and has a negative sign and its magnitude is not greater than unity, which confirms that there is not any problem in the long-run equilibrium relation between the independent and dependent variable at 5% level of significance, but its relatively value about (-0.04) for Ethiopia. The speed of adjustment implies that 3.8 percent of the disturbance in the short-run will be corrected each year.

TABLE 3: VECTOR ERROR CORRECTION MODEL

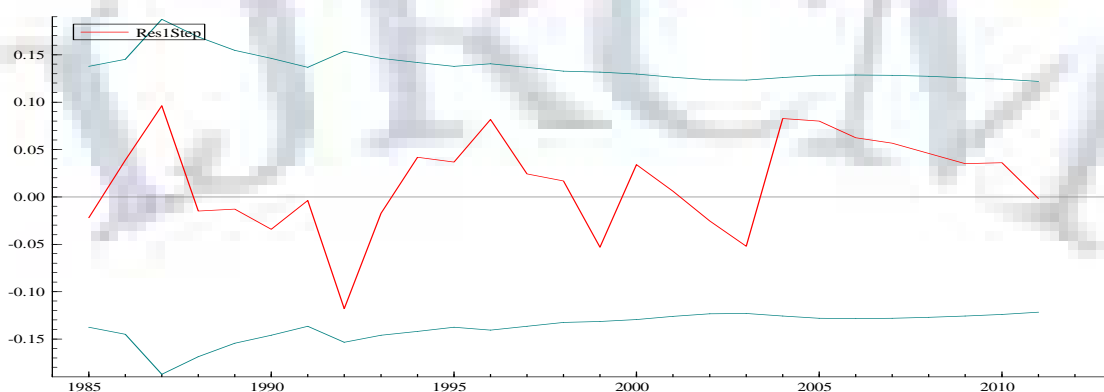
Dependent variable: $\Delta \ln RGDPY$				
Sample: 1971/72 – 2010/11				
Adjusted Sample: 1978/79 – 2010/11				
Independent variables	Coefficient	Std. Error	t-value	t-prob
Constant	-0.029017	0.027746	-1.046	0.3043
$\Delta \ln RGDP_{t-1}$	0.35741	0.162290	2.202	0.0358
$\Delta \ln PBC_{t-4}$	0.07977	0.07552	1.060	0.3000
$ECT_{t-1}$	-0.03805	0.104143	-2.737	0.0105
R <sup>2</sup> =0.165779    F(3,28)=5.5316 [0.0020]    \sigma 0.0609442    DW = 1.73				
RSS = 0.103997616 for 4 variables and 32 observations				
Model Diagnosis Tests				
AR 1-2 test:    F(2,26) = 1.8777 [0.1731]				
ARCH 1-1 test:    F(1,26) = 0.16164 [0.6909]				
Normality test:    Chi <sup>2</sup> (2) = 4.5128 [0.1047]				
hetero test:    F(6,21) = 0.28506 [0.9375]				
hetero-X test:    F(9,18) = 0.27026 [0.9750]				
RESET test:    F(1,27) = 0.032086 [0.8592]				

Note:  $\Delta$  denotes the first differences of the variables; R<sup>2</sup>: Coefficient of multiple determinations adjusted for the degrees of freedom (df); DW: Durbin-Watson statistic

The coefficient of determination (R<sup>2</sup>), indicate that about 16 percent of the real GDP per capita is explained by credit to the private sector included in the regression. The overall significance, F-test, also established all variables are jointly significantly different from zero at 1% significance level. Moreover, the bivariate system diagnostic test of the residuals (shown in the lower block of Table 3) also indicates the VECM have the desirable property of OLS. For instance, the LM test for serial autocorrelation does not provide any indication of the presence of serial correlation in the residual of real per capita income function. The result of heteroscedasticity test of the residuals also does not show evidence for autoregressive conditional heteroscedastic errors. This indeed is not surprising, since heteroscedasticity is not much problem in time series (Green, 1997).The Jarqu-Bera tests of skewness and kurtosis of the residuals revealed normality implying the absence of outliers in the data. The REST test provides no indication that the functional form of the VECM is inappropriate.

In order to strengthen our analysis, the stability of the parameters in real GDP per capita income model was examined by applying the cumulative sum of squares (CUSUMQ) plots from a one-step recursive residuals graphical plot estimation of the model (see Figure 1). The figure indicates that the null hypothesis of parameter stability cannot be rejected since the plot bounds within the 95% critical boundaries. This test indicates stability in the coefficients over the sample period at 5% level of significance.

FIGURE 1: PARAMETER STABILITY TEST: DIAGNOSTIC 1-STEP RESIDUALS +/- 2<sup>ND</sup> SE (CUSUM SQ)



In order to proceed to the Granger causality test and find the direction of causation between these two variables in the environment of VAR we used the lag length 7 as determined by Akaike Information Criteria (AIC). Table 4 presents the pairwise Granger-Causality test based on equation (7a) and (7b). The results show that the null hypothesis that private bank credit does not Granger cause real GDP is rejected at 1% level significance. However, the null hypothesis that real GDP does not Granger cause private bank credit cannot be rejected. The implication is that there is a unidirectional causal relationship between bank credit and economic growth with the direction from bank credit to economic growth for Ethiopia. The infers is that the growth of bank credit to the private sector

influences real GDP per capita growth in Ethiopia, but the reverse is not necessarily true. In other words, we can argue that economic growth in Ethiopia is caused by the expansion and improvement in financial sector in the long-run. Hence, the result that bank credit 'leads' economic growth in Ethiopia is consistent with the finance-led growth (or supply-leading) hypothesis previous studies by Odhiambo (2007) for Tanzania, Abu-Bader and Abu Qarn (2008) for Egypt, and Esso (2010) for Ghana, Guinea, Liberia and Mali.

TABLE 4: LONG-RUN GRANGER CAUSALITY TEST RESULTS

Pairwise Granger Causality Tests				
Date: 30/07/12 Time: 2:16				
Sample: 1978/79 – 2010/11				
Lags: 7				
Null Hypothesis:	Obs	F-Statistic	Probability	Decision
$\ln PBC$ does not Granger Cause $\ln RGDPY$	33	5.0229	0.0025	Reject
$\ln RGDPY$ does not Granger Cause $\ln PBC$		1.6043	0.1961	Accept

Note: \*The critical values of F for (8,32) degrees of freedom at 1%, and 5% and 10% levels of significance are 3.6353, and 2.9499 respectively.

## 5. CONCLUSION AND POLICY IMPLICATIONS

In this study we investigate the long-run dynamics between bank credit and economic growth in Ethiopia using annual time series data over the period from 1971/72-2010/11. The estimation process starts with examining stationarity property of the underlying time series data. The unit root test has been applied for the same. The dynamic interactions between the variables are investigated using the concept of Granger causality after testing for cointegration using the Johansen techniques to detect whether there is long-run relationship between bank credit and economic growth or not.

The estimated results confirmed that bank credit to the private sector to nominal GDP and real GDP per capita are non-stationary at the level data but found stationary at the first differences. Hence, they are integrated of order one. The empirical results from the Johansen cointegration test suggest the existence of a stable long-run relationship between bank credit and economic growth. Moreover, bank credit has a significant positive impact on economic growth in the long-run. However, the estimated coefficients are small in magnitude in the short run, suggesting that the relationship between bank credit and economic growth is rather weak in the short-run. Finally, the Granger Casualty analysis in the VAR framework suggests that there is a unidirectional causal relationship between bank credit to the private sector and economic growth with direction run from bank credit to economic growth in Ethiopia. Thus, it can be inferred that bank credit to the private sector has a direct positive effect in long-run economic growth of Ethiopia. This conclusion is consistent with the 'finance - led' growth (or supply - leading) hypothesis previously obtained by Odhiambo (2007) for Tanzania, Abu-Bader and Abu Qarn (2008) for Egypt, and Esso (2010) for Ghana, Guinea, Liberia and Mali.

The policy implication of our result is that bank credit to the private sector is an important policy variable to accelerate economic growth. Hence, the government should undertake essential measures to strengthen the long run relationship between bank credit to the private sector and economic growth. These measures include among others minimizing government intervention in the financial systems, increasing the status of financial institutions, and strengthen banking and financial governance. The lack of same not only affects the finance-growth nexus but also overall socio-economic development in the country.

The robustness of this study, however, is delimited by the inter-play of human capital, liquid liabilities of banks, and macro-economic factors such as the rate of investment, inflation, government final consumption, and openness to trade. Hence, the scope for further empirical research is to include more variables in the VAR model aiming at examining the relationship between bank credit and economic growth in Ethiopia. More importantly, further study should focus on the transmission mechanism through which bank credit affects long-run economic growth. Moreover, more light should be shed on the comparative analysis of empirical results for the pre-reform and post-reform periods using quarterly data in order to draw lesson how financial liberalization measures promote rapid and sustainable economic growth in Ethiopia.

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**APPENDIX**

**APPENDIX 1: LAG SELECTION CRITERIA**

Lags	LogL	LR	AIC	SC	HQ
1	80.5227156	191.199921	-3.82168	-3.56575	-3.72985
2	89.6596168	197.498945	-4.19261	-3.76167	-4.03928
3	88.21422	193.215671	-4.01158	-3.40204	-3.79669
4	88.0530615	190.216636	-3.89184	-3.10008	-3.61549
5	88.4462606	187.771958	-3.79693	-2.81928	-3.45945
6	92.5512023	189.039023	-3.91478	-2.74756	-3.51672
7	102.788119	196.438062	-4.41140	-3.05094	-3.95365

Source: Authors computation

**APPENDIX 2: FURTHER OUTPUT OF THE JOHANSEN COINTEGRATION TEST (VAR=7)**

Variables	standardized \beta' eigenvectors			standardized \alpha coefficients	
	ln RGDPY	ln PBC	Constant	ln RGDPY	ln PBC
ln RGDPY	1.0000	-0.74469	-8.7020	-0.43256	-0.050690
ln PBC	8.1680	1.0000	-59.853	0.34832	-0.010322
<b>Test of significance of beta coefficients</b>					
General restriction: LR test of restrictions, rank=1:Chi <sup>2</sup> (1)					
&3=0; 28.472 [0.0000]**					
&4=0; 15.487 [0.0001]**					

Source: Authors computation



**CONSUMPTION PATTERN AND EXPENDITURE ELASTICITIES OF RURAL POOR HOUSEHOLDS IN PUNJAB**

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**ABSTRACT**

*The present study examined the consumption pattern of rural poor households. To accomplish this objective primary data has been collected from 360 rural households from three districts (one from each region) of Punjab state of India. The sample households live 'below', 'at', and 'marginally above' poverty line. Per capita per day consumption of food and nutrient has been calculated. A variant of Working-Laser model was used to estimate Average Budget Share (ABS), Marginal Budget Share (MBS) and expenditure elasticities for each commodity. The results of ABS show that 72 percent of total expenditure was spent on food items and rest on non-food items. Per capita per day consumption of food and nutrients of sample households found to be less than the recommended dietary allowance given by ICMR for healthy life. MBS for milk was 22.31 which revealed that 22.31 percent of incremental income would be spent on milk. 9.87 percent of incremental income would be spent on vegetable and fruits, followed by pulses, oil and wheat. Among non-food items around 10 percent of incremental income would be spent on education and 6 percent on clothing. The expenditure elasticities were found to be higher for milk, vegetable, fruits and education which depicts that poor households intended to increase share of their income on these items. The study concludes that pattern of expenditure between food and non-food items is undergoing a change and the rural poor have also started spending more on non-food items. Women's educations play an important role in bringing about this change and should be given top priority in all development programmes for rural areas.*

**KEYWORDS**

Consumption Pattern, Expenditure Elasticities, Rural Development.

**INTRODUCTION**

The economic status of a society or community refers to its position as to where it stands on the ladder of financial position. Most important determinants of economic status of a society are its per capita income, the standard of living, the level of consumption etc. Different indicators of the levels of living presents the "Macro" as well as "Micro" level dimensions of the process of development. While per capita income and per capita consumption expenditure are some of the macro level indicators of development, the distribution of household expenditure is a micro level indicator. The standard of living of a household can be understood from the consumption pattern, and the quality of consumption budget clearly indicates the level of welfare of the household. Food consumption pattern of household is an important barometer of individual welfare and well-being in any country (Mathew (2003)).

Human life is ultimately nourished and sustained by consumption. During the last few decades, the world consumption has expanded at an unprecedented pace. The benefit of consumption has spread far and wide and today, more people are better fed and housed than ever before. Consumption clearly contributes to human development when it enlarges the capabilities and enriches the life of people without adversely affecting the well being of others. But the links are often broken and when they are, consumption patterns and trends turns inimical to human development exacerbating inequalities. In India also the existence of large disparities in consumption standards between regions and between classes of people is found. Wide economic disparities have been observed between the rich and poor especially due to the low rate of economic change among the poor sections of the population who generally fail to make use of the development programmes. The inequalities that persist between people, rich and poor, men and women, rural and urban and among different ethnic groups are seldom isolate, instead they are inter-related and over-lapping (Geetha(2011), Mathew (2003), UNDP(1988).

Consumption is a value of goods and services bought by people to satisfy the human wants. Consumption is normally the largest GDP component. Many persons judge the economic performance of their country mainly in terms of consumption levels and its dynamics. People in different position in respect to income have systematically different structures of consumption. The rich spend more, but they spend a lower percentage of income for food and other basic needs and poor spend higher percentage of their income on food items. The percentage values of an aggregation over all the households in a country can thus be used for judging income distribution and the development level of the society (Piana, 2001).

Velavan (1992) considered consumption expenditure as the expenditure incurred on food and non-food items. Food items included cereals, pulses, oils, spices and condiments, meat, fish, egg, fresh fruits, processed vegetable products, food products, milk and milk products, and other miscellaneous food items. Non-food items included clothing, rent, fuel and lighting, education, recreation, medical, expenses on cosmetics, toiletries and washing, expenses on travelling and other miscellaneous expenses. According to Thanmathi (1995), consumption expenditure included the amount spent on food items, housing, clothing, fuel and lighting, services, education, transport, electricity, medical, social and religious ceremonies, house repairs, recreation and taxes(Uma,2003).

For present study household consumption is defined as the amount spent on food items like cereals, pulses, vegetables and fruit, oil, milk, sugar and non-food items like clothing, education, medical, cosmetic and other miscellaneous expenditure.

**OBJECTIVES OF PRESENT STUDY**

The present study is based on the following objectives.

1. To study the consumption pattern of rural poor households.
2. To evaluate Average Budget share (ABS), Marginal Budget Share (MBS) and expenditure elasticities of sample households.
3. To examine the impact of household characteristics on household consumption pattern.

**DATA BASE AND METHODOLOGY****DATA**

Three-sixty rural households were surveyed during 2011-12 from three districts of Punjab state of India. Punjab state is divided into 3 regions: Majha, Malwa and Doaba. To cover all three regions, one district has been selected from each region. The selected districts are Amritsar, Muktsar and Jalandhar from Majha, Malwa and Doaba regions respectively. The households who constitute 'rural poor' have been identified as universe of present study. These households live



'below', 'at', and 'marginally' above poverty line. Multi-stage random sampling technique has been used to select the ultimate respondents. At first stage, from each district, two blocks were selected. From each selected block, two villages were selected. Further from each village 30 households were selected. Thus sample constitutes 360 households. In Punjab as a whole 360 respondents were interviewed through a structured interview schedule.

The consumption of some commodities is seasonal. To avoid this problem of seasonality we have collected data by aggregating the weekly data (in this case weekly recall) to annual basis.

**METHODOLOGY**

As our sample constitutes rural poor, their savings has been zero. Therefore household expenditure was almost equivalent to income. Household expenditure was therefore used as a proxy for income, as suggested by Hazell and Roell (1983). Total household expenditure was calculated as the sum of expenditure on rice, wheat, pulses, sugar, milk, vegetables and fruits, oil and other food items and non-food items like education, clothing, medical, cosmetics and miscellaneous commodities. A variant of the Working-Laser model, as used by Hazell and Roell (1993), Sheryl and Michael (2010) was used to estimate the absolute budget shares (ABSs), marginal budget shares (MBSs) and expenditure elasticities for each commodity. ABS measures the percentage of household expenditures on particular commodities and MBS measures the impact of change in income on consumption of particular commodities. The modified form of Working-Laser Model has been employed in this study.

$$E_i = \alpha_i + \beta_i E + \gamma_i E \log E \tag{1}$$

To capture the impact of difference in family composition on household expenditure, certain socio-economic variables have been included. The household variables included in the equation are:

- Reciprocal of Per Capita expenditure (PCE)
- Log of PCE
- Family Size/PCE (FZ)
- Sex of Head of family (D=1, for female headed household, 0 otherwise)
- Women Education (WE)
- Women Income (WI)
- District Dummy 1 (D1=1, Jalandhar District, 0 otherwise)
- District Dummy 2 (D2= 1, Amritsar District, 0 otherwise)

A number of household characteristic variables are included in a way that allows them to shift both the intercept and the slope of Engel functions (Hazell and Roell (1983)). The model is

$$E_i = \alpha_i + \beta_i E + \gamma_i E \log E + \sum_j (\mu_{ij} Z_j + \lambda_{ij} E Z_j) \tag{2}$$

Where E is the total per capita expenditure, Z<sub>j</sub> denotes the j<sup>th</sup> household characteristic variable and α<sub>i</sub>, β<sub>i</sub>, γ<sub>i</sub>, μ<sub>ij</sub>, λ<sub>ij</sub> are parameters to be estimated.

In expenditure share form equation 2 equivalent to:

$$S_i = \beta_i + \alpha_i/E + \gamma_i \log E + \sum_j (\mu_{ij} Z_j/E + \lambda_{ij} Z_j) \tag{3}$$

S<sub>i</sub> = E<sub>i</sub>/E is share of i<sup>th</sup> commodity in total per capita expenditure. The above share equation was estimated using Ordinary Least Square Method.

Following (Hazell and Roell (1983)), the Marginal and Average budget share for i<sup>th</sup> commodity was calculated using equation:

$$MBS_i = dE_i/dE = \beta_i + \gamma_i (1 + \log E) + \sum_j \gamma_{ij} Z_j \tag{4}$$

$$ABS_i = S_i = \text{Equation (3)} \tag{5}$$

$$E_i = MBS_i / ABS_i \tag{6}$$

**RESULTS AND DISCUSSION**

**CONSUMPTION PATTERN OF SAMPLE HOUSEHOLDS**

The consumption pattern of rural poor households has been analyzed by studying the differences in the expenditure on different items in consumption basket. The present study classified expenditure into 13 items. This includes 8 food items and 5 non-food items. Table 1 presents the average annual consumption expenditure of sample households.

**TABLE 1: DISTRIBUTION OF CONSUMPTION EXPENDITURE OF SAMPLE HOUSEHOLD ON FOOD AND NON-FOOD ITEMS (RS./YEAR/HOUSEHOLD)**

Items	Amritsar	Muktsar	Jalandhar
<b>Food</b>			
Rice	6202.02 (21.34)	3427.68(13.14)	7312.07 (22.47)
Wheat	615.78 (2.12)	2818.29 (10.80)	2515.74 (7.31)
Pulses	1470.40 (5.06)	1296.26(4.97)	1681.85 (4.89)
Sugar	1333.15(4.59)	1148.09(4.39)	1496.61 (4.35)
Milk	2277.00 (7.84)	1956.72 (7.59)	2706.36 (7.87)
Vegetable and fruits	1734.34 (5.97)	1335.37 (5.12)	2479.66 (7.21)
Oil	2494.59 (8.59)	2201.10 (8.43)	2254.14 (6.56)
Others	5294.96 (18.22)	5120.53 (19.62)	5263.19 (15.30)
Sub-total	21422.24 (73.73)	19304.04(73.97)	25709.35(74.76)
<b>Non-food</b>			
Education	1474.82 (5.07)	1358.12 (5.20)	1668.34 (4.85)
Clothing	2767.23 (9.52)	2325.13 (8.92)	2825.69 (8.22)
Medical	875.91 (3.01)	696.92 (2.67)	960.73 (7.43)
Cosmetic	582.46 (2.00)	442.73 (1.69)	671.30 (1.95)
Miscellaneous	1934.64 (6.67)	1969.26 (7.55)	2554.72 (7.43)
Sub-total	7635.06 (26.27)	6792.16(26.03)	8680.78 (25.24)
Total	29057.30 (100)	26095.20(100)	34390.13(100)

Source: Survey data. Note: values in parenthesis are percentage to total

The results of above table revealed that food items constituted 74 to 75 (approximately) percent of total budget, whereas share of non-food items was 25 to 26 percent. Among food items cereals constituted 24 to 30 percent, pulses 4 to 5 percent, milk 7 to 8 percent, vegetable & fruits 5 to 7 percent of total budget across the regions. Among non-food items education constituted 4 to 5 percent, clothing 8 to 10 percent, medical expenses 3 to 8 percent and miscellaneous items constituted 6 to 8 percent of total budget across the regions. So study found that cereals constituted major share of food basket of rural poor households.

The share of expenditure on food and non-food did not show much variation across the district. The reason may be that all sample households come under below poverty line or marginally above that.

**TABLE 2: DISTRIBUTION OF CONSUMPTION EXPENDITURE OF SAMPLE HOUSEHOLD FOR FOOD ITEMS (RS./YEAR/HOUSEHOLD)**

Items	Amritsar	Muktsar	Jalandhar
Rice	6202.02 (28.95)	3427.68(17.76)	7312.07 (28.44)
Wheat	615.78 (2.87)	2818.29 (14.59)	2515.74 (9.79)
Pulses	1470.40 (6.86)	1296.26(6.71)	1681.85 (6.54)
Sugar	1333.15(6.22)	1148.09(5.95)	1496.61 (5.82)
Milk	2277.00 (10.63)	1956.72 (10.14)	2706.36 (10.53)
Vegetable and fruits	1734.34 (8.10)	1335.37 (6.92)	2479.66 (9.64)
Oil	2494.59 (11.65)	2201.10 (11.40)	2254.14 (8.77)
Other	5294.96 (24.72)	5120.53 (26.53)	5263.19 (20.47)
Total	21422.24 (100)	19304.04(100)	25709.35(100)

Source: Survey data. Note: values in parenthesis are percentage to total

Consumption expenditure per annum for food for sample households has been given in table 2. The results revealed that food grains constitute 30 to 45 percent of food expenditure of sample households across the region. Milk constitutes 10 to 11 percent of food expenditure. Vegetable and fruits also received attention in food basket of poor households as indicated by share of 7 to 10 percent. Next preference is given to oil which constitute 9 to 12 percent of food expenditure.

#### FOOD AND NUTRIENT CONSUMPTION

An attempt has also been made to calculate the per capita per day consumption of food and nutrients. By making comparison of calculated per capita per day consumption with Recommended Dietary Allowance (given by ICMR (Annexure 1, 2, 3)), we have examined the nutritional status of sample households.

**TABLE 3: PER CAPITA PER DAY CONSUMPTION OF FOOD AND NUTRIENT (GRAMS/DAY/PERSON)**

items	Amritsar	Muktsar	Jalandhar
<b>Food</b>			
Rice	227.43	105.79	260.90
Wheat	55.71	214.59	110.72
Pulses	39.90	29.61	44.41
Sugar	28.59	21.23	25.13
Milk	210.39	178.09	242.75
Oil	36.67	26.58	40.05
<b>Nutrients</b>			
Protein(g)	42.60	23.98	45.20
Fat(g)	43.37	35.80	51.48
Energy(Kcal)	1628.05	1587.86	2075.94

Source: Authors' Calculations.

The results of table 3 depicts that per capita per day consumption of cereals was 283.14 grams, 320.38 grams and 371.62 grams in three districts of Punjab as against recommended dietary allowance of 420 and 300 grams for Sedentary and 480 grams and 360 grams for Moderate work for both men and women. The consumption of pulses was 39.90 grams, 29.61 grams and 44.41 grams in Amritsar, Muktsar and Jalandhar districts respectively, whereas recommended consumption was 60 grams for Sedentary and 90 and 75 grams for Moderate work for both men and women respectively. The recommended consumption of milk was 300 ml/day for Sedentary and 500 ml/day for Moderate which has been far away from calculated consumption of 210.39, 178.09 and 242.75 ml/day across three regions.

Per capita per day consumption of nutrients has also been calculated. The result shows that average consumption of protein was 42.60, 23.98 and 45.20 grams/day in three districts of Punjab as against recommended consumption of 60 and 50 grams/day men and women respectively. The recommended consumption of energy was 2875 and 2225 Kcal/day which was far away from calculated energy consumption of rural poor households.

So study has found that per capita per day consumption of food items of rural poor households was less than recommended dietary allowance for healthy life.

#### EFFECT OF HOUSEHOLD CHARACTERISTICS ON AVERAGE BUDGET SHARE

The present study has also examined the impact of household characteristics on consumption pattern. The study attempted to examine how household consumption pattern can change as income and socio-economic characteristics change. The household expenditure response to price change has not been taken into account, because cross sectional data for single period will not reflect price variations. The effect of household characteristics on the average budget share for sample households has been given in table 4.

TABLE 4: EFFECT OF HOUSEHOLD CHARACTERISTIC VARIABLE ON AVERAGE BUDGET SHARE

Items	Const	1/E	Log E	FZ	HF	WE	WI	D1	D2	R <sup>2</sup>
Rice	1.185 (0.998)	-0.117 (-0.371)	-0.085 (-0.843)	0.008 (0.554)	0.019 (0.810)	-9.030 (-0.133)	0.035 (1.530)	-5.489 (-0.0241)	-5.489 (-0.24)	0.989
Wheat	0.198 (0.227)	0.121 (2.045)**	-0.014 (-9.919)*	0.008 (0.564)	0.115 (1.927)***	0.002 (1.311)	0.009 (1.32)	-0.044 (-0.803)	-0.029 (-0.239)	0.756
Pulses	0.451 (1.592)	0.005 (6.389)*	-0.041 (-13.201)*	0.025 (-0.147)	0.000 (-0.323)	0.002 (2.627)***	0.140 (1.803)**	-0.004 (-0.159)	0.001 (0.310)	0.873
Sugar	0.408 (0.724)	0.006 (11.082)*	-0.037 (17.503)*	0.014 (1.178)**	0.001 (1.022)	-7.278 (-0.153)	-0.036 (-0.698)	-0.002 (-1.128)	-0.001 (-1.32)	0.937
Milk	0.474 (0.062)	0.006 (4.542)*	0.040 (31.771)*	0.020 (0.509)	0.118 (2.382)**	0.009 (2.271)**	0.923 (1.680)***	-0.003 (-1.210)	-0.001 (-0.468)	0.940
Veg and fruit	0.310 (0.707)	0.006 (4.420)*	-0.027 (-19.293)*	0.000 (-0.549)	0.005 (2.363)**	0.002 (1.685)**	0.120 (2.926)**	-0.001 (-0.457)	-8.057 (-0.031)	0.875
Oil	0.483 (0.132)	0.011 (0.000)	-0.043 (0.000)	0.000 (0.541)	0.000 (0.819)	0.001 (0.255)	0.048 (0.297)	0.001 (0.837)	0.002 (0.604)	0.926
Other food	1.057 (0.853)	0.000 (0.78)	-0.085 (-15.267)*	0.000 (-0.365)	-0.008 (-0.926)	-0.002 (-0.473)	-0.113 (-0.691)	0.006 (0.516)	-0.004 (-0.354)	0.795
Education	0.309 (1.0151)	0.004 (3.099)**	-0.026 (-18.878)*	0.000 (0.947)	0.008 (1.625)	0.001 (1.816)**	-0.049 (1.776)**	-0.004 (-1.646)	0.000 (0.325)	0.866
Clothing	0.031 (0.855)	0.009 (2.521)**	-0.001 (-0.415)	-0.004 (-0.248)	-0.002 (-0.595)	0.001 (0.487)	0.270 (1.896)**	-0.005 (-0.783)	0.000 (0.56)	0.268
Medical	0.180 (0.677)	0.007 (2.905)*	-0.013 (-9.348)*	0.000 (0.647)	0.001 (1.080)	-0.002 (-1.096)	-0.017 (-0.417)	-0.048 (-0.689)	-0.029 (-0.143)	0.749
Miscl.	0.259 (0.189)	0.004 (1.858)***	-0.019 (-16.871)*	0.000 (-1.372)	0.000 (0.247)	0.000 (0.263)	0.012 (0.347)	-0.002 (-0.534)	-0.001 (-0.365)	0.801

Note: Figure in parentheses indicates 't' value. \*, \*\*, \*\*\* indicates significance at 1%, 5% and 10% level of significance

The results show that women income and education has positive and significant effect on per capita food items like pulses, milk, vegetable & fruits. This shows that if women's income and education increase while per capita expenditure remained constant, the average budget share on above mentioned items would increase. This revealed that women's income and education significantly contribute for improving nutritional status. The female headed households spent more on milk, vegetables & fruits. Educated women also spend more on the education of their children.. None of the coefficient of for district dummy variables was statistically significant.

**EXPENDITURE BEHAVIOR OF SAMPLE HOUSEHOLDS**

Table 5 explains the expenditure behavior of sample households. The results were obtained by evaluating the average, marginal budget share and expenditure elasticities at sample mean value for total expenditure and all the households Z<sub>i</sub> variables. Average Budget Share (ABS), Marginal Budget Share (MBS) and expenditure elasticities has been obtained from pooled data.

TABLE 5: EXPENDITURE BEHAVIOR OF SAMPLE HOUSEHOLDS

Items	ABS (%)	MBS (%)	Expenditure Elasticities
<b>Food:</b>			
Rice	21.0901	-1.4328	-0.0679
Wheat	3.2840	2.4801	0.7552
Pulses	6.3832	4.2154	0.6604
Sugar	4.4982	0.0432	0.0096
Milk	7.5341	22.3071	2.9608
Veg and fruits	5.1216	9.8732	1.9275
Oil	7.0520	3.8521	0.5462
Other food	16.8231	41.3750	2.4594
<b>Non-Food</b>			
Education	5.3201	9.8780	1.8567
Clothing	9.2195	6.1732	0.6696
Medical	2.4530	1.8015	0.7344
Cosmetic	1.6280	0.9016	0.5538
Miscl.	7.5918	4.5025	0.5931

Source: Authors' Calculations

The result of ABS shows that 72 percent of total expenditure was spent on food items and rest on non-food items. Among food expenditure the highest share was on rice, followed by other food items. 7 percent of share was on oil, around 8 percent on milk, 5 percent on vegetables and fruits and around 6 percent on pulses. Among non-food items around 14 percent was spent on education and clothing, rest was followed by medical, cosmetic and other miscellaneous non-food commodities.

Marginal Budget share indicates the impact of income changes on consumption or in other words MBS shows the household response to incremental income. MBS for milk was 22.31 which revealed that 22.31 of incremental income would be spent on milk, 9.87 percent of incremental income would be spent on vegetable and fruits, followed by pulses, oil and wheat. Among non-food items around 10 percent of incremental income would be spent on education and 6 percent on clothing.

The expenditure elasticities were found to be higher for milk vegetable and fruits, education. The household were interested to increase share of their income on milk, vegetable and fruits and education. The expenditure behavior looks rational. The expenditure elasticities were found to be low for sugar and negative for rice.

**SUMMARY AND CONCLUSIONS**

The present study ventured to examine the consumption pattern of rural poor households. The study areas were Amritsar, Muktsar and Jalandhar districts of Punjab state of India. The specific objectives of the study were i) to study consumption pattern of rural poor households, ii) to evaluate Average Budget Share (ABS), Marginal Budget Share (MBS) and expenditure elasticities of sample households, iii) to examine the impact of household characteristics on Average Budget Share. To accomplish these objectives primary data has been collected from 360 households from Punjab state of India using multi-stage random

sampling technique. The sample households mostly live 'below', 'at', and 'marginally above' poverty line. A variant of Working-Laser model was used to estimate Average Budget Share (ABS), Marginal Budget Share (MBS) and expenditure elasticities for each commodity. The results of the study has found higher share of food items ranging from 74 to 75 percent of total budget. The share of non-food items was 25 to 26 percent. Among food items foodgrains constitute about 30 to 45 percent of food expenditure of sample households. The results revealed that Per capita per day consumption of food and nutrients of sample households has been less than the recommended dietary allowance given by ICMR for healthy life. The effect of household characteristics on average budget share has also been captured which shows that women income and education have positive and significant impact on food expenditure of pulses, milk, vegetable & fruits. The effect of women headed households was also observed to be positive and significant.

The result of ABS shows that 72 percent of total expenditure was spent on food items and rest on non-food items. Among the food items highest share was on rice, followed by milk, oil, pulses, vegetable & fruits and other food items. The marginal budget share (MBS) implies the household responses to incremental income. MBS for milk was 22.31 which revealed that 22.31 percent of incremental income would be spent on milk. 9.87 percent of incremental income would be spent on vegetable and fruits, followed by pulses, oil and wheat. Among non-food items around 10 percent of incremental income would be spent on education and 6 percent on clothing. The expenditure elasticities were found to be higher for milk vegetable and fruits, education. The household were interested to increase share of their income on milk, vegetable and fruits and education. The expenditure behavior looks rational. The expenditure elasticities were found to be low for sugar and negative for rice.

The study concludes that a change has been found in the consumption pattern of the rural poor households. Although these households are becoming more aware of consuming vegetables, fruits, milk etc but still their consumption of these items are far behind the dietary recommendations given by ICMR. The government is making all out efforts to improve the income and nutritional level of the rural masses (particularly of the rural poor) still they are making both ends meet and lag behind the given nutritional standards. The only positive development which has come to highlight is that the pattern of expenditure between food and non-food items is undergoing a change and the rural poor has also started spending more on non-food items. Women's educations play an important role in bringing about this change and should be given top priority in all development programmes for rural areas.

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**ANNEXURE 1: RECOMMENDED DIETARY ALLOWANCES (FOOD GROUPS) FOR ADULT AND CHILDREN** (Grams per day per person)

Food Groups	Sedentary		Moderate		Children		
	Men	Women	Men	Women	1-3 Years	4-6 Years	7-9 Years
Cereals and Millets	420	300	480	360	120	210	270
Pulses	60	60	90	75	30	45	60
Green Leafy Vegetables	100	100	100	100	50	50	100
Fruits	100	100	100	100	100	100	100
Milk*	300	300	300	500	500	500	500
Fats and Oils	20	20	35	30	20	25	25
Roots and Tubers	200	100	200	100	50	100	100
Sugars	25	20	40	25	25	30	30

Source: National Institute of Nutrition, 1998, Dietary Guidelines for Indians

Note: \* Milk in ml/day.

**ANNEXURE 2: RECOMMENDED DIETARY ALLOWANCES (NUTRIENTS) FOR ADULT AND CHILDREN**

Food Groups	g/Portion	Energy(Kcal)	Protein (g)	Carbohydrate(g)	Fat(g)
Cereals and Millets	30	100	3.0	20	0.8
Pulses	30	100	6.0	15	0.7
Meat/chicken/fish	50	100	9	-	7.0
Milk (ml)@ & milk products	100	70	3.0	5	3.0
Green leafy vegetables	100	46	3.6	-	0.4
Other vegetables	100	28	1.7	-	0.2
Fruits	100	40	-	10	-
Sugar	5	20	-	5	-
Fat & Oils	5	45	-	-	5.0

Source: National Institute of Nutrition, 2010, Dietary Guidelines for Indians

@Toned milk.

**ANNEXURE 3**

Nutrients	Moderate		Children		
	Men	Women	1-3 Years	4-6 Years	7-9 Years
Protein (g/day)	60	50	22	30	40
Energy (Kcal/day)	2875	2225	1240	1690	1950

Source: National Institute of Nutrition, 1998, Dietary Guidelines for Indians.



## ORIGIN OF ECONOMETRICS

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**ABSTRACT**

*Perhaps Powel Ciompa first used the term 'Econometrics' in around 1910, although the credit is given to R. Frisch for coining the term in 1926 and for establishing it as a subject in the sense in which it is known today. Available documents point out that Econometrics is originated perhaps since around 18<sup>th</sup> century. Method of least squares is developed in this century. This paper looks into the origin of Econometrics through available documents. This paper also looks into two famous conflicting claims in Econometrics between 'Hoerl-Kennard and Tychonoff over the discovery of method of ridge regression' and 'Gauss and Legendre over the discovery of the method of least squares'.*

**KEYWORDS**

History of Econometrics, Two Famous Conflicting Claims, Bayesian Econometrics, Method of Least Squares.

**PROLOGUE**

Econometrics involves coming together of mathematical economics, economic statistics and statistical inferences and expresses the theories and ideas of economics in mathematical forms. It is still relatively young and has been transforming and expanding very rapidly over the past few decades. Major advances have taken place in the analysis of cross sectional data. Heterogeneity of economic relations across individuals, firms and industries is increasingly acknowledged and attempts have been made to take them into account either by integrating out their effects or by modeling the sources of heterogeneity with the existence of suitable panel data. New time series econometric techniques have been developed and employed extensively into areas of macroeconometrics and finance. Non-linear econometric techniques are applied in the analysis of cross sectional and time series observations. Application of Bayesian techniques to econometric problems has been given new impetus largely to advances in computational techniques. During early years Econometrics had been defined as the union of Economics, Statistics and Mathematics. The term econometrics has later come to have a narrower meaning than Frisch originally intended, more like the study of statistical methods for the application of economic models. Econometricians had developed a distinctive path compared to those found in Psychometrics and Sociometrics during the same period. After it, Econometrics stabilized on its current meaning as 'the use of Statistical reasoning and methods as means to establish data-based descriptions of economic phenomena and empirically based on counterparts for, and tests of, economic theories'. In the post of 1950s period econometrics understood as due to not only to strengthening of its foundations in statistical theory but also to the continuing expansion of data, its establishment in the core undergraduate teaching programme and the development of cheap desk-top computing. Together these meant that econometric work became a standard tool of policy work in governments and international agencies as well as becoming endemic, in various different forms, in the sub-fields of scientific economic research. Econometric theory has developed into a formidable body of specialist statistical theory and the increasing gap between the difficult technical and theoretical questions and the apparent ease of applications might indicate a field where applications came loose from theoretical work. This has been militated by another tool, the development of specific software packages for Econometrics, in which theoretical and technical developments can be quickly translated into modeling, measurement, and testing regimes at the level of applications. Only in the last few years has the history of econometrics become established as an accepted field of research including sessions at professional meetings. Yet, the first written history of Econometrics appeared in the 1950s, when Christ (1952) reviewed the first 20 years' econometric work of the Cowles Commission and Stigler (1954) surveyed the early econometric analyses of consumer demand.

Spatial Econometrics is the field where spatial analysis and econometrics intersect. In general, econometrics differs from other branches of statistics in focusing on theoretical models, whose parameters are estimated using regression analysis. Spatial econometrics is a refinement of this, where either the theoretical model involves interactions between different entities, or the data observations are not truly independent. Thus, models incorporating spatial autocorrelation or neighbourhood effects can be estimated using spatial econometric methods. Such models are common in regional science, real estate economics and education economics. The first general text in the field was the 1979 book by Paelinck and Klaasen.

**2. EARLY DEVELOPMENT**

The use of mathematics and statistics in economics is not of recent origin. In the latter part of 17<sup>th</sup> century W. Petty wrote his essays on 'Political Arithmetik'. This fledgling work, remarkable for its time, was econometric in its methodological framework, even from the modern point of view. The union of economic theory, mathematics, and statistics has been more an aspiration of the econometrician than a daily achievement. Much of what is commonly known as econometrics is mathematical economic theory that stops short of empirical work and some of what is known as econometrics is the statistical estimation of ad hoc relationships that have only a frail basis in economic theory. Gilbert and Qin (2007) discussed that W. S. Jevons (1871) was the first economist to fit a demand equation although Morgan (1990) attributes the first empirical demand function to C. Davenant (1669) at the end of 17<sup>th</sup> century. Hoover and Dowell (2001) points out that Smith (1776) discussed the history of measurement of the general price level.

Origin of Econometrics begins with discovery of method of least squares (LS). Plackett (1972), Harter (1974 a, b & 1975), Stigler (1981), Singh (2010 a) and Singh (2011 b) advocated that this method was in frequent use since 18<sup>th</sup> century mainly on the ground of simplicity and ease of computation. Gauss used it for more than a decade without bothering to publish it. Gauss's letter was published in 1799 and another correction note was published in 1800. Legendre (1805) was the first to publish the method of LS. This is true that more and more qualities of LS came to light during 20<sup>th</sup> century and controversy arose between Gauss and Legendre about who should take the credit for the publication. A number of responsible scholars wrote volumes on the method of LS prior to Gauss and Legendre. The interested reader should refer to papers by Plackett (1972), Harter (1974 a, b and 1975), Stigler (1981) and Singh (2010 a).

**3. THE DEVELOPMENT ERA**

At the beginning of 20<sup>th</sup> century, no generally accepted or established patterns are available to synthesize data evidence and theory. Several statistical and mathematical techniques are in vogue and new techniques and new concepts were established and then proposed. Moore (1914) observed cyclic patterns in grain yield and price data to climate conditions by observing the rainfall data. Periodograms and Fourier frequency analysis were applied and he arrived at a general explanation of business cycles. He used method of LS to estimate two regressions in his study and also used polynomial regression adding quadratic and cubic regressors. He believed that he had discovered new type of demand curves. Persons' (1919) attempt was more practical to forecast the short-run business cycle movements. He classified the forces, as he felt in his study, into four types: secular (long forces) forces, seasonal forces, cyclic forces and irregular forces. Here he used methods of moving averages and curve fitting to compute the trend. The problem of extracting causal relationships between variables from data which contained different time patterns dominated early econometric work but the questions attacked were driven by economic and policy concerns. Measurements, for example, of market demand and supply relations for agricultural goods were undertaken at the American Bureau of Agricultural Economics

during the 1920s when farmers faced falling prices in international markets and followed earlier European breakthroughs on these questions. Similarly, the problems posed by 'business cycles' were widely recognized by commerce, politicians, economists and others.

Schultz (1925) discussed orthogonal regression in estimation. Wright (1928) gave an idea about method of instrumental variables through his study on simultaneity problem between supply and demand. Frisch (1929) discussed diagonal mean regression as a solution for choosing the bivariate regression. Tinbergen (1930) studied supply curves differentiating between demand and supply curves by adding additional explanatory variables into the demand and supply equations. He also applied a time dummy to detrend price series rather than detrending prior to regression and gave a new technique which is known as indirect least squares. Bowley (1933) examined the statistical distributions of several economic time series data for the study of changes in wholesale, retail prices and household income. Hotelling (1933, 1936) invented the new methods of principal components and canonical correlation for factor analysis models on psychological data. Frisch (1934 b) advocated the method of bunch map analysis among a set of variables all subject to measurement errors. Frisch (1934 a) and Leontief (1934) debated the famous pitfalls in the early 1930s. The debate was closely related to the issue of how applied modelers should conceptualize the error terms in measurement errors or errors in equations. The issue was also related to the appropriate choice of estimation methods, where OLS was adequate or weighted least squares. A major factor that helped to unite Tinbergen and other econometricians under Frisch's structural approach was the scepticism of non-econometric economists in relation to the scientific validity the nascent econometric methods. Working (1935) examined the impact of multiple factors under 'Law of Dynamic Equilibrium' on wholesale wheat prices.

The early econometricians were already aware about the method of LS estimation. Statistical optimality criteria were also brought in during the late 1930s. Nonlinear estimators became the first choice. The research brought up a new dimension to adapt the estimation procedure to ease the computational burden of nonlinear estimators. Koopmans (1937) devised general forms of weighted regression as the best estimators for error-in-variable regression models. His derivation is based on maximum likelihood principle. Koopmans (1937) introduced the concept of specification in econometrics. Dirks (1938) proposed non-linear regression explaining the change of retail sales by the lagged change of income. Clark (1938) studied both the current and a lagged income variables in estimation in a consumption function on quarterly data. Stone and Stone (1938) discussed a variety of functional forms including log-quadratic, log-linear and additional time trend regressing aggregate consumption on income with time-series and cross-section data sets. Wold (1938) attempted for the adoption of sampling theory and probability and stochastic process concept in time series analyses in his work. The 'econometric model' formulated as an intermediary device to bridge the gap between economic theory and economic data. Concept of multicollinearity is developed and concept of measurement errors or of omitted variables from the model was established with the development of statistical tools and methods. J. Tinbergen was the most creative of econometricians of the 1930s in the development of modeling, in understanding conceptual problems and in suggesting solutions. Keynes' work put the development in the 1940s of rigorous foundations for econometrics under the 'probability approach'. Despite their difference of opinion, both Tinbergen and Keynes can be seen, in retrospect, as reshaping economic theory and policy in the aftermath of the great depression so that, in the 1950s, L. Klein could develop the post-war generation of macroeconomic models on Keynesian theories with more secure statistical foundations. Haavelmo's probability blueprint for econometrics has been interpreted as creating a 'revolution' in econometrics. Parts of Haavelmo's program were immediately elaborated at the Cowles Commission. The research was primarily concerned with developing appropriate identification conditions and estimation techniques for such econometric models. Applied econometric research revealed serious practical and methodological limitations in the Cowles approach, particularly in regard to model specification, model choice, and associated testing procedures. Theoretical studies of economic dynamics of Frisch's model pursued by Koopmans (1940) and others. They all used periodic analysis in examining the cyclic and dynamic features of estimated final equations. Keynes (1940) expressed scepticism powerfully in his critique of Tinbergen's approach to testing business cycle theories. Moreover, there was an impetus standardise econometric practice with a strong reliance on economics and to get econometrics recognized as a sub-discipline of economics. Formalization of Frisch's structural approach took place during the Second World War. The war itself brought the development of econometrics in two distinct ways. Many of the early econometricians brought together for the work and it established an economic policy environment for active work. In the beginning of the 1940s the problem was separated from estimation issues and clearly formulated statistical and mathematical terminologies. Mann and Wald (1943) provided proofs of the consistency and asymptotically normality of the maximum likelihood estimators of a linear equation system with normally disturbance terms. Formalisation of identification conditions plays an important role in formalisation of econometrics as a sub-discipline in economics. The early econometricians developed ad hoc methods to tackle the problems during the 1920s and 1930s. Haavelmo (1944) carried out a thorough foundational work related to the structural approach based on probability theory. His argument for the probability approach is based on three related components: economic time series data, sampling theory and economic theories. Stigler (1962) discussed about the significant combination of mathematical theory and statistical estimation first occurred in the work of H. L. Moore during the early part of 20<sup>th</sup> century. Moore completed econometric work on business cycles on the determination of wage rates and on the demand for certain commodities. Harter (1975) concluded that the best choices of measures of central tendency and dispersion and of methods of fitting linear (or non-linear) regression equations depend upon the error law.

The interwar period provides evidence of an increasing separation between the macroeconomic and econometric approaches to business cycle analysis. The early econometricians adopted different approaches and methods in exploring the best ways of theorizing and modeling data. Epstein (1987) observed that price control requires knowledge of industry cost curves and even demand elasticities. Pagan (1987) advocated about three econometric methodologies associated with D. Hendry, C. Sims and E. Leamer practicing by their adherents in recent years and wrote in comparative vein. He summed up that none of the methodologies claimed is to be complete in general and no methodology has managed to obtain a perfect score. Econometrics is a frontier discipline in the introduction of scientific means and methods into Economics. The purpose of its introduction was to bridge the gap between economic theory and economic data. Epstein (1987) produced a concise history of econometrics; Morgan (1996) has provided an account of early period and a report of econometric development in Britain is due to Gilbert (1989).

Morgan (1990 b) has suggested that Epstein's history suffers from omission and misinterpretations of the evidence sufficient to cast doubt both on his main historical thesis concerning the role of the Cowles Commission, and on parts of his history of structural econometrics. She mentioned three examples on the personal history of the early econometricians and took the opportunity of correcting them. The first concerns Frisch's early history, the second is implied on Haavelmo's 'Probability Approach' and the third example is related to P.G. Wright who wrote a number of trenchant criticisms of econometrics which revealed considerable mathematical intelligence. Morgan (1990 b) mentioned that the first written histories of Econometrics appeared as far back as the 1950s, when C. Christ reviewed the first 20 years' econometric work of the Cowles Commission and G. Stigler surveyed the early econometric analysis of consumer demand. Epstein's history of econometrics is related to the history of what he calls structural econometrics, by which he means the use of the simultaneous equations model. The three popular methodological approaches are the Cowles Commission approach, the probability approach and statistical methods in Econometrics. An extensive record of macro econometric model building activities from 1930s to 1980s has been prepared by Bodkin, Klein and Marwah (1991). Morgan (1996) pointed out that early econometrics applied mathematical statistics without probability theory. Econometrics, the statistical metric for economics, can be regarded as one of the main innovations which turned twentieth century economics into an engineering, or tool-based science, in which each application of economic theory requires special shaping to circumstances, whether for scientific purposes or in the policy domain (Morgan 2001). The particularities of the history of econometrics have often been linked to the nature of its tasks and aims (De Marchi and Gilbert, 1989; Heckman, 2000; Morgan, 1990; Qin, 1993).

Qin (1996) discussed that Bayesian research has largely followed mainstream econometric development as far as the major econometric ideas and methods are concerned. He summarized two observations regarding development of Bayesian econometrics describing the fact that Bayesian econometrics can produce results identical to those produced by means of classical statistic methods. The potential of the Bayesian inference in econometrics was recognized by J. Marschak as early as 1950. Raiffa and Schlaifer (1961) demonstrated Bayesian method as preposterior analysis on regression models in their book. The early 1960's pioneering Bayesian applications in econometrics include published works by W. D. Fisher (1962), Hildreth (1963) and Zellner and Tiago (1964). Fisher (1962) examined the different effects on model estimation induced by different purposes of model use and Hildreth (1963) took a more affirmative attitude. Zellner and Tiago (1964) proposed another Bayesian method for regression models with first-order autocorrelated errors. The seminal works of W. D. Fisher, Hildreth, Zellner, Rothenberg and Tiago brought to light the attraction of making Bayesian inference in Econometrics for several practical reasons. Zellner (1971) wrote the first Bayesian Econometrics textbook entitled 'An Introduction to Bayesian Inference in Econometrics'. Latter Bayesian econometricians were faced



with two major technical difficulties in devising Bayesian estimators. To overcome the difficulties research results were built on either simultaneous-equations model (SEM) or a simple/multivariate regression model. The development of Bayesian estimation methods for SEM emulated closely the strategy of full-information and limited-information estimation of the classical camp. The main research was carried out by Dreze (1968), Morales (1971), Harkema (1971), Rothenberg (1973) and Dreze and Morales (1976). Kloek and Dijk (1978) made an important breakthrough in numerical integration based on Monte Carlo integration procedures with wider range and their results freed Bayesian econometricians from the severe practical constraint of choosing priors by their analytical solvability and therefore considerably widened the scope of Bayesian application. Howson and Urbach (1989) discussed that Bayesian Econometrics can produce results identical to those produced by means of classical statistical methods is sufficient to show that there is nothing subjective in the Bayesian theory as a theory of inference: its canons of inductive reasoning are quite impartial and objective. Paelinck (2000) proved that in principle all spatial data will inevitably show up an aggregation bias in general econometric aggregation, if only one macro-aggregate is considered, just one parameter bias is present in the macro-model. Blaug (2001) summarized that there has been a virtual explosion of books on the history of econometrics, beginning with Epstein (1987), Morgan (1990) and Qin (1993) on probability approach of the 1940s and the structural estimation methods of Cowles Commission and culminating in the magnificent study of Hendry and Morgan (1995) in which all the great papers in the 20<sup>th</sup> century history of Econometrics are discussed and many of the original empirical verifications are reworked with modern techniques. The role of econometrics in Economics remains a live issue today. Macroeconomics has become ever more theoretical in the 1980s and 1990s while Econometrics has become ever more atheoretical, with many leading econometricians giving prominence to data exploration before venturing into empirical generalization. Advocacy for the Bayesian approach was recently discussed by Kennedy (2002), Hendry (2002) and Magnus (2002). Kennedy (2002) described about ten commandants of applied econometrics and they are: (i) Use of common sense and economic theory (ii) ask the right questions (iii) Know the context (iv) Inspect the data (v) do not worship complexity (vi) Look long and hard at the result (vii) Beware the cost and data mining (viii) Willing to compromise (ix) Do not confuse significance with substance and (x) Confess in the presence of sensitivity. Magnus (2002) appreciated the paper of Kennedy (2002) containing the ten commandants of applied econometrics and did not agree with almost all the points made by Kennedy. He later mentioned that Kennedy's work is only half done and he believes Kennedy will complete his task and write the sequel.

Valadkhani (2004) presented a brief literature review on macroeconomic modeling and discussed briefly about critique of macroeconomic modeling for policy analysis. It is still unique tool in relation to model selection, diagnostic tests and time series properties of the data. The criticism of some macroeconomic modeling has motivated econometricians to devise alternative methodologies proposed by Sims, Leamer and Hendry. He argued that each one of them has some shortcomings. Gilbert and Qin (2005) pointed that economists adopted a wide variety of analytical methods, some ad hoc but others reflecting advances in statistical methodology in the period prior to 2<sup>nd</sup> world war. Two major areas were business cycle analysis and demand analysis in which statistical theory was employed. During and immediately after the war, Cowles commission research sought to base econometrics autonomous probabilistic models specified in terms of underlying structural parameters. Least squares (LS) would not be normally consistent in such models and maximum likelihood estimation was to be preferred. Subsequently, however, the pendulum swung back towards methods based on LS. This was reflected in the textbook expositions what was accepted as standard econometrics in the late sixties and early seventies. They characterized modern econometrics in terms of the emergence a widely accepted analytical framework and debated how and indeed whether econometric models can reflect the theory-generated economic structures as a major theme. Over the last quarter of the century, the paradigm became looser as econometricians moved to defining their positions relative to each other rather than, as earlier, relative to their non-econometric colleagues. The result was greater diversity in both theory and practice, but with a shared language and a common history. They discussed that key attraction of the Bayesian approach became particularly appealing to the econometricians of the 1960s for several reasons. The Bayesian principle was felt to relate easily to the problem of decision making by applied modelers who faced uncertainty in both theory and sample data at hand. The Bayesian approach appeared more natural than classical methods since the welfare outcomes are more or less satisfactory rather than correct and incorrect. The potential usage of the Bayesian method was discussed in the econometric circle as early as the mid 1950s. Serious adoption of the method of econometrics usage occurred in the 1960s, pioneered mainly by J. Dreze, T. J. Rothenberge and A. Zellner. The Bayesian econometrics became an independent approach in econometric methodology. The distinction between microeconomics and macroeconomics is relatively new. Few practical distinctions were drawn between the methods appropriate to the analysis of data types. Gilbert and Qin (2005) concluded that many of the advances in Econometrics took place in the statistical theory related to linear regression model with the specific problems faced on analyzing non-experimental data, often generated with error processes correlated over time and over variables. A major theme dominated over the debate through the century about how and indeed whether econometric models reflecting theory-generated economic structures. Griliches and Intriligator (2005) discussed that the development of statistical theory has played a critical role in the history of econometrics since econometric techniques are, to a large extent, based on multivariate statistics. Modern statistical theory begins with the work of Legendre and Gauss on least squares, motivated by the attempt to remove errors of observation in astronomy and geodesy.

Louca (2007, p. 25) discussed that econometrics became necessary instrument for an empirical approach, providing the flesh and bone of both pure economics to be. Its development was Ragnar Frisch's lifetime aim, the idea he had actively promoted and campaigned for ever since the early 1920's. Alkhamisi and Shukur (2007) discussed that Zellner (1962) proposed seemingly unrelated regression (SUR) model and it is considered as one of the most successful and efficient methods for estimating SUR and tests of aggregation bias. They analyzed the output from the Monte Carlo experiment along with the main dominating factors affecting the properties of the different multivariate ridge parameters for the proposed SUR ridge parameters. The simulation results support the hypothesis that the number of equations, the number of observations per equation, the correlation among explanatory variables and equations are the main factors that affect the properties of SUR ridge estimators. Srivastava and Giles (1987), Zellner (1962) and others advocated about SUR model that it has stimulated a countless theoretical and empirical results in Econometrics and other areas.

Qin (2007) in his book examined the formative period of econometric theory during 1930 to 1960. It covers the major events which led to its formulation. It focuses upon the process of how tools of mathematical statistics were selected and ideas of mathematical statistics were adapted to combine with economic motivations and enquiries. There has been a remarkable and growing interest in the history of econometrics in recent years. Gall (2007) discussed that Econometrics was perhaps born out of the probabilistic revolution in statistics in the early 1900s and the formation of Econometric Society in 1930s referring the papers by Morgan (1990 a) and Duo (1993). Qin (2007) also discussed that Econometrics took as formal subdiscipline of economics at the end of 1930s or in the beginning of 1940s. Two key developments during this period are: (i) a structural modeling procedure, which required econometrics models to be built upon a priori theoretical models and sought to confirm the theory by approximately measuring out the associated structure and (ii) a stepwise formulation of the general modeling practice. Econometrics grew rapidly in 1930s following the founding of the Econometric Society in 1930 and the publication of *Econometrica* in 1933. Qin (2010) examined the history of Econometrics through a particular case study – modeling the tradeoff between inflation and unemployment. He first examined the pattern of citations of the key papers grouped in three sections. Having analyzed the citation statistics, he is now backing to the issue of historical assessment making impact of modeling on the development of econometrics. Interpretations from different angles and intentions fostered diversification of research agenda. Applied economists have become increasingly willing to abandon textbook econometrics and let data speak more, although it is not yet prevailing position to forgo the general equilibrium tradition and embrace empirical models explicitly with partial and incomplete structural interpretation. Hoover (2010) described the decade 1987 to 1997 was great one for the history of Econometrics because many important works were developed by many authors such as R. Epstein, M. S. Morgan, D. Qin, D. Hendry and J. Klein. He described about the success of 2007 meeting of North American Econometric Society and highlighted about the weakness of publishing history and related papers on Econometrics in journals.

Singh (2010 b and 2011 a, b) points out that H-K (1970 a, b) introduced the generalized ridge regression estimator (GRE) and this became popular tool to prevail over the singularity. Anders (2001) and Singh (2010 b and 2011 a, b) suggested that RR is an application of Tychonoff regularization (TR), a method that has been explored in the approximation theory literature for about as long as RR has been used by Tychonoff (1943). TR is the most commonly used method of regularization of ill-posed problems in Statistics and is also a RR. Thus another controversy between H-K and Tychonoff arose here also that who should take the credit for the development of RR. Singh (2011 b) concluded that it is highly appropriate to give credit to Tychonoff's TR due to being of more general nature

than H-K's RR and H-K expounded the finite dimensional case only of TR under statistical approach, while Tychonoff's TR is a general case. The interested reader should refer to the papers by Singh (2010 b and 2011 a, b).

#### 4. CONCLUDING REMARKS

Researchers in Astronomy provided new dimension to their works and latter those works evolved into the method of LS. The method of LS was in frequent use since the 18<sup>th</sup> century due to simplicity and ease of computation. More qualities of LS were developed during 20<sup>th</sup> century and controversy about the credit of invention arose between Gauss and Legendre.

History of the development of Econometrics from the mid-1950s onward ascribes a major role in the formulization of dynamic econometric modeling (Hendry 2003). Denis's accompanying paper provides a brief earlier history intellectual development. Denis' initial research had been on mathematical economics, followed by econometric theory, particularly seeking to establish the same form of rigorous inferential basis for its application to small samples that Student's famous t-distribution paper had done for statistics. Indeed, the majority of his publications related to advanced econometric theory. From the mid nineteen sixties onwards, Econometrics was established and accepted as a discipline in its own right. Advancement in computer technology and software with availability of larger and higher quality datasets eased the computational constraints.

In the post war period till 1980s, the history of Econometrics was the history of Cowles Commission Econometrics. When the limits of Cowles Commission became visible during 1970s young persons like Hendry, Leamer, Sims and others started developing alternative programmes. These new programmes originated the history of areas before and besides the Cowles programmes.

Hoover (2008) summarized that modern Econometrics can be dated from the development of structural econometrical models following the pioneering work in the 1930s of J. Tinbergen, the conceptual foundations of probabilistic Econometrics in T. Haavelmo's 1944 probability approach to Econometrics and the technical elaboration of the identification problem in the two Cowles Commission volumes. The ridge regression, generalized inverse regression, principal components regression, Bayesian methods in Econometrics, seemingly unrelated regression, partial least squares regression, distributed-lag model, method of instrumental variables and others including various softwares were developed under modern econometrics. Econometrics today is much more considered as statistics applied to economic data. This is reflected by the increase attention for history of Statistics in relation to the history of Econometrics and with a more prominent role of R. A. Fisher. Credit to coin the term 'Econometrics' is given to R. Frisch for establishing it as subject but Powel Ciompa has first used it in around 1910.

Two important controversies for the propriety claim in the history of Econometrics are between 'H-K and Tychonoff for the development of RR' and between Gauss and Legendre for the development of LS. I agree with the conclusion given by Singh (2011) that it is highly appropriate to give credit to Tychonoff's TR for the development of RR due to being of more general in nature than H-K's RR and giving credit to Gauss and not to Legendre for the discovery of LS is not only appropriate but also legitimate because he has been extensively using the same since around 1794 onwards whereas Legendre published it in only 1805.

A variety of methods are used in econometrics to estimate models consisting of a single equation. The oldest and still the most commonly used to estimate linear regressions is the OLS method. Similarly, a variety of methods are available to estimate non-linear models. A particularly important class of non-linear models is those used to estimate relationships where the dependent variable is discrete, truncated or censored. These include logit, probit and Tobit models. Single equation methods may be applied to time-series, cross section or panel data.

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**ORGANIZATIONAL CULTURE IN PENNAR INDUSTRIES LTD.**

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**ABSTRACT**

*Culture is made up of the attitudes, values, beliefs and behaviors of its employees. It reflects the demonstrated values and principles of the workplace, permeating everything an organization does. Essentially, it can make or break organization. The ideal organizational culture is one in which projects are considered in strategic planning and are implemented to support an organization's corporate strategy and corporate objectives. Pennar Industries Limited is one of the leading engineering organizations in India renowned for providing global innovative engineering solutions. This paper carried out "a study on organizational culture in PENNAR industries Ltd". Mainly focused on whether there is good organizational culture in the company. The primary data was collected with the help of questionnaire. Responses were gathered from the employees working at PENNAR industries Ltd". A descriptive study was conducted. Data were analyzed and the findings and recommendation are presented.*

**KEYWORDS**

Culture, Organization, Corporate, engineering, Work place.

**INTRODUCTION**

 **Organizational culture** is a pattern of shared basic assumptions invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration. Organizational culture is a set of shared mental assumptions that guide interpretation and action in organizations by defining appropriate behavior for various situations.

The organizational communication perspective on culture views culture in three different ways:

- **Traditionalism:** Views culture through objective things such as stories, rituals, and symbols.
- **Interpretivism:** Views culture through a network of shared meanings.
- **Critical-Interpretivism:** Views culture through a network of shared meanings as well as the power struggles created by a similar network of competing meanings.

**Corporate culture** is the total sum of the values, customs, traditions, and meanings that make a company unique. Corporate culture is often called "the character of an organization", since it embodies the vision of the company's founders. The values of a corporate culture influence the ethical standards within a corporation, as well as managerial behavior.

Organizational culture and corporate culture are often used interchangeably but it is a mistake to state that they are the same concept. All corporations are also organizations but not all organizations are corporations. Organizations include religious institutions, not-for-profit groups, and government agencies. Corporations are organizations and are also legal entities.

**COMPANY PROFILE**

1988 was the year when Pennar Industries Limited was born, and since then, Pennar has grown and diversified to become a leading engineering company making a host of **steel based products**. Pennar began by manufacturing Cold Rolled Steel Strips (CRSS) with an installed capacity of 30,000 MTPA. Its first plant strategically established at Isnapur, 45KM from Hyderabad. Pennar achieved profits right from the first year of its operation, followed by declaration of dividend from the second year. The company was growing at a rapid pace and thus to incorporate its expansion and demand, Pennar increased its manufacturing capacity.

Pennar is now a multi-location, multi-product company manufacturing Cold Rolled Steel Strips, Precision Tubes, Cold Rolled Formed Sections, Electro Static Precipitators, Profiles, Railway Wagons and Coach Components, Press Steel Components and Road Safety Systems.

**REVIEW OF LITERATURE**

In a study of 230 Organizations from different industries around the world, and from regions including North America, Asia, Europe, The Middle East, and Africa, having a strong and positive organizational culture was associated with increased organizational effectiveness. The strong and positive aspect of organizational culture is most critical to success across regions generally included

- \* empowering employees
- \* having a team orientation
- \* having a clear strategic direction and intent
- \* possessing a strong and recognizable vision.

**Harvard Business School** (2003) study reported that culture has a significant impact on an organization's long-term economic performance. The study examined the management practices at 160 organizations over ten years and found that culture can enhance performance.

**Denison, Haaland, and Goelzer (2004)** found that culture contributes to the success of the organization, but not all dimensions contribute the same. It was found that the impacts of these dimensions differ by global regions, which suggests that organizational culture is impacted by national culture.

**Burman and Evans (2008)** argue that it is '**leadership**' that affects culture rather than 'management', and describe the difference. When one wants to change an aspect of the culture of an organization one has to keep in consideration that this is a long term project. Corporate culture is something that is very hard to change and employees need time to get used to the new way of organizing.

**OBJECTIVES OF THE STUDY**

- To study the Organizational culture of PENNAR INDUSTRIES
- To find out Opportunity for personal development & career development in PENNAR.
- To find out the relationship between company culture and,

- (a) Wage system
- (b) Appraisal system
- (c) Stress management system.
- (d) Diversity in management etc.,

**ANALYSIS AND INTERPRETATION**

**1. GENDER OF RESPONDENTS**

Gender	Respondents	Percentage%
Male	96	87.27%
Female	14	12.73%
Total	110	100%

From the above table it is observed that 87.27% of the employees are in the Male category 12.73% of the respondents are in the Female category

**2. RESPONDENTS WORKING EXPERIENCE WITH PENNAR**

Options of respondent	Respondent	Percentage%
Below 2 years	12	10.91%
2 to 5years	76	69.09%
5 to 10 years	14	12.73%
Above 10 years	8	7.27%
Total	110	100%

Most of the respondents 69.09 are in the experienced with pennar by 2 to 5 years 12.73% are experienced with Pennar by 5 to 10 years. The thing is above 10 years experienced (7.27) are the high officials that's from supervisory level.

**3. RESPONDENTS CURRENT POSITION IN PENNAR**

Options of respondent	Respondent	Percentage%
Lower level	20	18.18%
Supervisory	90	81.82%
President	0	0%
Director	0	0%
Total	110	100%

From the above table, it is inferred that 81.82% of respondents are in supervisory level and 18.18% are in lower level employees in Pennar.

**4. ORGANIZATION CULTURE FOLLOWS THE COMPANY'S MISSION**

Options of respondent	Respondent	Percentage%
Strongly agree	48	43.64%
Somewhat agree	36	32.73%
neutral	10	9.09%
Somewhat disagree	14	12.73%
Strongly disagree	2	1.82%
Total	110	100%

43.64% of the respondents are highly agreed with the question 32.73% are agreed and 9.09% neither agree nor disagree but 12.73% are disagreed and highly disagreed by 1.82%.

**5. ORGANIZATION CULTURE IS DEVELOPED BY TOP MANAGEMENT AND INTERNAL CULTURE**

Options of respondent	Respondent	Percentage%
Strongly agree	20	18.18%
Somewhat agree	55	50.00%
neutral	15	13.64%
Somewhat disagree	8	7.27%
Strongly disagree	12	10.91%
Total	110	100%

Half of the respondent (50%) are in PENNAR somewhat agreed with the question, 18.18% are strongly agreed 13.64% are in neutral 10.91% are disagree and rest are strongly disagreed the question.

**6. PENNAR SHOWS RESPECT TO THE IDEAS, OPINIONS, PEOPLE IN THE WORK PLACE**

Options of respondent	Respondent	Percentage%
Strongly agree	10	9.09%
Somewhat agree	39	35.45%
neutral	28	25.45%
Somewhat disagree	24	21.82%
Strongly disagree	9	8.18%
Total	110	100%

35.45% are agreed the PENNAR respect about ideas, people inside in the company. 9.09% of respondents strongly agreed and the thing is 25.45% are neutral and 22% are disagreed and nearly 8.18% are strongly disagree about the question.

**7. OPPORTUNITY FOR PERSONAL DEVELOPMENT AND CAREER DEVELOPMENT**

Options of respondent	Respondent	Percentage%
Excellent	18	16.36%
Very good	56	50.91%
Good	14	12.73%
Somewhat good	22	20.00%
Total	110	100%

Most of the respondent 50.9% are says that the chance for career and personal development in PENNAR is quite good. But the same time 20% are not much satisfied 16.36% feels it is Excellent and 12.73% felt good.

**8. EMPLOYEES ARE GETTING EQUAL TREATMENT**

Options of respondent	Respondent	Percentage%
Excellent	15	13.64%
Very good	38	34.55%
Good	40	36.36%
Somewhat good	17	15.45%
Total	110	100%

36.36% respondents agreed it is good to get equal treatment employees, 34.55% said that it is very good in PENNAR.13.64% said that it is excellent but 15.45% it is somewhat good only.

**9. WAGE SYSTEM IN PENNAR**

Options of respondent	Respondent	Percentage%
Excellent	10	9.09%
Very good	20	18.18%
Good	33	30.00%
Somewhat good	47	42.73%
Total	110	100%

The employees are not much satisfied with PENNAR industries wage system. Nearly 43% respondents says that it is somewhat good only.30% says it is good and 18.18% and 9.09% are valuing it is "good" and "excellent" respectively.

**10. STRESS MANAGEMENT SYSTEM**

Options of respondent	Respondent	Percentage%
Excellent	10	9.09%
Very good	43	39.09%
Good	40	36.36%
Somewhat good	17	15.45%
Total	110	100%

The response reveals that the stress management system is quite good in PENNAR 39.09% is agreed with very good and 36.36% is good, 9.09% feels it is excellent but above 15% saying it is not much satisfied.

**11. RECOGNITION FROM MANAGEMENT**

Options of respondent	Respondent	Percentage%
YES	63	57.27%
NO	47	42.73%
Total	110	100%

57.27 respondents said that they are getting recognition from management but 42.73% are saying they are not getting.

**12. SATISFACTION ABOUT COMPANY'S LEAVE POLICY**

Options of respondent	Respondent	Percentage%
YES	80	72.73%
NO	30	27.27%
Total	110	100%

The huge parts of the respondents (72.73%) are satisfied with leave policy and rest 27.27% are not satisfied about the leave policy of the PENNAR.

**FINDINGS**

1. Half of the respondent (50%) are in PENNAR agreed with the culture of PENNAR is developed by top management and internal culture.
2. It is found that PENNAR industries value the opinion of employees. Nearly 51% are strongly agreed the question. Again 30.91%are satisfied and agreed, but nearly 10%are not agreed.
3. 35.45% are agreed the PENNAR respect about ideas, people inside in the company.9% of respondents strongly agreed and the thing is 25.45% are neutral and 22% are disagreed and nearly 9%are strongly disagree.
4. Most of the respondent ie,50.9% are says that the chance for career and personal development in PENNAR is quite good but at the same time 20% are not much satisfied,16.36% feels it is Excellent and 12.73% felt good.
5. 36.36%of the respondent said that the relationship between management and workers are good.35.45% is feels it is very good and 20% excellent and minimum 6% it is somewhat good.
6. It is observed the employees are not much satisfied with PENNAR industries wage system.

**SUGGESTIONS AND RECOMMENDATIONS**

- From the study it is identified that the **wage system, job appraisal** system prevails in the organization are not up to satisfactory level to the contribution of organizational culture so the PENNAR try to solve it.
- Employees are not much satisfied with the **diversity in management** of PENNAR. If the company gives more, it helps the organization to reach above competitors.
- It has been found that half of the employees feel they are not getting **encouragement for higher earnings**. Hence the company should make its motivation one to all the employees.

**CONCLUSION**

Organizational culture is a pattern of basic assumptions that are taught to the personnel as the correct way to perceive, think and act on a day-To-day basis. Some of the important characteristics of organizational culture are observed behavioral regularities, norms, values, rules, philosophy and so on. While everyone in the organization will share the organization's culture, not all may do so to the same degree. There can be a dominant culture, but also a number of subcultures. Some organizations have strong cultures and others have weak cultures. PENNAR Ltd is a leading manufacturer and exporters of industrial steel based moldings.

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**AN EMPIRICAL STUDY ON SOCIAL IMPACT OF SELF HELP GROUP MEMBERS IN KANCHIPURAM DISTRICT**

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**ABSTRACT**

India is a country of rich resources with poor people. The scourge of poverty is said to be alarming in the post reform period. The number of poverty alleviation programmes like IRDP, JRY, TRYSEM, DWCRA, etc. could not free the people from the clutches of the poverty. In this context all the poverty alleviation programmes were brought under one umbrella called the Swarn Jayanthi Gram Swarojgar Yojana (SGSY) from April 1999 onwards. In this scenario, micro credit dispensed through SHG concept, promises to be a path breaker in the sphere of poverty alleviation and employment generation. At present Tamil Nadu Government has been effectively implementing Mahilar Thittam through SHG. The present study assesses the social impact of the SHG on its members in Kanchipuram District with a sample of 350 members from three NGOs affiliated to Mahilar Thittam scheme. The statistical tools like simple percentage, mean score, t-test, one way Anova, correlation co-efficient have been used. The overall findings indicate that age group has no relevance to social dimension and type of family average income and marital status have not contributed significantly to the literacy level of members. But all other profile variables have significantly contributed to enhancing social impact on members. SHGs have not only helped the members to gain economic freedom but also helped in transforming their social outlook.

**KEYWORDS**

Mahilar Thittam, Micro Finance, Non-Government Organisation, Self Help Groups, Social Impact.

**INTRODUCTION**

India is a country of rich resources with poor people. The scourge of poverty is said to be alarming in the post reform period. The number of poverty alleviation programmes like IRDP, JRY, TRYSEM, DWCRA, etc. could not free the people from the clutches of the poverty. Therefore poverty continued to be a dark spot in an otherwise shining India. The IRDP, our star poverty alleviation and rural development programme suffered from a number of weaknesses like procurement of poor quality assets; inadequate financial assistance including subsidies; concentration in a few activities; improper identification of the beneficiaries and activities; low rate of recovery of credit; etc. The developmental programmes implemented in the rural areas focus on the core issue of poverty alleviation and rural development through the creation of sustainable livelihood opportunities. However, there was a considerable degree of overlapping in these anti-poverty programmes.

In this context all the poverty alleviation programmes were brought under one umbrella called the Swarn Jayanthi Gram Swarojgar Yojana (SGSY) from April 1999 onwards. Besides the credit dispensed through commercial banks and cooperative institutions have failed to make a significant impact due to reasons like poor recovery from the marginalized section, inadequacy of loan, inability to identify the beneficiaries, political interventions, willful default and poor credit discipline triggered by loan waiver schemes of the government. Further the entry of big business enterprises following liberalization in retail, telecommunication and financial services, Special Economic Zones (SEZ), neglect of agriculture sector by policy makers, etc. further marginalized the rural and urban poor.

In this scenario, micro credit dispensed through SHG concept, promises to be a path breaker in the sphere of poverty alleviation and employment generation. Out of the three models of disbursement of micro credit, banks dispensing micro credit through NGO's have been creating waves in several dimensions. At present Tamil Nadu Government has been effectively implementing Mahilar Thittam through SHG. The examination of impact of the SHG on its members assumes singular significance. This study evaluates the social impact of the SHGs on their members on various parameters identified through review of literature.

**THE CONCEPT OF SELF HELP GROUP**

The Self Help Groups are voluntary associations of people formed to attain some common goals. These groups that have similar social identity, heritage, caste or traditional occupations come together for a common cause and manage their resources for the benefit of the group members. NABARD has defined Self Help Group as "a homogenous group of rural poor voluntarily formed to save whatever amount they can conveniently save out of their earnings and mutually agree to contribute to a common fund of the group to be lent to the members for meeting their productive and emergent credit needs"

**FEATURES OF SELF HELP GROUP**

- The motto of every group member should be "Savings first - credit latter" and it need not be registered.
- Self Help Group is homogeneous in terms of economic status.
- The ideal size of a Self help group ranges between 10 and 20 members.
- Groups are non-political, voluntary associations and follow democratic culture.
- Each group should consist of only one member from one family.
- A group has to be formed with only men or only with women.
- SHGs hold weekly meetings mostly during non-working hours, and full attendance is made mandatory for better participation.
- The groups have transparency among themselves and they have collective accountability of financial transactions.
- The groups evolve a flexible system of operations often with the help of NGOs and manage their common pooled resources in an independent manner.
- Every group provides a platform to members for exchange of ideas.

The concept of self help is not new to Indian society. In traditional rural societies, rural population practiced it in various forms. Activities like house building, farming, sharing irrigation, and bullocks were managed on a self-help basis. However, this concept of collective action was among others developed by Olson Manuour (1971). In his opinion, people tend to organize themselves into groups only when they perceive that the benefits of collective action would far exceed

the cost of participation. But India had the distinction of having traditional saving groups. Informal self help groups oriented to savings and credit functions had existed and they were using distinctive credit instrument even before 1904 when the Co-operative Credit Societies Act came into force.

## REVIEW OF LITERATURE

Dolli (2006) who conducted a study on sustainability of natural resources management in watershed development project found that for the members of SHG in KAWAD project, improved income (66 per cent), self employment opportunities (66 per cent), awareness (66 per cent) and social contact (60 per cent) were expressed as major benefits, while in KWDP, awareness (53 per cent), social contacts (53 per cent) and self employment opportunities (40 per cent) were found to be major benefits.

Jain (2003) micro credit helps the women to achieve social and economic status through involvement of SHGs. The SHG is an available tool for rural development and the promotion of community participation in rural development programs as well as a vehicle for disbursing micro-credit to women and encouraging them to enter into entrepreneurial activities. His another finding is that Self Help Groups enhance the equality of the status of women as participants, decision-makers and beneficiaries in the democratic, economic, social and cultural spheres of life.

Kausalya Santhanam (2004) points out that the SHGs are transforming the face of Tamil Nadu and strengthening the gender equality because of economic independence and managerial training. Socio-economic empowerment and capacity building are achieved through a series of training programmes such as maintenance of registers, personality development, communication skills and entrepreneur development programmes. SHGs have inculcated the habit of savings among the members and also provided them with a sense of security.

Prem Singh Dahiya, et al. (2006) carried out a study to trace the socio-economic evaluation of the working of Self-Help Groups on their impact, issues and policy implications. The study found out that the social impact was deep in empowering womenfolk, educational development of children and emancipation from social evils like drunkenness by male household members.

Rao (2003) compared the genesis and development of Self-Help Groups from 48 women dairy co-operatives spread over 6 districts of Andhra Pradesh and Karnataka. The study indicated that the existing formal financial institutions failed to provide financial support to landless, marginalized and disadvantaged groups. The origin of the Self-Help Groups was traced to be a mutual support in Indian village community. Credit for consumption has been the major purpose for which loans have been availed in Andhra Pradesh while it is for social functions and purchase of inputs for agriculture in Karnataka. He concludes that women save Rs. 75 to Rs. 150 per month and are involved in social awareness programmes on dowry, nutrition, legal literacy, sanitation, and multiple roles of women.

Savitha (2004) who undertook a study on women empowerment and decision making in agriculture in Mysore district, found that majority of them experienced a moderate level of social empowerment and 26.67 percent had high level of empowerment by adopting percentage analysis.

Thelma Kay (2003) stated in his research paper that women who had generated increased income through SHG schemes have gained greater respect and decision making power within the household, power to command, attention within the community and had self-confidence due to exposure to women's rights, social and political issues.

In the light of the above, it is manifest that no study has been conducted that, with these three N.G.O.'s in Tamil Nadu in Kanchipuram district which is atop and ahead of other districts in Tamil Nadu in the number of SHGs functioning. In view of higher enrolment of women members, and increase in number of SHGs functioning in the district, it was purposively chosen for the study.

## STATEMENT OF THE PROBLEM

Micro credit has emerged as a financial strategy to reach the urban and the rural poor. Whether micro credit schemes routed through self help groups have proved to be a great success in Kanchipuram District too as claimed elsewhere, is a matter worth probing. Evaluation of the impact of SHGs on the beneficiary members has assumed crucial importance. In other words, whether micro credits dispensed through self help groups in Kanchipuram district has really helped the beneficiaries in raising their level of living through pursuit of gainful micro ventures, is a problem that merits detailed study. The present study is undertaken essentially to assess this impact.

## SCOPE OF THE STUDY

The study of women members in SHGs in Kanchipuram district throws light on the status of women, social impact created by SHG. The need of the day is the empowerment of women in all the walks of life through SHG. This study addresses the social impact in various dimensions and its impact on Self Help Group members. Thus, the present study is supposed to benefit the different constituencies of self help group mechanism.

## OBJECTIVES OF THE STUDY

1. To measure the level of social impact perceived by the respondents.
2. To analyse the relationship between the profile variable and social variables.
3. To identify the association among the social variables.

## HYPOTHESES OF THE STUDY

1. There is no significant influence of personal variables on various social dimensions of women members'.
2. There is no relationship between the dimension of social variables.

## LIMITATIONS OF THE STUDY

1. The study is restricted to Kanchipuram district alone in view of time and resource constraint.
2. Only 3 NGOs which run the highest number of self help groups are considered.
3. Self help groups which have women members alone have been studied.
4. NGOs registered under Mahalir Thittam are studied. In other words, SHGs functioning under private NGOs and banks are outside the purview of the study.

## METHODOLOGY

### SAMPLING

The present study is confined to the members of the Self Help Groups under Mahalir Thittam Scheme operated by the Government of Tamil Nadu. Multi-stage random sampling was adopted for the present study. There were more than 25,000 Self Help Groups functioning in Kanchipuram district. These groups were functioning under 20 NGOs. The sample size of the present study was fixed at 350 groups by applying sampling formula  $(n = [ZS/E]^2)$ . In the first phase only 3 NGOs (Hand in Hand, Daughters of Mary Immaculate, and Arivoli Iyyakkam) which run self help groups functioning for a minimum period of 5 years in all 13 blocks of Kanchipuram district were considered and the self help groups which have a minimum membership of 15 alone were considered in the second phase. In the final stage, three office bearers were chosen from each group thus, making the total size of the sample to 360 members. Since 10 questionnaires were found to be incomplete in some vital aspect and due to non-cooperation of 10 respondents; these were to be rejected. Hence the final size of sample is 350 members.

### PERIOD OF THE STUDY

The study was conducted in the month of April 2012.

**COLLECTION OF DATA**

The present study is empirical in character based on survey method. The first-hand information for this study was collected from the officials of DRDA, Kanchipuram District. Primary data exploring the impact of SHGs on social impact were collected from the members. The interview schedule was prepared after a review of relevant literature pertaining to self help groups.

**FRAMEWORK OF ANALYSIS**

Data collected have been presented in tabular form and analysis made, statistical tools such as simple percentage, mean score, t-test, one way Anova, correlation co-efficient were used. Likert's five-point scale has been used to measure the impact and opinion of respondents to ascertain the level of impact on each dimension of social variable.

**RESULTS & DISCUSSION****TABLE 1: AGE-WISE CLASSIFICATION OF THE SAMPLE MEMBERS**

Sl. No.	Age	No. of Members	Percentage to Total
1	Below 25	108	30.9
2	25-30	189	54.0
3	Above 30	53	15.1
	<b>Total</b>	<b>350</b>	<b>100.0</b>

Source: Primary Data

The age wise distribution of sample has been displayed in the table 1. It is patent from table that 108 members forming 30.9 per cent fall in the age group of below 25 and 189 members constituting 54 per cent comes under the age group of 25 and 30. Members above the age of 30 are only 53 forming 15.1 per cent. It is therefore evident from the above analysis that the SHG concept has been catching up the younger women of Kanchipuram district.

**TABLE 2: LITERACY LEVEL OF THE SAMPLE MEMBERS**

Sl. No.	Literacy Level	No. of Members	Percentage to total
1	Illiterate	88	25.1
2	Primary Schooling	116	33.1
3	High School Education	87	25.0
4	Higher Secondary Education	53	15.1
5	Graduate	6	1.7
	<b>Total</b>	<b>350</b>	<b>100.0</b>

Source: Primary Data

Table 2 displays the educational status of the sample respondents. A close glance at table reveals that the members with primary schooling constitute a higher percentage of 33.1 per cent closely followed by illiterate members with 25.1 per cent. It is also patent from the table that members with higher secondary and graduate qualification forming 16.8 per cent do not seek economic pursuit through self Help Group. Therefore it is concluded that SHGs in Kanchipuram district are mostly manned by illiterate and primary school dropout members.

**TABLE 3: AVERAGE ANNUAL INCOME OF THE SAMPLE MEMBERS**

Sl. No.	Income Range (in Rs.)	No. of Members	Percentage to total
1	7,500 – 15,000	7	2
2	15,001 – 22,500	21	6
3	22,501 – 30,000	124	35
4	30,001 – 37,500	58	17
5	Above 37,500	140	40
	<b>Total</b>	<b>350</b>	<b>100</b>

Source: Primary Data

A close scrutiny of Table 3 reveals that the average annual income of the respondents has increased remarkably. The number of members whose average annual income falls between Rs. 22,501 and Rs. 30,000 is 124 (35 percent) and the number of respondents earning between Rs. 30,001 and Rs. 37,500 are 58 (17 percent) and those earning above Rs. 37,500 are 140 constituting 40 per cent. In short as many as 322 members forming 92 per cent have earned income beyond Rs. 22,000 on an average. This clearly shows that the SHGs in the study area have helped the members to gain economic empowerment.

**TABLE 4: TYPE OF FAMILY AMONG THE SAMPLE MEMBERS**

Sl. No.	Family Pattern	No. of members	Percentage to total
1	Nuclear	245	70
2	Joint	105	30
	<b>Total</b>	<b>350</b>	<b>100</b>

Source: Primary Data

Table 4 shows the nature of the family of SHG members in Kanchipuram district. It is manifest from the table that vast majorities (70 per cent) are from nuclear families. It was stated during the course of interview with the members that the nuclear family system enabled them to actively participate in group activities.

**TABLE 5: MARITAL STATUS OF THE SAMPLE MEMBERS**

Sl. No.	Marital Status	No. of Members	Percentage to total
1	Unmarried	90	26
2	Married	234	67
3	Others	26	7
	<b>Total</b>	<b>350</b>	<b>100</b>

Source: Primary Data

It can be noticed from table 5 that most of the members i.e. 234 members representing 67 per cent are married female members while 90 members with 26 per cent are unmarried. The bare necessity to supplement the income of family in these days of sky rocketing of prices and sheer inability to keep idle despite possessing vast vocational skills drive the married members to seek some gainful economic activity by SHG.

TABLE 6: LOCALITY OF THE SAMPLE MEMBERS

Sl. No.	Locality	No. of Members	Percentage to total
1	Urban	138	39
2	Rural	212	61
	<b>Total</b>	<b>350</b>	<b>100</b>

Source: Primary Data

It is evident from the above table 6 that the concept of SHG has become a great hit among the female population in rural segment of the Kanchipuram district. As many as 212 members occupying 61 per cent from rural areas outnumbered their urban counter parts which constitute 39 per cent. Therefore it can be concluded that the SHGs in Kanchipuram district are mostly concentrated in rural areas.

Having examined the demographic profile of respondents, analysis veers round to measuring the impact of SHG on its members on social dimensions.



TABLE 7: IMPACT OF SELF HELP GROUP ON MEMBER'S LITERACY

Social Variables	Level of Acceptance			Total	Mean	SD
	Not Improved	Partially Improved	Considerably Improved			
Ability to read	--	160 (45.71 %)	190 (54.29 %)	350 (100%)	2.54	0.50
Ability to write	54 (15.43 %)	192 (54.86 %)	104 (29.71 %)	350 (100%)	2.14	0.66
Ability to do simple arithmetic	11 (3.14 %)	118 (33.71 %)	221 (63.15 %)	350 (100%)	2.60	0.55

Source: Primary Data

The impact of SHG on the variables like ability to read, ability to write, ability to do simple arithmetic has been analysed in the table 7. The relationship between the various aspects of literacy and SHG has been established in earlier studies conducted by Banerjee (2002), Anjugam and Alagumani (2001). This table manifest that as many as 190 members (54.29 per cent) are reported to have experienced a considerable improvement and one hundred sixty members (45.71 per cent) have expressed a partial improvement in the reading ability.

In other words, it can be said that SHG has benefited every member's ability to read. As regards the ability to write, the SHG has made different levels of impact, 104 members (29.71 per cent) have attributed their ability to write while 192 members (54.86 per cent) give credit to SHG for their partial improvement in their writing skill and 54 members (15.43 per cent) stated that there is no improvement in their writing skill due to SHG. As far as arithmetical skill is concerned, 221 members (63.15 per cent) have attributed considerable improvement in their arithmetical ability. While 11 members representing 3.14 per cent have stated that there is no improvement in their arithmetical ability even after becoming members of SHG. In the light of above analysis, it is apparent that SHG has made a conspicuous impact on its member's reading, writing, and arithmetic skills.

TABLE 8: IMPACT OF SELF HELP GROUP ON MEMBER'S HEALTH

Social Variables	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total	Mean	SD
My quality & quantity of diet has improved	--	--	19 (5.43%)	108 (30.86%)	223 (63.71 %)	350 (100%)	4.58	0.59
My awareness on cleanliness & hygiene has improved	--	20 (5.71%)	9 (2.57 %)	166 (47.43%)	155 (44.29 %)	350 (100%)	4.30	0.78
My health care has improved	--	58 (16.57%)	12 (3.43 %)	180 (51.43%)	100 (28.57 %)	350 (100%)	3.92	0.99

Source: Primary Data

Many research studies have established the fact that the health care aspect of the member has significantly improved after their admission to membership in SHG. Table 8 gauges the impact of SHG on the health aspect of the members. It is patent from the table that 331 members (94.57 per cent) have agreed that their diet pattern has improved.

In other words socialisation in SHG mechanism has helped them to improve their diet pattern. Only a few members i.e. 19 (5.43 per cent) aver that SHG has made no dent on their diet routine. As regards awareness about cleanliness and hygiene, 321 members (91.72 per cent) have positively responded that their



knowledge about cleanliness and hygiene has topped while a minuscule minority of 20 members (5.71 per cent) perceive no impact on their awareness about cleanliness. Similarly SHG has significant impact on the health care aspect of the members. As many as 280 members constituting 80 per cent are firm in their view that their awareness about health care has certainly improved after joining the SHG. Therefore it can be concluded that the SHG mechanism has made a positive dent on various aspects of health in the study area.

**TABLE 9: IMPACT OF SELF HELP GROUP ON MEMBER'S SOCIAL RELATIONSHIP**

Social Variables	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total	Mean	SD
Relationship with friends, acquaintances relations has improved	--	5 (1.43%)	--	88 (25.14%)	257 (73.43%)	350 (100%)	4.71	0.54
My contacts with high officials improved	--	5 (1.43%)	--	97 (27.71%)	248 (70.86%)	350 (100%)	4.68	0.55
Opportunity to interact with others in the meeting	--	3 (0.86%)	1 (0.28%)	26 (7.43%)	320 (91.43%)	350 (100%)	4.89	0.39
Relationship with society has improved	--	5 (1.43%)	--	94 (26.86%)	251 (71.71%)	350 (100%)	4.69	0.55

Source: Primary Data

As explained in the previous table, SHG provides opportunities to members to interact with one another in group meetings; to meet officials of funding agencies; to interact with NGOs and to transact with different customers in their business deals. Thus, the members are able to nurture their social skills. The independent research studies conducted by Jerinabi and Lalitha Devi (2010), Bezabih Tolosa (2007), Stanley Devis Mani and Selvaraj (2008) have established the connectivity between the membership in SHG and the improvement in the soft skills of the members.

A casual glance at the table 9 shows that the relationship with the friends and acquaintances has positively improved thanks to SHG. The mean score of 4.71 indicating strong agreement of members on the improved relationship with friends and acquaintances bears testimony to the positive impact of SHG on this relationship aspect. The table has clearly demonstrated the positive impact created by SHG on strengthening the contact with various officials as 345 members representing 98.57 per cent have strongly agreed.

The interpersonal relationship among members is evident from the positive response given by 346 members reflecting 98.86 per cent. Similarly the economically empowered members are recognized as entities in the society. All these positive qualities help the members to build and maintain smooth relationship in different walks of life. It is clear from the table that 345 members representing 98.57 per cent have averred that the SHG has helped them in nurturing the positive relationship with the society.

**TABLE 10: IMPACT OF SELF HELP GROUP ON MEMBER'S SOCIAL ACCEPTANCE**

Social Variables	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total	Mean	SD
My esteem as earning member has increased	--	2 (0.57%)	3 (0.86%)	110 (31.43%)	235 (67.14%)	350 (100%)	4.65	0.53
My advice is solicited on social matters	--	--	--	86 (24.57%)	264 (75.43%)	350 (100%)	4.75	0.43
Participation in making decisions on social matters	--	--	--	69 (19.71%)	281 (80.29%)	350 (100%)	4.80	0.40
Being invited for village festivals	--	--	--	106 (30.29%)	244 (69.71%)	350 (100%)	4.70	0.46

Source: Primary Data

Table 10 displays the impact of SHG and social acceptance. A cursory glance at the table shows that the 345 members, 98.57 per cent, reported that they have been recognized as an entity due to their earning capacity derived from their membership in groups. The mean score of 4.65 testifies the acknowledgment of the fact of recognition as an earning member. Thus the very earning capacity of members makes others in the family and society to listen to their suggestion, ideas and views. All members are one in their view that they are invited to contribute their opinion on vital issues affecting their families. This increases the ego satisfaction of members.

All the members credit the SHG to the attainment of new status as an earning member. As regards their participation in decision making on social matters, it is evident from the response of all the 350 members that they are able to participate in all decisions affecting social matters. The unanimity of all members on the variable "invitation for village festival" unmistakably points to the positive contribution of SHG to emancipation of women from the clutches of male folk. In short all the variables listed in the table disclose in unambiguous terms the significant role played by SHG on heightening the image of women folk on the social spectrum.

TABLE 11: STUDENT T TEST FOR SIGNIFICANT DIFFERENCE BETWEEN TYPES OF FAMILY WITH REFERENCE TO SOCIAL VARIABLES

Social Variables	Type of Family	Mean	S.D	t value	P value
Literacy	Nuclear	18.72	1.03	1.701	0.090
	Joint	15.63	1.02		
Health	Nuclear	18.69	1.41	3.254	0.004**
	Joint	12.86	1.46		
Social Relationship	Nuclear	15.04	1.76	3.818	0.009**
	Joint	19.06	1.59		
Social Acceptance	Nuclear	15.63	1.25	3.259	0.001**
	Joint	19.02	1.17		
Overall Social Impact	Nuclear	58.31	3.16	3.469	0.003**
	Joint	57.13	2.80		

Source: Primary Data

Note: 1. \*\*Denotes significant at 1% Level 2. \*Denotes significant at 5% Level

The impact of type of family on social variables is taken up for analysis is shown in the table 11. The smallness and largeness of the family may have an impact on social variables. The members from nuclear family may have better prospects to improve their literacy level than those from joint families thanks to availability of more time to develop the skill. In this background impact of type of family on social variables is analyzed. A sharper focus on mean scores of type of family on the literacy and health variables shows that the members from nuclear family stand to get a significant impact on these social variables as evidenced by the mean score of 18.72 and 18.69 respectively, while the members from joint family have been more deeply affected by social relationship and social acceptance variables than those from nuclear family. The overall impact of type of family on social variables is significant with the p value of 0.003.

TABLE 12: STUDENT T TEST FOR SIGNIFICANT DIFFERENCE BETWEEN LOCALITIES WITH REFERENCE TO SOCIAL VARIABLES

Social Variables	Locality	Mean	S.D.	t value	P value
Literacy	Urban	7.28	0.98	3.220	0.042*
	Rural	5.29	1.08		
Healthcare	Urban	12.64	1.44	3.223	0.046*
	Rural	10.62	1.43		
Social Relationship	Urban	17.60	1.75	3.305	0.041*
	Rural	18.94	1.54		
Social Acceptance	Urban	17.31	1.19	3.216	0.036*
	Rural	18.96	1.24		
Overall Social Impact	Urban	52.10	2.94	3.224	0.046*
	Rural	58.20	2.97		

Source: Primary Data

The locality where one resides may have an impact on various social variables like literacy, health, social relationship, and social acceptance. A close look at the mean scores of locality groups shows that urban members have been affected by the variables like literacy and health care with higher mean scores of 7.28 and 12.64 respectively. Further the existence of significant difference in the mean scores has been confirmed by the respective p values standing at 0.042 and 0.046. As explained earlier, higher exposure experienced by urban members might be the reason for significance in the impact level on the aforesaid variables when compared to rural counterparts. An analysis of the mean scores of locality groups on the variables i.e. social relationship and social acceptance presents a different picture. In other words, the extent of social relationship and social acceptance is deeper in rural members than their counter parts as evidenced by the mean scores of 18.94 and 18.96 respectively. Therefore it can be concluded that locality has impact on the rural and urban members differently on different variables. As for the overall impact of locality on social variables, it can be said that the locality factor has played a significant role with the p value of 0.046 on social variables.

TABLE 13: ANOVA FOR SIGNIFICANT DIFFERENCE BETWEEN AGE GROUP WITH RESPECT TO SOCIAL VARIABLES

Social Variables	Age Group	Mean	S.D	F value	P value
Literacy	Below 25	6.27	1.06	1.287	0.277
	25-30	7.35	1.04		
	Above 30	6.09	0.88		
Health	Below 25	12.20	1.40	0.962	0.383
	25-30	12.72	1.53		
	Above 30	13.02	1.23		
Social Relationship	Below 25	19.03	1.43	0.141	0.869
	25-30	18.03	1.75		
	Above 30	19.93	1.72		
Social Acceptance	Below 25	16.75	1.28	0.760	0.468
	25-30	17.85	1.12		
	Above 30	18.97	1.39		
Overall Impact of Age on Social variables	Below 25	50.00	3.11	0.035	0.965
	25-30	51.87	2.99		
	Above 30	59.96	2.58		

Source: Primary Data

The impact of age on social variables is analyzed in the table 13. An attempt is made to identify the age group or groups which have been deeply affected by social variables. The higher mean scores of 7.35 of the age group falling between 25 and 30 have been significantly impacted by literacy. In other words, women members belonging to this age group has learnt three skills i.e. reading, writing and simple arithmetic. As far as health care is concerned women members above the age of 30 with mean score of 13.02 have gained a higher level of consciousness than the other age groups. Similarly women members above the age of 30 have significantly improved the social relationship as evidenced by the mean score of 19.93. The same finding holds good for social acceptance variable as well. In short, it can be concluded that except literacy, women members above the age of 30 have been favourably impacted on the variables like health, social relationship and social acceptance. The existence of significance in the mean scores has been confirmed by the p values. As regards the overall impact of age on

social variables, the statistical results confirm that age has played a definite role in social variables but the significance is more in the age group of those above 30 in most of the variables.

TABLE 14: ANOVA FOR SIGNIFICANT DIFFERENCE BETWEEN EDUCATIONAL STATUS AND SOCIAL VARIABLES

Social Variables	Educational status	Mean	S.D	F value	P value
Literacy	Illiterate	7.81 <sup>b</sup>	1.03	3.872	0.031*
	Primary Schooling	7.38 <sup>b</sup>	1.04		
	High School	7.29 <sup>a</sup>	0.98		
	HSc	7.19 <sup>a</sup>	1.06		
	Graduate	7.00 <sup>a</sup>	0.63		
Health	Illiterate	13.14 <sup>b</sup>	1.46	3.645	0.032*
	Primary Schooling	12.97 <sup>b</sup>	1.61		
	High School	12.71 <sup>a</sup>	1.32		
	HSc	12.42 <sup>a</sup>	1.18		
	Graduate	19.00 <sup>a</sup>	1.41		
Social Relationship	Illiterate	18.02 <sup>b</sup>	1.76	3.283	0.048*
	Primary Schooling	17.55 <sup>b</sup>	1.49		
	High School	17.72 <sup>a</sup>	1.63		
	HSc	17.95 <sup>a</sup>	1.82		
	Graduate	17.00 <sup>a</sup>	0.00		
Social Acceptance	Illiterate	18.96 <sup>b</sup>	1.26	3.853	0.033*
	Primary Schooling	18.67 <sup>b</sup>	1.16		
	High School	17.03 <sup>a</sup>	1.14		
	HSc	16.75 <sup>a</sup>	1.34		
	Graduate	16.33 <sup>a</sup>	1.32		
Overall Social Impact	Illiterate	59.53 <sup>b</sup>	2.98	3.501	0.015*
	Primary Schooling	59.10 <sup>b</sup>	3.27		
	High School	58.95 <sup>a</sup>	2.69		
	HSc	58.22 <sup>a</sup>	2.68		
	Graduate	54.83 <sup>a</sup>	1.94		

Source: Primary Data

An attempt is made to find out the impact of educational status on social variables. The ANOVA technique followed by Duncan multiple range test, applied to know the level of impact on different groups, establishes the fact that illiterate groups and those with primary education have been highly impacted by SHG while other groups with high school, higher secondary and degree holders have been comparatively less impacted.

As for the overall impact of educational status on social aspects, it is illiterate and those with primary education have been affected significantly as the p value is significant at 0.015. Perhaps the sample size comprises more of illiterates and primary school educated; the impact is more significant among these groups. Therefore the impact might be more pronounced in the case of illiterates and those with primary education.

TABLE 15: ANOVA FOR SIGNIFICANT DIFFERENCE BETWEEN AVERAGE ANNUAL INCOME AND SOCIAL VARIABLES

Social Variables	Average Annual Income (In Rs.)	Mean	S.D.	F value	P value
Literacy	7,500 –15,000	7.21	0.97	0.312	0.732
	15,001 – 22,500	7.20	1.04		
	22,501 - 30,000	7.26	1.61		
	30,001 – 37500	7.30	1.06		
	Above 37,500	7.31	1.01		
Health	7,500 –15,000	12.59 <sup>a</sup>	1.30	3.106	0.046*
	15,001 – 22,500	12.77 <sup>a</sup>	1.55		
	22,501 – 30,000	13.01 <sup>b</sup>	1.24		
	30,001 – 37,500	12.74 <sup>a</sup>	1.16		
	Above 37,500	13.15 <sup>b</sup>	1.28		
Social Relationship	7,500 –15,000	18.62 <sup>a</sup>	1.33	3.545	0.034*
	15,001 – 22,500	18.50 <sup>a</sup>	1.25		
	22,501 - 30,000	18.79 <sup>b</sup>	1.30		
	30,001 – 37,500	18.41 <sup>a</sup>	1.31		
	Above 37,500	18.95 <sup>b</sup>	1.81		
Social Acceptance	7,500 –15,000	18.77 <sup>a</sup>	1.30	3.243	0.024*
	15,001 – 22,500	18.62 <sup>a</sup>	1.19		
	22,501 – 30,000	18.93 <sup>b</sup>	1.14		
	30,001 – 37,500	18.43 <sup>a</sup>	1.12		
	Above 37,500	18.96 <sup>b</sup>	1.16		
Overall Social Impact	7,500 –15,000	57.72 <sup>a</sup>	2.74	3.636	0.038*
	15,001 – 22,500	57.64 <sup>a</sup>	2.63		
	22,501 – 30,000	57.91 <sup>b</sup>	3.08		
	30,001 – 37,500	57.35 <sup>a</sup>	2.54		
	Above 37,500	58.36 <sup>b</sup>	2.89		

Source: Primary Data

It is common knowledge that the level of income influences one’s literacy, health, social relationship and social acceptance. The result of the ANOVA analysis proves that the level of income has not significantly influenced the literacy level. In other words, since most of the members have already crossed the age for educating themselves, they may not spend much on their education. Therefore the impact of rise in income does not bring out a significant change in their literacy level.

As regards other social variables i.e. health, social relationship and social acceptance, those groups whose income is beyond Rs. 37,500 have been highly impacted as the mean values of this group are higher than those of other income groups. Therefore it can be concluded that higher the income level, higher the impact on social variables. The overall impact of average annual income on social variables is significant, as the p value is 0.038.

TABLE 16: ANOVA FOR SIGNIFICANT DIFFERENCE BETWEEN MARITAL STATUS AND SOCIAL VARIABLES

Social Variables	Marital status	Mean	S.D.	F value	P value
Literacy	Unmarried	7.25	1.03	1.131	0.324
	Married	7.27	1.02		
	Others	7.58	1.06		
Health	Unmarried	12.80 <sup>b</sup>	1.33	3.107	0.041*
	Married	13.00 <sup>b</sup>	1.60		
	Others	12.79 <sup>a</sup>	1.48		
Social Relationship	Unmarried	19.05 <sup>b</sup>	1.39	3.343	0.003**
	Married	19.12 <sup>b</sup>	1.79		
	Others	18.91 <sup>b</sup>	1.33		
Social Acceptance	Unmarried	18.81 <sup>b</sup>	1.27	3.303	0.050*
	Married	18.94 <sup>b</sup>	1.18		
	Others	17.31 <sup>a</sup>	1.26		
Overall Social Impact	Unmarried	57.90 <sup>a</sup>	2.94	3.685	0.005**
	Married	58.62 <sup>b</sup>	2.97		
	Others	57.91 <sup>b</sup>	3.04		

Source: Primary Data

One’s marital status may influence the social impact. The unmarried ones may have more inclination to improve their literacy level than the other categories in order to improve their earnings prospects and to gain recognition as the educated members of the society. The sense of being settled in family life might not urge them to improve their literacy level. In this context, an attempt is made to find out the impact of educational status on various groups covered under the variable “literacy”.

It is obvious from the table 16 that the marital status has not significantly impacted the literacy of members as the p value 0.324. The health consciousness used to be higher among the married members than the other groups as they may like to live longer to take care of rest of their family members. The unmarried and others like widows, destitute and orphans may not be interested to take care of health as much as their married counterparts. In this backdrop the impact of one’s marital status on health is explored. A close examination of mean scores reveals the fact that the married members become more conscious in health aspect than the other groups as their mean score is 13. The unmarried and others are equally concerned about their health aspect as evidenced by the mean score of 12.8. The fact of marital status significantly influencing the health aspect is further borne out by the significant p value of 0.041.

The comparison of mean scores of different groups discloses the fact that the married and unmarried groups have significant impact on the dimension of social relationship in terms of significant p value which stands at 0.003.

An analysis of mean scores of the groups covered under the marital status shows that married and unmarried members experience higher degree of social acceptance than the others. Therefore it can be concluded that the impact of married and unmarried is significant with the p value of 0.052 on social acceptance parameter. As regards the impact of marital status on all the parameters covered under the social dimension, the married and unmarried groups have significant impact as the p value is 0.005.

TABLE 17: CORRELATION CO-EFFICIENT BETWEEN SOCIAL VARIABLES

Social variables	Literacy	Health	Social Relationship	Social Acceptance
Literacy	1.000	-0.020	0.118*	0.101
Health	---	1.000	0.003	0.020
Social Relationship	---	---	1.000	0.182**
Social Acceptance	---	---	---	1.000

Source: Primary Data

An attempt is made in the table 18 to find out the inter-variable correlation among the social variables. It is very interesting to note that the level of literacy is positively and significantly correlated with social relationship and social acceptance. It implies that rise in the literacy level enables the members to bond with others in the society very smoothly and enables them to gain social acceptance in the society. Therefore the SHG in the study area needs to be credited for the positive contribution it has made in the social relationship and social acceptance through the development of literacy level of members.

The health variable however is not correlated significantly with social relationship and social acceptance since there may not be any connection between the health and social relationship and social acceptance. In other words, irrespective of one’s health condition, one can relate with others in the society very smoothly and gain social recognition by one’s conduct. Therefore there may not be a correlation between health and other variables. Social relationship has a positive linkage with social acceptance to a significant extent of 0.182. In other words, the more intense the social relationship, the more wider the social acceptance.

**CONCLUSION**

The present study undertaken in Kanchipuram District reveals that SHGs have made a tremendous impact on social dimensions of women members. The SHG has contributed substantially on the social front in nurturing good relationship with members, friends, funding agencies and bank; in winning a positive recognition from the society as an entity; in upgrading their reading, writing, computational and decision making skills. The SHGs would continue to produce revolutionary results in the study area if the organization promoting microfinance programmes pay more attention to the existing and new groups for a visible success.



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**MANGALORE SPECIAL ECONOMIC ZONE – GROSS ROOT LEVEL REALITIES AND SEZs PROBLEMS****S.P. KIRAN****RESEARCH SCHOLAR****DEPARTMENT OF STUDIES IN ECONOMICS & COOPERATION****UNIVERSITY OF MYSORE****MYSORE****DR. D.V. GOPALAPPA****ASSOCIATE PROFESSOR****DEPARTMENT OF STUDIES IN ECONOMICS & COOPERATION****UNIVERSITY OF MYSORE****MYSORE****ABSTRACT**

*This paper attempts to analyse the problems of Mangalore Special Economic Zone particularly and generally. The MSEZ projects are proposed over a total area of 3,985 acres of land of Dakshina Kannada District, Karnataka. The SEZs would not be used more than 0.069 per cent of the total land area and not more than 0.12 per cent of the total agricultural land in India. In Mangalore the crop yield per acre was 20 quintals and 18 quintals respectively. Even then the land surveyors have certified the same as waste land and fixed lower price. In addition to this the compensation paid was only Rs. 8 Lakhs per acre where as the market price was Rs. 45 Lakhs. Even for the residential houses they have paid only Rs. 450 and 650 per sq. ft. for tile and concrete roofed houses respectively. The projected displaced families is 1,661 out of this only 223 have got in to training, and in the first batch, only 40 trainees were given employment and the remain g (82.10%) could not get anything. The principle of cost benefit analysis failed miserably in case of the establishment of MSEZ, which has not produced any product even today.*

**KEYWORDS**

Agriculture, Compensation, Employment and Land.

**INTRODUCTION**

Any development project need to be according to the principle of Cost Benefit Analysis. The principle of Cost Benefit Analysis is that 'the Social cost needs to be lower than the Social benefit'. Unfortunately the authorities have not been bothered about the same and their programmes and policies many times proved wrong. Here is a case of the Mangalore Special Economic Zone (MSEZ), which has been in news for its loopholes from the last about six years. According to the proponents of SEZs, the SEZs will increase employment, exports and Foreign Direct Investment (FDI) in the country. This will, in turn, result in the economic development and growth. But the field level observation reveals that it is caused only hardship to the farmers.

A Special Economic Zone is a geographical region which has economic laws that are more liberal than a country's general economic laws. It is a specifically delineated duty-free enclave treated as a foreign territory for the purpose of industrial, service and trade operations, with exemption from customs duties and a more liberal regime in respect of levies, foreign investment and other transactions. In fact, the SEZ is a development tool, with the goal of promoting rapid economic growth by using tax and business incentives to attract foreign investment and technology. The policy of SEZs was first adopted by China in 1978 as part of its economic reforms. On seeing the success of this policy in China, India adopted this scheme in April 2000.

Today all countries of the world are in the race to enhance their socio-economic development. They are using different methods and policies to achieve socio-economic development. Of these methods and policies, the policy of Special Economic Zones (SEZs) is a new one and is adopted by many countries like Brazil, China, Pakistan, India, Iran, Jordan, Poland, Russia etc. to enhance their socio-economic development.

**OBJECTIVES AND THE METHOD OF RESEARCH**

To gain insights into the functioning of SEZs, the present study was carried with the objectives of to examine the SEZs & its impact on agricultural sector. To evaluate the performance of Mangalore Special Economic Zone in Karnataka. The present paper is based on both secondary and primary data. In this direction the secondary data has been collected from various reports of the Ministry of Commerce, Government of India and Indian stat. Com. The literature has also been gathered from published articles, books and Government reports. The primary data collected interviews of the land lost famers, project displaced families, people who were deprived of employment and the farmers who protested against land acquisition during second phase. And also to crosscheck the same the discussion were held with the officers of MSEZ, KIADB, Special Land Acquisition Officer the District Statistical Officer, etc.

**SEZs AND AGRICULTURAL SECTOR**

The concept of SEZs is not a new one and it is an improvement over the concept of Export Processing Zones (EPZs). India was one of the first in Asia to recognize the effectiveness of the EPZ model in promoting export, with Asia's first EPZ set up in Kandla in 1965. Seven more EPZs were set up thereafter. The policy provides for setting up of SEZs in the public, private, joint sector or by the State Government. There is also a provision in this policy that some of the existing Export Processing Zones would be converted into Special Economic Zones.

To set up such a large number of SEZs there is a need for land on a large scale to be acquired. The total land area of India is 29, 73,190 sq km out of which 16, 20,388 sq km area is used for agriculture (agricultural area). The share of the agricultural area in the total area is 54.5 per cent and the non-agricultural area in India is 13, 52,802 sq km. The total area for proposed SEZs (formally approved and in principle approved) is approximately. 2061 sq km which would not be more than 0.069 per cent of the total land area and not more than 0.12 per cent of the total agricultural land in India. (Ministry of Agriculture).

If SEZs are set up on non-agricultural land, especially on barren land, then they play an important role for the social and economic development of the country. They can generate employment, enhance export and attract foreign direct investment (FDI) and technology at low social cost. In case of China SEZs are set up on non-agricultural land. Therefore they have played an important role for the economic development of the country. From 1980 to 1995, the annual rate of economic growth of China was near about 10 per cent.

On the other hand, if SEZs are set up on agricultural land then they create obstacles for the social and economic development of the country. If fertile land is used for the establishment of SEZs, then the area under agriculture will decline. This will lead to decrease in the production of agriculture. India at present is facing a food problem (leading to import of wheat) and this problem will become more severe if the area under agriculture declines due to the setting up of SEZs.

But in India SEZs are being set up not only on non-agricultural land but also on agricultural land. In case of Punjab, Haryana, UP, West Bengal, Maharashtra, Karnataka and some other States of the country, SEZs are being set up on fertile land. For example, the land of West Bengal and Karnataka are basically good for

agriculture but even then the West Bengal and Karnataka Government are allowing SEZs in Nandigram, Singur and Mangalore. Those SEZs, which are set up on fertile land, adversely affect our agricultural production. The social cost of such SEZs is more than the benefits one gets from these SEZs. For the setting up of SEZs the government acquires land forcibly from the farmers at a price lower than what is prevailing in the market and gives this land to the developers of SEZs at a subsidized rate. Farmers organise agitations against the government for such a move on the latter's part and there is often loss of public property and lives in these agitations as happened in Singur, Nandigram and Mangalore.

When land is acquired from the farmers, the farmers and agricultural labourers lose their employment, as they are not skilled labourers to relocate them to other jobs. The problem of displacement and rehabilitation of farmers and agricultural labourers also comes to the fore. Indian farmers are mostly uneducated, so they cannot get high-rank jobs in SEZs; they can work only as labourers in SEZs. But farmers are not ready to work as labourers in SEZs. Already farmers and agricultural labourers are facing a bad situation in India and when there will be no work for them their economic conditions will become worse.

On the other hand, if the farmers invest their money (which they get as compensation for land) in a proper way, they can get more profit. If they spend their money on the education of their children then their future will be bright. The labourers, who work in the agricultural sector, can also work in SEZs when an industry is set up under the SEZ scheme. The wage rate is high in SEZs as compared to the agricultural sector. So there can be improvements in the economic conditions of agricultural labourers. Thus SEZs can play an important role for the transformation of labour from the agricultural sector to the industrial sector. Then the burden of the population on the agriculture sector will decline and this will be beneficial for both the development of agriculture and industry. Due to this disguised unemployment in the agriculture sector would disappear and lead to proper utilization of our manpower.

## FIELD STUDY OF THE MSEZ

Mangalore Special Economic Zone established in February 2006, promoted by the Central & State Governments, industrial groups and financial institutions. The MSEZ project is proposed over a total area of 3,985 acres of land of Dakshina Kannada District, Karnataka. Currently 1,800 acres is already in possession of MSEZ Ltd., of which 1,453 acres has been notified as sector specific SEZ (Petroleum & Petrochemicals).

During the first phase of the development of MSEZ (2005) about 1890 acres of land was notified and acquired from the villages like Kalavaru (458), Thokuru (250), Bala (25), Permode (408), Bajape (600) and Kulayi (150). The land loser families though protested against MSEZ could not save their land. According to the farmers, their lands were very fertile and were growing the rich crops like Paddy, Areca, Coconut, Banana plantation, Mango, Pineapple and Jasmine with the approximate cropping intensity of 2.4 per year. Even then the land surveyors have certified the same as waste land and fixed lower price.

Gregory Pataro (land loser) said that he lost the land bearing the survey NOS. 23, 58, 65 and 92 (14.28 acres) of which 4 acres could be cultivated for paddy and 10 acres for horticultural crops. The crop yield per acre was 20 Quintals and 18 quintals respectively. He expressed his pain and angry about MSEZ for acquiring the land by considering it as wasteland along with the residential house, which was destroyed subsequently. Not only Mr. Pataro, many other farmers after watching horrible destruction of their houses by the J.C.B have been carrying the same pain.

In addition to this the compensation paid was only Rs. 8 Lakhs per acre where as the market price was Rs. 45 Lakhs. Even for the residential houses they have paid only Rs. 450 and 650 per sq. ft. for tile and concrete roofed houses respectively. Unfortunately this amount was not enough to build a house and this made people to take money from money lenders under exploitative conditions. Apart from this, the farmers have faced a series of problems like lack of water facilities, electricity, public services, civil amenities and the ration through PDS (Since they do not have door NOS the ration card is not yet issued even today).

In a way MSEZ is creating unemployment problems also because in the first batch it gave training to youth for two years with the stipend of Rs. 500 per month. These youth were promised to pay the salary of Rs. 10,000 after the training. As a result many youth have discontinued their studies and quit their existing jobs to take up training by expecting more salary. But out of 1,661 families only 223 (86.58) have got in to training, and in the first batch, only 40 trainees were given employment and the remaining (82.10%) could not get anything. As the authorities failed to absorb them, the training period extended from two to three years without giving any reason.

The then minister, Krishna J. Polymer along with the Deputy Commissioner have discussed with the authorities of MSEZ and assured the employment and also the compensation in the month of June 2011 and even today no progress in this direction. R.N. Shetty (President of the Student Federation Committee) said that MRPL and MSEZ conducted a meeting of PDFs (Project Displaced Families) in Mangalore. It was attended by the General Manager, A.J. Pai (MSEZ) and Public Relation Officers, viz., Sanjivkarkere, Santhoshkumar Khadri and three other officers. In the meeting they have said "MSEZ will generate more than 10,000 jobs and preference would be given to PDFs while recruiting for jobs". But till now there is no much progress.

In spite of all these problems MSEZ went forward for second phase of land acquisition of about 2,035 acres in the villages viz., Permode, Thenkayakuru, Delanthbettu and Kuthethuru. But because of the strong resistance from the farmers along with the organizations like *Krishna Samrakshana Samithi*, *DSS*, *Karavali Karnataka Samrakshana Samithi*, etc., it could not succeed. The farmers have criticized MSEZ for all the problems created to them and they wish not to have any SEZ in Mangalore and elsewhere. Every problem has its own solution but the MSEZ has created problems and it has become impossible to solve them. Therefore, the Principle of Cost Benefit Analysis failed miserably in case of the establishment of MSEZ, which has not produced any product even today.

## MAJOR FINDINGS AND CONCLUSION OF THE STUDY

Mangalore Special Economic Zone was established in 2006, to boost the economic growth of the area. MSEZ acquiring the agricultural land and increase the food crises in India. If SEZs are set up on agricultural land then they create obstacles for the social and economic development of the country. When land is acquired from the farmers, the farmers and agricultural labourers lose their employment, as they are not skilled labourers to relocate them to other jobs. In way it's creating unemployment problems in India. The MSEZ leads to the problem of displacement and rehabilitation of farmers and agricultural labourers also come to the fore. However, there is a criticism about the SEZs because most of the SEZs are established by the Multi National Companies. If that is the case, whatever the dividend earned by these MNCs may be flown to their respective countries. If this happens the host countries will face the problem of the scarcity of the capital.

The paper concludes that MSEZ apparently, it failed in terms of the principle of cost benefit analysis. Unfortunately the authorities have not been bothered about the same and their programmes and policies many a times proved wrong. Every problem has its own solution but the MSEZ has created problems and it seems, this has become impossible to solve them. Therefore, the MSEZ failed miserably in two counts - Firstly it is failed in terms of boosting economic growth as it could not produce a single product even today and secondly it has not generated any employment, which it had proposed and lost the confidence of the farmers land the public in the area.

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**GENDER PERSPECTIVE & ECONOMIC DEVELOPMENT - A CASE STUDY OF HARYANA**

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**ABSTRACT**

A holistic assessment of human development will lose its intrinsic *raison d'être* if it does not highlight the status of women. The health of a State's women combined with their educational attainments and involvement in productive work, when compared to a matching status of men, provides a strong measure for assessing gender development. Gender is a very critical variable of development. We have decided to examine to assess the Status of women and the gender gap and the correlation between Gender Equality Index and Economic Development in Haryana. The Gender Equality Index is a composite measure consisting of the three indices: the educational index, the health index and the work participation index reflecting the attainment level of females on various composite indicators as a proportion to that of males. The foregoing analysis clearly brings out the complementarities on both the positive and negative sides of the various indicators that together go to make up the Gender Equality Index spectrum. It highlights the truth that being well-placed on the gender spectrum provides the spring-board for economic development. In this manner, the Gender Perspective adds a new dimension to our understanding of socio-economic reality. The study reveals that there is significant gender gap in the state of Haryana but there is no relation between the gender gap and economic development.

**KEYWORDS**

Gender Equality Index (GEI), Haryana Human Development Report (HHDR), Human Development Index (HDI), Infant Mortality Rate (IMR), National Human Development Report (NHDR).

**INTRODUCTION**

The state of Haryana came into existence on November 1<sup>st</sup>, 1966. Just prior to this date, this sub-region was a comparatively backward part of the composite Punjab. Now Haryana is considered a prosperous state as its Net State Domestic Product Per Capita was Rs78781 in 2009 -2010. Haryana is the 2<sup>nd</sup> highest State in Per Capita Income in India. The Haryana's growth performance is mainly attributed to the green revolution in the state achieved mainly an account of the state government's policy of developing roads, electricity, grain markets and all other infrastructural facilities.

Haryana is a small state with an area of only 44212 square kilometers. We have noticed that the total population of Haryana was 56.74 lakh in the year 1951 which increased to 253.53 lakh in the year 2011. The decadal percentage increase in population in Haryana was 33.78, 32.22, 27.41, 28.43 and 19.90 percent in 1961, 1971, 1981, 1991, 2001 and 2011 respectively. The growth rate of population in Haryana is much higher as compared to national growth rate. It is apparent from this scenario that the health and family welfare policy and programmers of the State need to be adjusted to lay greater emphasis on participation involvement of the people. Density of population has also increased from 128 persons per sq. km. in 1951 to 573 persons per sq.km in 2011.

**IMPORTANCE OF THE STUDY**

Development signifies a process of positive change from a less developed scenario to a more developed one. Imbuing the process of development with a human touch, therefore, implies placing people at the centre stage of development. Seen in this perspective, human development seeks to widen the scope of development from purely the growth of the material well-being of a State as measured by the level of GDP and PCI and their increase over a given period of time to include enhancement of capabilities of the people through education as well as their access to critical social services and basic physical amenities.

A holistic assessment of human development will lose its intrinsic *raison d'être* if it does not highlight the *status of women*. The health of a State's women combined with their educational attainments and involvement in productive work, when compared to a matching status of men, provides a strong measure for assessing gender development.

Gender is a very critical variable of development. In case the girl-child is affectionately nurtured to be healthy and well- educated, women will not only be able to have a good income-earning capacity but will also be able to build healthy and educated families. In view of the foregoing analysis the inter se position of the different districts on the Gender Equality Index (GEI) becomes of crucial importance in their comparative potentiality for human development.

**OBJECTIVES OF THE STUDY**

The present study is based upon the Gender Perspective and Economic Development of Haryana. So, we have decided to examine the following objectives:

1. To assess the *Status of women* and the gender gap in Haryana.
2. To examine the correlation between Gender Equality Index and Economic Development.

**METHODOLOGY**

A high measure of gender development represents the capability of society to march forward in unison, men and women together, at a rapid pace towards the goal of fulfilling people's aspirations. The Gender Development Index of UNDP and the Gender Equality Index evolved by the Planning Commission are analytical instruments for assessing this capability. The present study is based on the secondary data. In this study, required data have been collected, tabulated and analyzed. The area of the study is the State of Haryana. In order to make the results more understandable and data available, we decided to compare and analyze the data of 2001. In order to realize the objectives of the study, the data have been analyzed with the help of simple statistical tools like percentage and frequency distribution and correlation. The following is the formula for the computation of rank correlation propounded by Spearman.

$$R = 1 - \frac{6 \sum D^2}{N(N^2-1)} \quad \text{OR} \quad R = 1 - \frac{6 \sum D^2}{N^3-1}$$

The GEI is an analytical tool which measures the inequality in attainments on selected human development indicators between females and males. The index seeks to present the status of women "as a ratio of attainments for females to that of males." As per the current reality, the index is likely to take a value between zeros to unity.



**GENDER EQUALITY INDEX**

The point of departure involves expressing the index is proportion of attainment level for females to that of males. The parameters used in the GEI of Haryana are given below:

**Calculating the Equally Distributed Health Index**

For this we first calculate separate Health Indices for males and females

In the same way as we calculated the health index for HDI.

$$\text{Equally Distributed Health Index} = \{[\text{Female Population Share (Female Health Index)}^{-1} + \text{Male Population Share (Male Health Index)}^{-1}]\}^{-1}$$

**Calculating the Equally Distributed Education Index**

For this we first calculate separate Education Indices for males and females in the same way as we calculated the Education Index for HDI

$$\text{Equally Distributed Education Index} = \{[\text{Female Population Share (Female Education Index)}^{-1} + \text{Male Population Share (Male Education Index)}^{-1}]\}^{-1}$$

**Calculating the Equally Distributed Worker-Participation Index**

For this we first calculate separate Work-Participation Indices for Males and Females,

$$\text{Female Work Participation Index} = \frac{\text{Female Work Participation Rate for each district}-8}{40-8}$$

$$\text{Male Work Participation Index} = \frac{\text{Male work Participation rate For each district}-45}{60-45}$$

$$\text{Equally Distributed Work Participation Index} = \{[\text{Female Population Share (Female Work Participation Index)}^{-1} + \text{Male Population Share (Male Work Participation index)}]\}^{-1}$$

$$\text{GEI} = 1/3 (\text{Equally Distributed Health Index}) + 1/3 (\text{Equally Distributed Education Index}) + 1/3 (\text{Equally Distributed Work Participation Index})$$

**Scaling Norms for GEI**

Indicators	Minimum	Maximum
Work Participation Rate ( male)	45	60
Work Participation Rate ( female)	8	40
Literacy Rate7+ (male &female)	0	100
% of children attending edu. Institutions (male &female)	0	100
Life Expect Rate (male &female)	50	80
IMR (male &female)	20 per 1000	

*Note: Higher the GEI, higher will be the significant.*

**STATUS OF WOMEN \ GENDER GAP IN HARYANA**

**TABLE 1: SEX RATIO IN HARYANA**

Year	1951	1961	1971	1981	1991	2001	2011
Sex Ratio	871	868	867	870	865	861	877

Source: Statistical Abstract of Haryana 2009-10, Census of Haryana, 2011.

The sex ratio in Haryana State was almost same since its formation. It was 867, 870, 865, 861, and 877 female per thousand male in the years 1971, 1981, 1991, 2001, 2011 respectively which is serious concern.

**TABLE 2: HUMAN DEVELOPMENT INDEX OF HARYANA**

Year	HDI	Rank
1981	0.360	5
1991	0.443	5
2001	0.509	5

Source: N.H.D.R. 2002

The HDI for state as a whole improved from 0.360 in 1981 to 0.509 in 2001, but the rank as a state in the country remains the same i.e. 5th. Hence' relatively there is no improvement in the HDI rank of Haryana.

**TABLE 3: DISTRICT-WISE GENDER GAP IN EDUCATION IN 2001**

S.NO.	District	Literacy			Children Attending School		
		Male	Female	Gap	Male	Female	Gap
1	Ambala	82.31	67.39	14.92	79.40	76.28	3.12
2	Bhiwani	80.26	53.00	27.26	97.71	71.90	25.81
3	Faridabad	81.52	56.31	25.21	74.79	66.02	8.77
4	Fatehabad	68.22	46.53	21.69	68.62	58.58	10.04
5	Gurgaon	76.17	47.78	18.39	69.09	53.33	15.76
6	Hissar	76.57	51.08	25.49	75.79	67.60	8.19
7	Jhajjar	83.27	59.65	23.62	78.02	75.97	12.05
8	Jind	73.82	48.51	25.31	75.72	67.95	7.77
9	Kaithal	69.15	47.31	21.84	75.69	66.94	8.75
10	Karnal	76.29	57.97	18.32	75.46	69.32	6.14
11	Kurukshetra	78.06	60.61	17.45	78.80	72.75	6.05
12	Mahendergarh	84.72	54.08	30.64	84.01	74.62	9.39
13	Panchkula	80.87	65.65	15.22	76.81	74.02	2.79
14	Panipat	78.50	57.97	20.53	72.90	68.20	4.70
15	Rewari	88.45	60.83	27.62	84.83	79.02	5.81
16	Rohtak	83.23	62.59	20.64	78.84	76.48	2.36
17	Sirsa	70.05	49.93	20.12	69.22	61.38	7.84
18	Sonepat	83.06	60.68	22.38	78.86	74.80	2.06
19	YamunaNagar	78.82	63.39	15.43	76.76	72.41	4.35
20	Haryana	78.49	55.73	22.76	76.00	68.80	7.20

Source: H.H.D.R. 2005

Gender-wise Literacy Rate (2001) and Gender-wise percentage of children attending educational institutions in 6-18 years age group,2001 for the various districts of Haryana has been given in the table 3. This table reveals that Ambala has the best rating on Female Literacy Rate followed by Panchkula, Yamunanagar and Rohtak where as Fatehabad has the lowest preceded by Kaithal, Gurgaon and Jind. In relation to Male Literacy Rates, Rewari has the highest rate followed by Mahendergarh, Jhajjar and Rohtak whereas Fatehabad is the least developed district in this regard.

So far as the Literacy Gap is concerned, Ambala has the least gap followed by Panchkula, Yamunanagar and Kurukshetra. On the other hand, Mahendergarh has the largest gap and immediately proceeded by Gurgaon, Rewari and Bhiwani. The spectrum of the Literacy Gap ranges from 14.92 percent to 30.64 percent which is quite wide.

TABLE 4: GENDER GAP: EDUCATION IN HARYANA

	Literacy Rate		Children Attending School	
	1991	2001	1991	2001
Males	69.1	78.49	67.33	76.00
Females	40.47	55.73	50.79	68.80
Total	55.85	67.91	59.82	72.73
Gender Gap	28.63	22.76	16.54	7.20

Source: H.H.D.R. 2005

FIGURE 1: GENDER GAP: LITERACY RATE

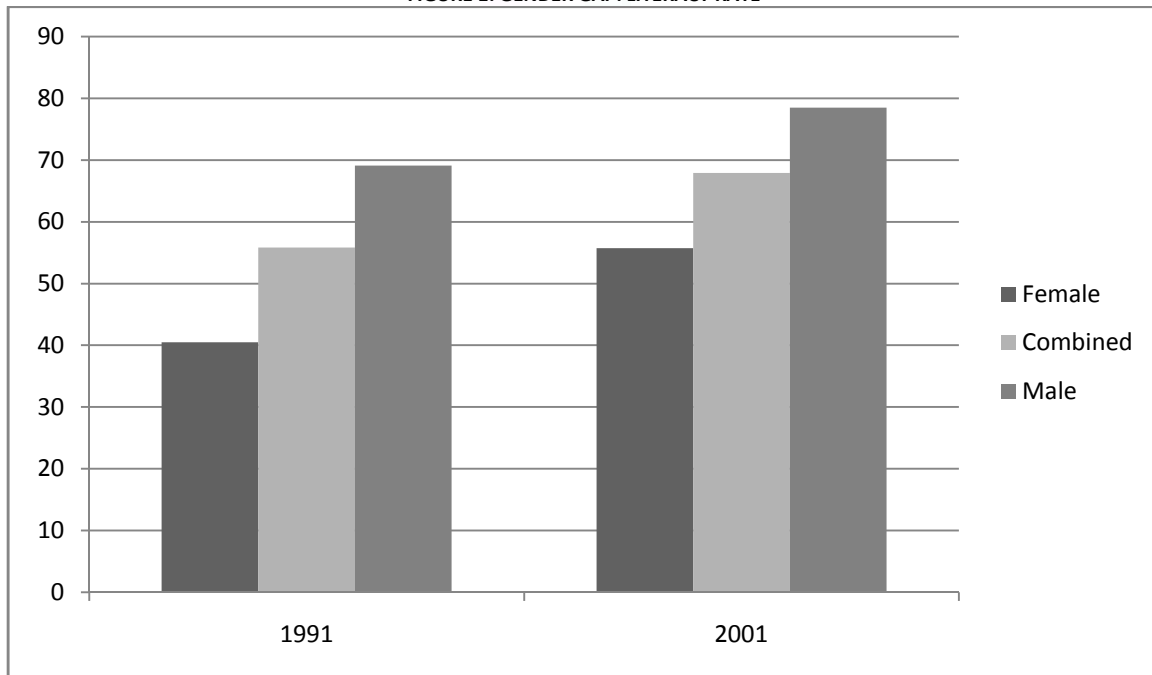
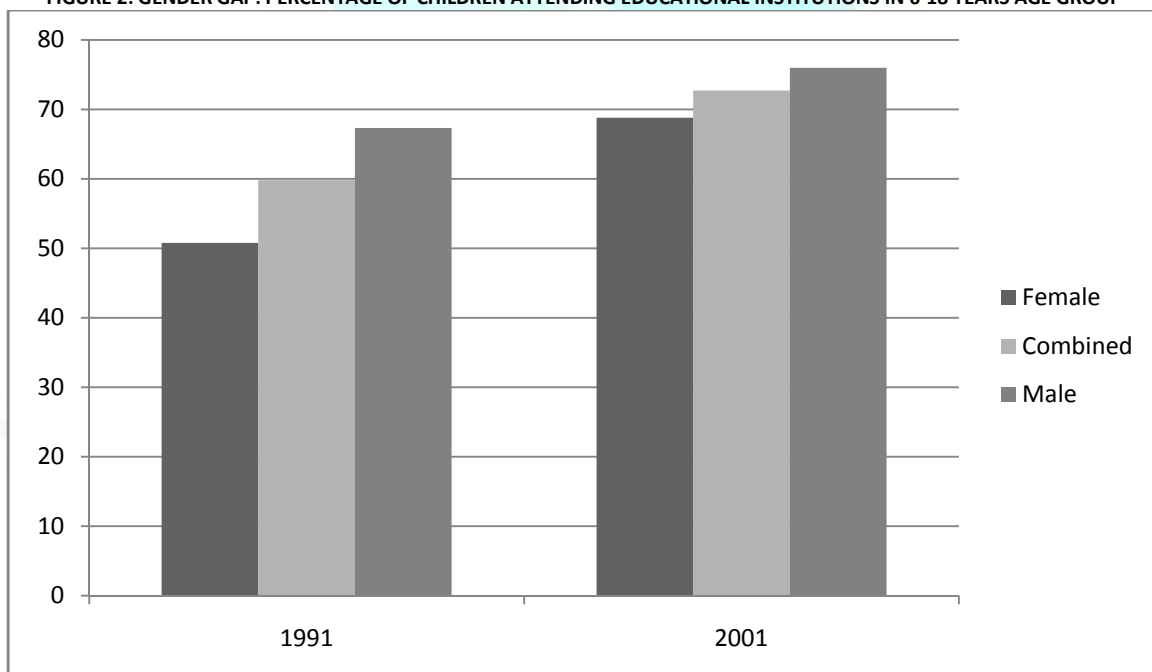


FIGURE 2: GENDER GAP: PERCENTAGE OF CHILDREN ATTENDING EDUCATIONAL INSTITUTIONS IN 6-18 YEARS AGE GROUP



An interesting way of looking at development between two points of time is in terms of measuring the Gender Gap at the state level. We have selected 1991 and 2001 as two points of time for focusing the spotlight on variations in the Gender Gap. Attention is drawn to table 4 and figure 1 & 2 which depicts the Gender Gap in relation to the Literacy Rate in 1991 and 2001. In 1991, the female literacy rate was 40.47 percent and the male literacy rate was 69.1 percent thereby showing a Gender Gap of 28.63 percent. In 2001, the female literacy rate was 55.73 percent while the male literacy rate was 78.49 percent thereby showing a Gender Gap of 22.76 percent. The gender gap in literacy has come down by 5.87 percent during 1991 to 2001. Similarly, the gender gap in children attending educational institutions has also fall down from 16.54 percent in 1991 to 7.20 percent in 2001.

TABLE 5: DISTRICT-WISE GENDER GAP IN HEALTH IN 2001

S.NO.	District	IMR			Life Expectancy at age 1		
		Male	Female	Gap	Male	Female	Gap
1	Ambala	49	68	19	68.2	67.8	0.4
2	Bhiwani	59	73	14	67.0	67.1	-0.1
3	Faridabad	55	75	20	67.5	66.9	0.6
4	Fatehabad	71	83	12	65.9	66.0	-0.1
5	Gurgaon	67	85	18	66.3	65.8	0.5
6	Hissar	56	81	25	67.4	66.2	1.2
7	Jhajjar	56	72	16	67.4	67.2	0.2
8	Jind	67	84	17	66.3	65.9	0.4
9	Kaithal	69	87	18	66.1	65.6	0.5
10	Karnal	60	78	18	66.9	66.5	0.4
11	Kurukshetra	62	70	08	66.7	67.5	-0.8
12	Mahendergarh	60	76	16	66.9	66.8	0.1
13	Panchkula	50	67	17	68.1	67.9	0.2
14	Panipat	59	75	16	67.0	66.9	0.1
15	Rewari	60	70	10	66.9	67.5	-0.6
16	Rohtak	55	72	17	67.5	67.2	0.3
17	Sirsa	58	73	15	67.2	67.1	0.1
18	Sonepat	58	73	15	67.2	67.1	0.1
19	YamunaNagar	58	75	17	67.2	66.9	0.3
20	Haryana	60	76	16	66.9	66.8	0.1

Source: HHH.D.R. 2005

District-wise Gender Gap in IMR and Equally Distributed Health Index has been given in the table 5. According to this table, a perusal of Female IMR shows that the districts of Panchkula, Ambala, Rewari and Kurukshetra occupy the first four positions whereas the districts of Kaithal, Gurgaon, Jind and Fatehabad occupy the last four positions. The first position of Panchkula in the Female IMR is understandable given the fact that it stands second in Female Literacy. Similarly, Ambala district stands second in Female IMR and first in Female Literacy. *Education has a significant role to play in enhancing health awareness.*

Let us, now, focus our attention on the Male IMR. The district Ambala occupies the first position (lowest IMR) followed by Panchkula, Rohtak and Faridabad whereas the district of Fatehabad occupies the last position and is immediately preceded by Kaithal, Gurgaon and Jind. Faridabad is an industrially developed district and consequently, its 3<sup>rd</sup> position on Male IMR stands to reason. The Gap between the Female IMR and Male IMR in relation to the various districts of Haryana, the districts of Kurukshetra and Rewari have the lowest gaps thereby implying a higher gender consciousness than other districts. The IMR Gap is the highest in the case of Hissar district followed by the districts of Faridabad and Ambala. These Districts need to make strenuous efforts to improve their Reproductive Child Health services on an urgent basis.

TABLE 6: GENDER GAP: I M R

	1991	2001
Combined	74	68
Females	80	76
Male	69	60

Source: H.H.D.R. 2005

Let us, now, focus the spotlight on the Gender Gap relating to IMR shown in the table 6 & figure 3. In 1991, the Female IMR was 80 deaths per thousand live births whereas the Male IMR was 69 deaths per thousand live births. As such, the IMR gap in 1991 was 11. In 2001, the Female IMR was 76 per thousand live births as compared to 63 deaths for males, thereby showing a Gender Gap of 7. In other words, the Gender Gap came down by 11 in 1991 to 7 in 2001.

FIGURE 3: GENDER GAP: INFANT MORTALITY RATE

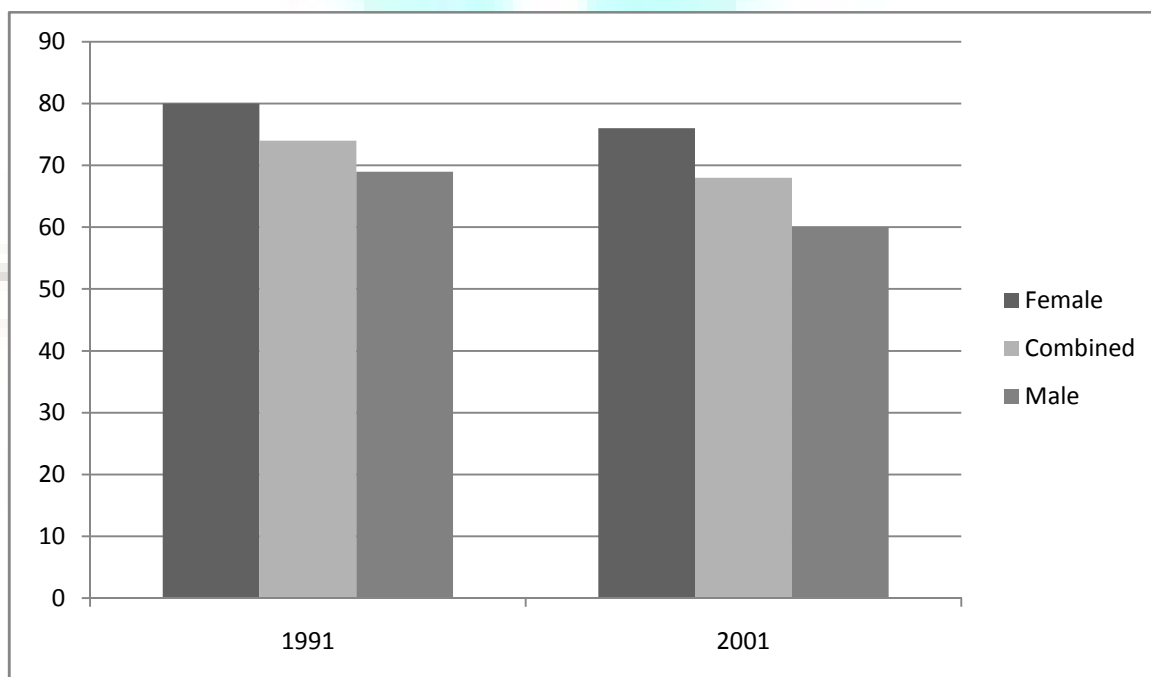


TABLE 7: DISTRICT-WISE GENDER GAP IN WORK PARTICIPATION IN 2001

S.NO.	District	Male	Female	Gap
1	Ambala	50.95	10.16	40.79
2	Bhiwani	49.24	35.38	13.86
3	Faridabad	48.32	20.90	27.42
4	Fatehabad	54.42	34.40	20.02
5	Gurgaon	46.84	27.72	19.12
6	Hissar	51.87	33.22	18.65
7	Jhajjar	51.38	35.66	15.72
8	Jind	51.56	34.85	16.71
9	Kaithal	50.87	25.79	25.08
10	Karnal	50.18	19.02	31.16
11	Kurukshetra	51.19	21.40	29.79
12	Mahendergarh	48.00	38.20	09.80
13	Panchkula	54.54	18.22	36.32
14	Panipat	51.03	25.75	25.28
15	Rewari	49.72	36.77	12.95
16	Rohtak	49.33	27.83	21.50
17	Sirsa	53.05	30.73	22.32
18	Sonepat	49.65	30.44	19.21
19	YamunaNagar	50.10	11.66	38.44
20	Haryana	50.30	27.22	23.08

Source: H.H.D.R. 2005

Let us now, focus our attention on the Gender wise Work Participation Rates which has been given in the table 7. A perusal of the Female Work Participation Rate shows that the District of Mahendergarh falls at the first position and is immediately followed by Rewari, Jhajjar and Bhiwani whereas the district of Ambala falls at the last position and is immediately preceded by Yamunanagar, Panchkula and Karnal. The fact that the upper four positions on the work participation spectrum go to comparatively less developed district is indicative of the fact that women in these districts are an integral part of their work force on account of poor economic conditions and a largely agrarian economy. In contrast, in the comparatively more developed districts of Ambala, Panchkula, Yamunanagar and Karnal, women tend to participate to a lesser extent in the work force. This may be on account of higher urbanization of these districts and preference of educated women for white collar jobs which are not easily available.

In relation to the Male Work Participation Rate, the district of Panchkula occupies the first position followed by Fatehabad, Sirsa and Hissar whereas the district of Gurgaon occupies the last position and is immediately preceded by Mahendergarh, Faridabad and Bhiwani. It is quite clear from an examination of the above table that the Work Participation Rate for both males and females present significantly different scenarios as compared to the Health and Education related indicators.

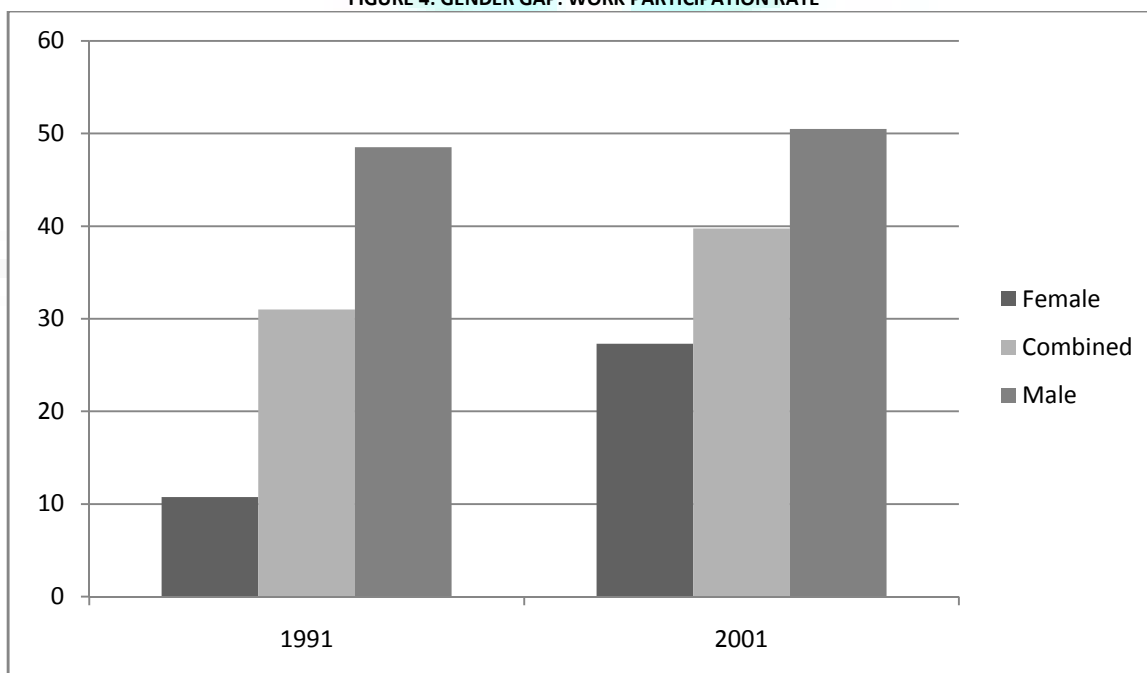
The Work Participation Gap is the highest in the case of Ambala District followed by Yamunanagar, Panchkula and Karnal districts whereas it is lowest in the case of Mahendergarh which is immediately preceded by Rewari, Bhiwani and Jhajjar Districts. Given the lesser level of economic development of Mahendergarh, Rewari Bhiwani and Jhajjar, the lower Work Participation Gap reflected by them is indicative of the fact that women in their work force are mainly members of the Informal or Unorganized Sector.

TABLE 8: GENDER GAP: WORK PARTICIPATION RATE

	1991	2001
Males	48.51	50.49
Females	10.76	27.31
Total	31	39.76

Source: H.H.D.R. 2005

FIGURE 4: GENDER GAP: WORK PARTICIPATION RATE



Work Participation Rate refers to the proportion of persons in the age group of 15 years and above who were either working or available for work. Attention is drawn to figure 4 and table 8 which depicts the Gender Gap relating to work participation rate. In 1991, the work participation rate of males was 48.51 percent



as compared to 10.76 percent for females, thereby showing a huge Gender Gap of 37.75 percent. In 2001, the male work participation rate was 50.49 percent as compared to 27.20 percent showing a Gender Gap of 23.29. In this manner, the Gender Gap relating to Work Participation Rate reduced by 14.28 percent between 1991 and 2001. The increasing participation of women in the labour force is a heartening trend.

**TABLE 9: GEI: HARYANA'S INTER DISTRICT EQUALLY DISTRIBUTED EDUCATION, HEALTH AND WORK PARTICIPATION INDICES, 2001**

S.NO.	District	Equally istributed Edu. Index	Rank	Equ. Distr. Health Index	Rank	Equ. Distr. Work Par. Index	Rank
1	Ambala	0.7688	2	0.5821	1	0.1214	19
2	Bhiwani	0.7233	10	0.5262	9	0.4116	12
3	Faridabad	0.6976	13	0.5362	5	0.2787	16
4	Fatehabad	0.6104	18	0.4703	18	0.7072	1
5	Gurgaon	0.6049	19	0.4759	17	0.1957	17
6	Hissar	0.6878	14	0.5172	13	0.5672	13
7	Jhajjar	0.7515	6	0.5403	4	0.5545	5
8	Jind	0.6794	15	0.4782	16	0.5609	4
9	Kaithal	0.6660	16	0.4674	19	0.4531	8
10	Karnal	0.7054	11	0.5109	15	0.3453	14
11	Kurukshetra	0.7354	8	0.5247	11	0.4155	11
12	Mahendergarh	0.7527	4	0.5149	14	0.3212	15
13	Panchkula	0.7484	7	0.5817	2	0.4394	9
14	Panipat	0.6984	12	0.5221	12	0.4593	6
15	Rewari	0.7916	1	0.5310	6	0.4545	7
16	Rohtak	0.7611	3	0.5442	3	0.3823	13
17	Sirsa	0.6331	17	0.5298	8	0.6061	2
18	Sonepat	0.7519	5	0.5305	7	0.4158	10
19	YamunaNagar	0.7344	9	0.5249	10	0.1777	18
20	Haryana	0.7046		0.5158		0.4365	

Source: H.H.D.R. 2005

Inter District Equally Distributed Education, Health and Work Participation Indices have been given in the table 9. This table reveals that the District of Rewari tops the list on the Equally Distributed or Composite Education Index followed by Ambala, Rohtak and Mahendergarh. In this regard, we can say that the comparatively newly formed districts (formed subsequent to formation of Haryana) of Sonepat, Jhajjar and Panchkula are moving forward more swiftly than some of the 'older' Districts (existing prior to formation of Haryana) such as Hissar, Gurgaon and Jind.

The Equally Distributed or Composite Health Index of the GEI shows that the districts with an ongoing record of well-established (Educational and Health Institution) like Ambala and Panchkula to be maintaining their lead. In contrast, the districts of Kaithal, Fatehabad, Gurgaon and Jind fall at the rear end of the equally distributed Health Index.

In the case of the Equally Distributed Work Participation Index of the GEI, the reverse appears to be true with the lesser developed districts of Fatehabad, Sirsa, Hissar and Jind showing higher values on account of a much higher participation of women in their Informal Sector work force.

**TABLE 10: INTER DISTRICT GENDER EQUALITY INDEX & INCOME INDEX OF HARYANA, 2001**

District	Gender Equality Index		Income Index	
	Value	Rank	Value	Rank
Jhajjar	0.6154	1	0.3531	16
Fatehabad	0.5960	2	0.5365	6
Rewari	0.5924	3	0.6064	5
Hissar	0.5907	4	0.5341	7
Panchkula	0.5898	5	0.5173	8
Sirsa	0.5897	6	0.5035	9
Jind	0.5728	7	0.4051	12
Sonepat	0.5661	8	0.3885	13
Rohtak	0.5625	9	0.3713	14
Panipat	0.5599	10	0.7547	2
Kurukshetra	0.5585	11	0.3147	17
Bhiwani	0.5538	12	0.3146	18
Mahendergarh	0.5296	13	0.1021	19
Kaithal	0.5288	14	0.3559	15
Karnal	0.5205	15	0.4697	11
Faridabad	0.5042	16	0.6232	4
Ambala	0.4908	17	0.6677	3
Yamuna Nagar	0.4790	18	0.4846	10
Gurgaon	0.4255	19	0.8901	1
Haryana	0.5523		0.5247	

Source: H.H.D.R. 2005

Let us, now, examine the Income Index based on the Per Capita District Domestic Product (DDP). Attention is drawn to table 10. A perusal of the table shows that the District of Gurgaon occupies the top position on the Income Index followed by Panipat, Ambala and Faridabad whereas the district of Mahendergarh occupies the last position and is immediately preceded by Bhiwani, Kurukshetra and Jhajjar. Gurgaon occupies the top spot on the Income Index because of a high level of industrialization as well as a swiftly rising level of corporate investment in Real Estate. The case of Gurgaon is fascinating because a study of its socio-economic parameters shows that there are in fact two Gurgaons: the Gurgaon of the rich and the Gurgaon of poor. This is borne out by the fact that whereas Gurgaon occupies the first position in the Income Index, it occupies the 19<sup>th</sup> position on Gender Equality Index.

Panipat with its well-developed Handloom Industry, Oil Refinery and Fertilizer Plant (NFL) also presents a similar position: it occupies the No.2 position on the Income Index but falls to the 10<sup>th</sup> position on Gender Equality Index. In contrast, Jhajjar is a district which is low on the Income Index (16<sup>th</sup> position) whereas its 1<sup>st</sup> position on GEI. Similarly, Rohtak occupies the 14<sup>th</sup> position on the Income Index but appears to be working for a better tomorrow by bagging the 9<sup>th</sup> position on GEI. District like Kaithal are universally low on various Indices occupying the 15<sup>th</sup> position on the Income Index, 14<sup>th</sup> position on GEI. A district like Kaithal demonstrates how one deprivation supplements another thereby retarding its composite progress.

## CONCLUSIONS

The State of Haryana came into existence on November 1<sup>st</sup>, 1966. Just prior to this date, this sub-region was a comparatively backward part of the composite Punjab. The investigator has examined the gender perspective and economic development with two objectives in this study i.e. (1) To assess the *Status of women* and the gender gap in Haryana and (2) to examine the correlation between Gender Equality Index and Economic Development. India is considered the demographic dividend country where more than 64% of its population is of youths. This occurs with shift in the age structure of the population towards the adult working ages. This age structure can have positive impact on economic growth. The emphasis on human development have shifted the focus from the 'quantity of growth' to the 'structure and quality of growth'. There is not much change in the sex ratio of Haryana since 1951 and very low which is serious concern. The HDI for state as a whole improved from 0.360 in 1981 to 0.509 in 2001, but the rank as a state in the country remains the same i.e. 5th. Hence' relatively there is no improvement in the HDI rank of Haryana. There is a significant gender gap in Literacy, Infant Mortality Rate and Work Participation Rate in Haryana but coming down. The GEI is a composite measure consisting of the three indices: the educational index, the health index and the work participation index reflecting the attainment level of females on various composite indicators as a proportion to that of males. Inter District Gender Equality Index and Income Index of Haryana has examined and found that there is negative (- 0.108) correlation between significant gender equality index and significant income index. On the basis of the results, we can say that there is no relation between the gender gap and economic development. The study reveals that there is significant gender gap in the state of Haryana. Hence, it would not be positive to go on the economic growth path without taking steps to ensure gender equality.

## SUGGESTIONS

1 In the sphere of education, the literacy rate of Haryana has shown a steady increase. However, there is considerable scope for improving the literacy rate of females which has been pegged at about fifty percent in 2001 with a huge literacy gap. The female literacy rate is much higher in the State like Kerala and Tamilnadu and as such, the needle of analysis points towards undertaking concert efforts for improving female education in the State. The Government of Haryana should make a time bound framework to face the challenges in the field of education like gender disparity, universal enrolment, inclusive education, regional imbalances, measuring learning outcomes, enhancing teacher quality, education- employment linkages and implementing Right to Education Act, 2009.

2 The sex ratio of Haryana has been a serious concern since its inception having no improvement and is very much lower than the national average. On the basis of the declining CSR (Child Sex Ratio) in Haryana, it is suggested that there is a need for a concerted gender sensitization campaign in the State. Though the health scenario of the State has shown improvement by recording a decline in CBR (Crude Birth Rate) and IMR (Infant Mortality Rate), still there is a considerable scope for improvement.

3 Work Participation Rate refers to the proportion of persons in the age group of 15 years and above who were either working or available for work. The facilities should be provided for credit and employment opportunities to the women, so that they can help themselves. It is a fact that females have the conflict between career making and family life settlement periods as it comes near about at the age of 25 years. So, it is suggested that they should be compensated in the form of relaxation in age and time period for jobs also. The experience of childcare of own child is also an achievement, the benefits of such experiences also be shared with the society.

**"Investing in women's capabilities and empowering them to exercise their choices in the surest way to contribute to economic growth and overall development" - UNDP, Human development report 1996.**

Be kind hearted and liberal toward females, they are equally productive and hard workers. It is time for a society and policy makers to recognize and record women's contribution to economic activities

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**FOOD SECURITY THROUGH THE MECHANISM OF PUBLIC DISTRIBUTION SYSTEM**

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**ABSTRACT**

Food Security is of highest priority in India because of its growing population. Food Security in India has close links with the Public Distribution System. It is so because Public Distribution System is the most important medium through which the government ensures food security at the micro level. Public Distribution System has been in vogue for the last several decades. Public Distribution System ensures availability of food grains to the public at affordable prices as well as for enhancing the food security of the poor. India at present finds itself in the midst of a paradoxical situation, endemic mass hunger coexisting with the mountain food grain stocks. In this backdrop, this paper studies the Indian Public Distribution System as a food security intervention. The main aim of the paper is to present an analysis of the salient dimensions of the Public Distribution System in India and analyze the functioning of agencies engaged in procurement, transportation, storage and distribution of food grains and identify the loopholes in the system.

**KEYWORDS**

Food Security, Public Distribution System, India.

**INTRODUCTION**

In India the need for a Public Distribution System (PDS) as an effective instrument of price stabilization in the national economy was felt for the first time during the Second World War. The Foodgrains Policy Committee in 1943 recommended setting up of a procurement and rationing machinery by the government to meet the war time situation, complicated by the Bengal Famine of 1943. The Ashok Mehta Foodgrains Enquiry Committee (1957) had argued for a measure of relief to consumers through assuring them the benefit of government procurement operation at reasonable prices by selling foodgrains through the institutions like co-operative societies, and/or employers' organizations.

India has lived with food shortage for a very long period. Famines, wars and droughts causing acute scarcity conditions forced the government to undertake 'firefighting' measures from time to time like suspending normal activities of markets and trade through wholesale trade, organization of food zones (for purpose of procuring foodgrains from surplus zones and distributing them to deficit zones), introduction of statutory rationing in selected urban areas, etc. However, a developing economy like India needs a security system looking much beyond management of scarce supplies and critical situation.<sup>5</sup> India took a quantum leap in 1965 when the Food Corporation of India (FCI) and the Agricultural Price Commission, renamed as Commission for Agricultural Costs and Prices (CACAP) later, were set up.

The public distribution system evolved as a system of management of scarcity for distribution of foodgrains at affordable prices. Over the years, PDS has become an important part of government's policy for management of food economy in the country. PDS is a national food security system, established by the Government of India, under the Ministry of Consumer Affairs, Food and Public Distribution and managed jointly with the State Government in India. It is a major intervention aimed at ensuring food security to all the poor, especially the vulnerable sections of society. It is recognized as a permanent feature of the strategy to control price, reduce fluctuations and achieve equitable distribution of essential goods.<sup>8</sup>

Public Distribution System means distribution of essential commodities to a large number of people through a network of Fair Price Shops (FPSs) on a recurring basis. The commodities are as follows:

- Wheat
- Rice
- Sugar
- Kerosene

The major stake holders in Public Distribution System are:

**Central Government:** Responsible for purchase of foodgrains, transporting them to principle FCI godowns and fixing quantity and price of foodgrain to be distributed to BPL families.

**State Government:** Responsible for identification of BPL families and issuing ration cards.

**Food Corporation of India:** Responsible for warehousing the foodgrains.

**Fair Price Shops:** Last mile distribution to actual customers.

**TABLE 1: FOOD POLICY OVERVIEW**

Price Policy		Procurement		Distribution	
Goals	Drivers	Goals	Drivers	Goals	Drivers
Price Stabilization	Procurement at MSP	Remunerative prices	FCI and State agencies	Distribution of food grains across the country	Fair price shops
Remunerative & Economic Price incentives	Open ended purchase	Serve TPDS and other welfare programs	Buffer Norms	Objective of food accessibility	Welfare programs
Protection of consumers	Food Subsidy				

**OBJECTIVES OF THE STUDY**

The following objectives have been framed to assess the working of public distribution system in India:

1. To study the administrative functional framework of public distribution system.
2. To portray the important decisions governing access to public distribution system.
3. To analyze the historical development of public distribution system in India

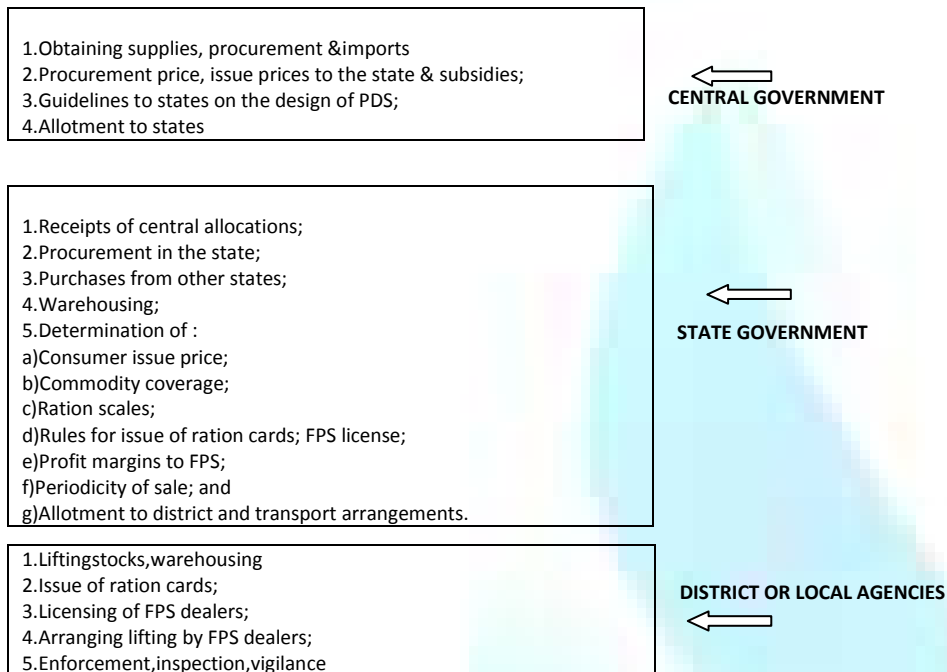
**METHODOLOGY**

The present paper is purely based on secondary data. The secondary data was collected from various research findings, periodic journals and articles related to public distribution system.

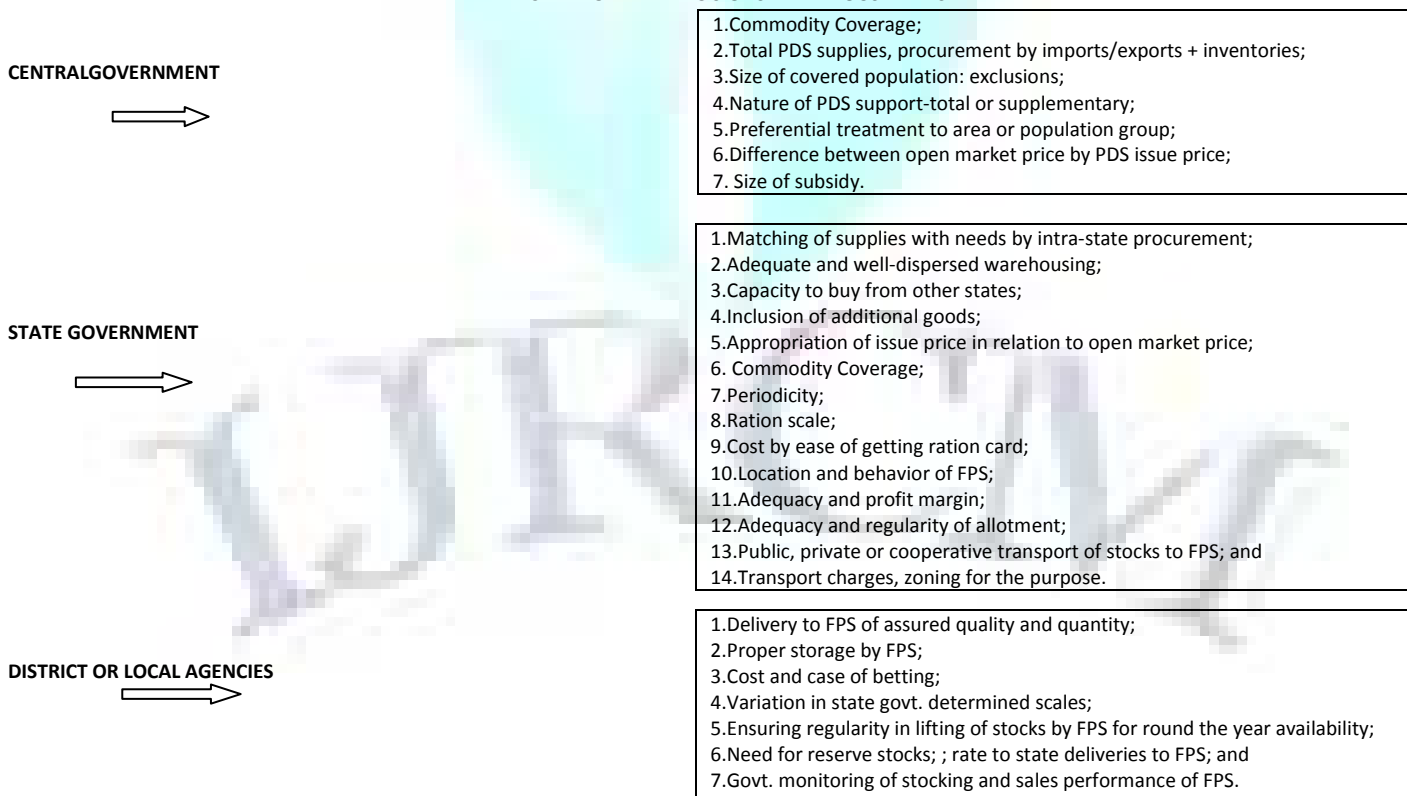
**ADMINISTRATION OF PUBLIC DISTRIBUTION SYSTEM**

The administration of public distribution system has been explained with the help of Table 1 and Table 2. Table 1 depicts the overall administrative functional model of PDS, showing roles, responsibilities and areas of decision making at the level of the central government, state governments, district and local agencies, exerting upon the FPS and the consumer. Table 2 portrays the critical decision variables at each of the levels at which policy and administrative decision governing access to the PDS are made.

**TABLE 2: ADMINISTRATIVE FUNCTIONAL FRAMEWORK OF PUBLIC DISTRIBUTION SYSTEM**



**TABLE 3: IMPORTANT DECISIONS AT VARIOUS LEVELS**



**HISTORICAL DEVELOPMENT OF PUBLIC DISTRIBUTION IN INDIA**

Public distribution system in India is more than half a century old. It first started in 1939 as a war-time rationing measure. The British government introduced it in Bombay and later extended it to six other cities and a few other regions. The drought and food shortages of the mid-sixties highlighted the need for strengthening and continuing with a system of food distribution and the PDS was made a universal scheme in the 1970s. Thus, from its inception as a rationing



scheme in big cities during World War II, the PDS was converted into a universal programme for the provision of cheap food and made a component of the strategy to alleviate poverty.

There have been four phases, broadly speaking, in the history of the PDS in India.<sup>2</sup>

The first phase was from its origins to 1960, a period when the system was expanded to other cities. During the first phase, distribution through the PDS was generally dependent on imports of food grain.

The second phase, from 1960 to 1978, was one which saw major organizational changes. Specifically, in response to the food crisis of the mid-1960s, the government of India took a holistic approach to food security, and set up the Agricultural Prices Commission and the Food Corporation of India in order to strengthen domestic procurement and storage.

The third phase, from 1978 to 1991, was marked by large-scale expansion of the PDS, supported by domestic procurement and stocks.

The fourth phase, from 1991 to the present, is one in which the policy of universal PDS has been replaced by a targeted policy in line with the objectives of economic liberalization. Thus, over the entire period, the PDS grew from a rationing scheme in selected cities to a national universal programme of food distribution and then to a policy targeted at the income-poor.

Historically, the objectives of the PDS have been<sup>1</sup>:

- maintaining price stability,
- increasing the welfare facilities for the poor (by providing access to basic foods at reasonable prices to the vulnerable population),
- rationing during situations of scarcity, and
- keeping a check on private trade

Public Distribution System evolved as a major instrument of the government's economic policy for ensuring availability of foodgrains to the public at affordable prices as well as for enhancing the food security of the poor. In the beginning the coverage of PDS was universal with no discrimination between the poor and non-poor. All households, rural and urban, with a registered residential address were entitled to rations. The commodities are made available through a network of fair price shops. The planning commission's Report, says that, with a network of more than 400000 Fair Price Shops (FPSs) the PDS in India is the largest distribution machinery of its type in the world. PDS is said to distribute each year commodities worth Rs. 15000 crore to about 16 crore families.<sup>7</sup>

Over the years, the policy related to PDS has been revised to make it more efficient and targeted. The Revamped Public Distribution System (RPDS) was launched in June, 1992 with a view to strengthen and streamline the PDS as well as to improve its reach in the far-flung, hilly, remote and inaccessible areas where a substantial section of the poor live. It was introduced in 1775 blocks in the country. From June 1997, in a renewed attempt, Targeted Public Distribution System (TPDS) was introduced to adopt the principle of targeting the 'poor in all areas'. It was for the first time that a two-tier subsidized pricing system was adopted, one for Above Poverty Line (APL) and other for Below Poverty Line (BPL) families. Further, in 2000, two special schemes were launched viz., *Antyodaya Anna Yojana* (AAY) and the *Annapurna Scheme* (APS) with special target groups of 'poorest of the poor' and 'indigent senior citizens', respectively. The functioning of these two schemes was linked with the existing network of the PDS. Some important features of PDS are summarized in Table 4.

TABLE 4: SOME IMPORTANT FEATURES OF PDS<sup>5</sup>

Name of scheme	Year of introduction	Coverage target group	Latest volume	Issue price (Rs per kg)
PDS	Upto 1992	Universal	-	W -2.34* R-2.89**
RPDS	1992	Backward Blocks	20 kg of foodgrain	W-2.80 R-3.77
TPDS	1997	Poor & non-poor	35 kg of foodgrain	BPL-W-2.50 R-3.50 APL-W-4.50 R-7.00
AAY	2000	Poorest of the poor	35 kg of foodgrain	W-2.00 R-3.00
APS	2000	Indigent senior citizen	10 kg of foodgrain	Free

\*W stands for Wheat.

\*\*R stands for Rice.

## PLANNING AND PUBLIC DISTRIBUTION SYSTEM

The evolution of public distribution system in the country also correspond with the planning for public distribution system and the changes in the perspective of plans with every lap of Five Year Planning system in the country. From the beginning of First Five-Year Plan (1951-56), the need for PDS on a regular basis, for the country to provide help to the poor and to some extent for generating down ward pressure on prices has been emphasized. In the Fourth Five-Year plan (1969-74) the initial emphasis on buffer stock maintenance and price stabilisation was shifted to increased PDS supplies.

By Fifth Five-Year plan (1974-79) a major role for PDS was envisaged in ensuring supplies of essential goods of mass consumption to people at reasonable price particularly to the weaker sections of the society. During the Sixth Five Year Plan (1980-85), PDS was expected to develop such that it remains hereafter a stable and permanent feature of the strategy to control prices, reduce fluctuations and achieve equitable distribution of essential consumer goods.

The Seventh Plan (1985-90) assigned to it a crucial role by bringing the entire population under public distribution system and became a permanent feature in the country's economy. By the Seventh Plan, PDS in India had close links with food security for the vulnerable sections of the population, policy implications regarding budgetary support for food subsidy, and a food price policy.<sup>10</sup>

During the Eighth Five Year Plan (1990 -95) the supply of food grains through PDS were increased by extending the coverage to more rural areas and use of food grains for employment generation programmes,<sup>9</sup> like National Rural Employment Programme (NREP) and the Rural Landless Employment Generating Programme (RLEGP). Subsequently, these programmes were modified and combined into the Jawahar Rozgar Yojana (JRY). The introduction of providing food security through generation of employment, and linking it to programmes of poverty alleviation has added yet another dimension to the policies.

The Ninth Five Year Plan (1997-2002) discussed the problem of food security at the national level as well as household level. The Ninth Five Year Plan reviewing the situation underlined the stark reality: "In spite of mounting food subsidies, evaluation studies indicate that supply of subsidised foodgrains through PDS has not resulted in improvement in household level foodsecurity. Self-sufficiency of foodgrains at national level and availability of foodgrains at affordable cost at local level have not got translated into household level food security for the poor."<sup>3</sup>

The Tenth Five Year Plan (2002-07)<sup>4</sup> has drawn the attention to the changes in consumption pattern which have taken place in the Post-Green Revolution period. The Tenth Five Year Plan provided outline for restructuring of PDS in order to make it more efficient.

The broad objective of the Eleventh Five Year Plan (2007-2012)<sup>11</sup> is to achieve good health for people, especially the poor and the underprivileged. The Eleventh Five Year Plan recognised the need for overall improvement of purchasing power and several social security nets for the poor as the driving force behind ensuring food and nutrition security for the most vulnerable groups in the economy.

Thus, PDS has been an integrated part of the government's policy ever since the inception of planning in India. Over the years, Government has managed to develop one of the world's most extensive foodgrains distribution system.

TABLE 5: PRODUCTION, PROCUREMENT AND OFFTAKE OF FOOD GRAINS (IN MILLION TONNES)

	1997-98	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Food subsidy in Rs billion	79	176	240	270	290	235	242	313
Production of food grains	192.3	212.9	174.8	213.2	198.4	208.6	217.3	230.7
Procurement of food grains	23.6	42.6	40.3	34.5	41.4	42.2	34.3	37.4
Distribution through FPS	17.0	13.8	20.1	24.2	29.7	31.4	31.6	33.5
Disposal through welfare schemes	2.1	8.9	11.4	13.5	10.6	9.7	5.1	3.9
Open market sale	0.06	5.6	5.66	9.66	0.25	1.1	.01	.02
Subsidised exports	0	4.7	12.5	10.3	1.0			

**Source:** Based on several issues of *Monthly Food Bulletin*, New Delhi: Ministry of Food and Consumer Protection.

### PROBLEMS OF PUBLIC DISTRIBUTION SYSTEM

The Government of India started Public Distribution System with a view to tackle the problem of hunger and maintain food security among people. But from the day of birth of PDS it has become a shelter of corruption. The problems which have been identified in the course of investigation are:

- 1) The very system of procurement and distribution creates distortions that skew normal supply-demand factors that should inform the market.
- 2) Since procurement is open ended, heavy accumulation of stocks is one of the consequences that increases costs sharply and puts severe pressure on the Central Government in financial terms.
- 3) Grading, weighing and bagging of procured grains is the stage where malpractices occur.
- 4) Storage facilities are not sufficient, sometimes grains are stored in the open, leading to heavy losses.
- 5) In the distribution phase, the multiple sets of issue prices, create opportunities for false entitlements and distribution, and diverting low priced grains to open market.
- 6) The distribution system of essential commodities is so meager that it hardly suffice the need of the family.
- 7) There is weak monitoring, lack of transparency and inadequate accountability of officials in implementing the scheme.

### CONCLUSION

Right to Food is a human right and denial of such means unfreedom. So this human right needs to be protected at any cost. Had there been food security, some of the starvation deaths could have been avoided. PDS should therefore, be reformed and made more efficient. The need of the hour is to rectify the mismanagement of PDS so that intended benefits reach the poor and the PDS can serve the purpose of food security by alleviating poverty.

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## RESOURCE CONVERGENCE IN 'PEOPLES PLANNING' BY WOMEN NEIGHBORHOOD GROUPS AND PEOPLE'S ELECTED WOMEN REPRESENTATIVES: A CASE STUDY OF DECENTRALISED LOCAL SELF GOVERNANCE

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### ABSTRACT

*The enormous resource potentials existing at PRI levels for resource convergence, plan integration and implementation have been utilized only partially in the people's plans through the grass roots level institutions like the grama sabhas. Enabling roles assigned to women peoples representatives for achieving decentralized participatory empowerment and development of poor women per se through the Self Help Groups (SHGs) and Neighborhood Groups (NHGs) based sort of development subsystems are yet to be consolidated and strengthened. Appropriate human resource, organization development and training strategies are the need of the time for promoting development of women through these grass roots level micro organizations. These women specific NHGs and SHGs have remained as the weakest links in decentralized planning efforts. In fact what has been achieved in the peoples planning at resource convergence, in integrated planning, execution and monitoring of women specific projects are only a tip of the iceberg as far as the needs identified as potentials existing and realized specifically for the gender based development, at the neighborhood levels for poverty alleviation and livelihoods promotion.*

### KEYWORDS

Area Development Society (ADS); Community Development Society (CDS); Decentralized Planning ; Elected Women Peoples Representatives ; Grama Sabhas; Neighbor Hood Groups (NHG) ; Panchayath Raj Institutions (PRIs) ; People's Planning ; Resource Convergence ; Rural Local Body/Grama Panchayath ; Self Help Groups (SHG) ; Urban Local Body/ Municipal Councils.

### I. INTRODUCTION

1.1. Convergence of resources and services at the level of Neighborhood Groups (NHGs) are also known as 'ayalkkootams' of women as an effective anti poverty strategy. It is a cherished goal of decentralized planning and development in Kerala. The Community Development Societies (CDS) and its organizational structures nurtured by the Government are to help achieve decentralized and participatory women development at grass roots level<sup>(1)</sup>. The roles and responsibilities of elected women people's representatives are envisaged prominent in this task. The elected women people's representatives interface with CDS's women functionaries and government officials deserve more attention. The involvement of women in preparing micro and mini plans at Neighborhood Groups (NHG), and at Area Development Society (ADS) i.e. at ward level, is expected to promote larger and efficient resource convergences from different sources in the context of peoples planning in Kerala for poverty alleviation via self employment creation, thrift-loan for micro enterprises' development. Such potentials and its realizations have been investigated in this paper.

1.2. In Kerala as part of decentralized 'peoples plan campaign' the NHGs and Self Help Groups (SHGs) have been organized and promoted by the three tier Panchayath Raj Institution (PRIs). To facilitate people's direct participation in democratic decentralized governance, the Grama Sabha has been given statutory powers and functions in the Panchayath Raj Act (1994). And to promote the functioning of Grama Sabhas both general and specific purpose 'ayalkottams' have come into existence either spontaneously or being promoted by various interest groups, PRIs and the Government. These neighborhood groups have come to stay at the grass roots level micro organizations of decentralized participation and administration for economic development and empowerment of women in Kerala. Even the Sen Committee (CDP.1997) had recommended the earmarking of separate and autonomous functional areas for the self help groups and neighborhood groups and envisaged a major role for these in the Grama Sabha Deliberations.

1.3. Against the backdrop of the people's campaign for decentralized planned development experience, we propose to study the role of women's self help neighborhood activity for convergence of resources, services and infrastructure aiming at empowerment, development and poverty alleviation through thrift loans for micro enterprises promotion. The leadership of elected peoples representatives of local bodies, especially by those of the women councilors is expected to facilitate better convergence and integration of various women oriented programmes in the Panchayath Raj Institutions (PRIs). At least ten per cent of the Plan Fund of the PRIs has to be earmarked for women specific and directly beneficial to women empowerment activities. In this context, the Government officials of those departments having development functions have to follow programme specific instructions for identifying beneficiaries in the Grama Sabhas. A typical Grama Sabha in the Kerala context will mean a gathering of above 300 to 400 households and considering that on an average one adult is eligible for participating from each household and it would mean that about 350 odd participants would flock together. Such a large group would be unwieldy for exercising participatory planning for development. Hence the general, specific purpose and target oriented NHGs and SHGs have also been promoted and these in turn are playing special role in the Kerala's decentralized planning efforts. In this context we propose; i) to analyze the functioning of poor women's Neighborhood Groups as agents for convergence of resources, services and infrastructure facilities; ii) to study the role and interfacing functions of elected women representatives of people as facilitators of NHG activities for better resource convergences and plan integration at neighborhood level and; iii) to assess the officials involvement in these developmental efforts taken up by elected people's representatives and the women self help groups.

1.4. The structure of this paper is as follows; the introduction is followed by a review of research highlighting the conceptual, evolutionary, and methodological aspects of the role of NHGs and SHGs as subsystem level institutions in the Grama Sabhas of the PRIs and the people's plan. The evolution of peoples plan model, proliferation of peoples plan organizations, institutions and functionaries, peoples planning and Grama Sabhas, NHG-vis-à-vis SGs, Group Approach and Kudumbasree Mission Mode, and social capital civil society-state-action consideration are presented. The third section covers the structure of the organization and the methodology of functioning. The fourth section highlights, (a) roles functions and organizational arrangements of CDS as perceived by the people's women representative; (b) women leaders interface with the CDS functionaries and government officials; (c) needs identified for ADS micro plans and women involvement in micro planning; (d) elected women representatives' evaluation of CDS's women office bearers; (e) the NHGs needs sanctioned by the CDS down to the ADSs and NHGs levels; (f) progress of infrastructure works taken up by CDS; and (g) convergence of resources realized and of potentials existing. The last section presents the major findings and followed by the conclusions.

### II. REVIEW OF LITERATURE

#### Kerala's Development Crises and Plan Models

2.1.1. We have the paradoxical and much acclaimed 'Kerala Development Model'; a high physical quality of life (PQLI), low economic growth, high unemployment rates, relatively high and stable absolute and relative poverty levels over the past decades in the state, and grass roots level politicalisation of social life. "Persistent stagnation in production sectors together with growing proportion of expenditures in the social sector was talking the economy to impasse". (George, 1993 in Mohan Kumar, 2002.P.492). The crises of Kerala Development Model were explained referring to the labor militancy, higher wages, trade union opposition to labor saving technologies, heavy burden of provision of social goods and services. (Kannan, 1998) All these are hoped to be overcome through the 'Decentralized Development Model' via 'peoples planning campaign' initiated in the Ninth Five Year Plan by the Left Democratic Front Government.



And this 'peoples plan model' pursued an integrated approach devoid of techno-economic refinements of the Growth Models based on resource allocation principals of axiomatic, atomistic behavior patterns (Thomas.1998). The Marxist ideologue EMS Namboodiripadu wrote, "this is a new experiment wherein people have mobilized with out resort to caste, creed or political party based differentiations for resource mobilization and plan implementation'. Those in power trying to stick to power and those outside it making efforts to capture power by resort to power politics need be replaced by a development politics centered on productivity increases" (in Thomas . 1998). Again this "Campaign promises to break the strait-jacket of bipolar front politics in the state and usher in a new era of unity for development action cutting across political affiliations" (Thomas. and Harilal .1997). Here in the role of the lowest rung of the ladder of mandatory local self-governing institutional bodies, the Grama Sabhas have been focused as very crucial. The 'Social Capital' and 'Civil Society' theorists (Putnam, 1993; Heller 1996, 2000) have put forward another model that the proliferation of institutions and increased associational life concomitant to peoples planning have positively contributed to the emergence of a vibrant civil society and thereby facilitated sustained local self development and good governance. However, as peoples plan was on, two economists had already come up with an 'Open Economy Model' and arrived at findings that the states economy is experiencing a turn around in growth and suggested remedies to the development crises (Harilal and Joseph , P.2286, P.2293)

#### **Proliferation of Functionaries**

2.2.1. The Government of Kerala and the State Planning Board made elaborate administrative arrangements and issued guidelines to all Panchayaths to make the Grama Sabha work out. Necessary 'associational' – 'organizational' functionaries were created and designed as : Conveners (Elected Peoples Representatives), coordinators (Govt. Officials), Task Force Members (experts-activists-voluntary elements, retired personnel, political activists etc), Beneficiary Committees, User Committees, Ward Committees, Resource Persons, Neighborhood Groups (NHGs) and Self Help Groups (SHGs) of women etc with specific functions and responsibilities. "The right to information is incorporated as a prominent feature of the Acts and Rules Governing local self Governance by these Panchayath Raj Institutions (PRIs)". (CDP.1997.P.3). The Committee on Decentralization of Powers (CDS) considered; that accountability to people is best ensured by being transparent and wanted eligibility criteria and prioritization instruction spelled out and incorporated into for beneficiary selection in the Grama Sabhas and that elected peoples representatives and staff transferred to PRIs needed skill development and managerial capacity building training to further professionalism in rendering services to the common man. All these new organizational functionaries are expected to become effective role models at local self-governance through women empowerment.

#### **Peoples Planning –Grama Sabhas-NHGs and Women Participation**

2.3.1 The Government of Kerala in the Local Administration Department and the State Planning Board has issued at least five Government Orders and Six Circulars (there may be many more) for the smooth conduct of Grama Sabhas. And addressed to the major task of beneficiary selection per se<sup>(2)</sup>. Perhaps by putting one of the most visible of the several contentious and difficult task, the beneficiary selection function, to Grama Sabhas, by the PRIs, the experiences generated in this process will tell us as a test does as to what really transpired in these sessions. During the first four phases of peoples planning campaign 4940 and 10497 'resource persons' were trained at state and district levels respectively by the State Planning Board. And about one lakh persons received/attended to trainings at Panchayath level to make the peoples plan through Grama Sabhas (Thomas I.M, 1998. PP.46-47). In this Special Grama Sabhas convened in 1996 about 27 lakhs people participated. The state level average participation was 180 persons per Grama Sabha, of Which 25,3, and 5 persons were women, SC/ST and officials respectively (Thomas ,1998. P.11, P.45 P.47.P.50). Assuming that all the Grama Sabhas held had the minimum statutory quorum of fifty persons, the participation rate was worked out to five percent of the total memberships in most Panchayaths (John, 1999. P.44). The performance of Grama Sabhas had been analyzed at length: i)the participation rates have varied widely among inter and intra Grama Panchayaths, Districts and Regions of the State; ii) participation of SC/STs (scheduled castes / tribes-weaker sections) has been grossly low; iii) women participation rate at 27 percent is very low, as women constitute more than fifty percent of the general population; iv) the variations in women participation rates were very high and more intense than in the general patterns observed; v) the grama Sabha meetings turned out to be mere venues for 'needs raising' and hardly any analysis of issues were done (Thomas , PP.50-51). The NHG level micro plans prepared and presented in the Grama Sabhas at ward level are consolidated at local body level and become part of 'peoples plan'.

#### **Group Approach to Poverty Alleviation a Mission**

2.4.1.The Kudumbasree is an anti poverty programme for women being jointly spearheaded by the Central and State Governments together with the NABARD in rural and urban areas of Kerala with the mission of total eradication abject poverty by 2008. The Acronym 'Kudumbasree' encompasses a transformed version combining all of the Urban Basic Services (UBS); Urban Basic Service for the Poor (UBSP); Urban Poverty Alleviation (UPA), and Urban Basic Services and Poverty Alleviation Programs (UBSP&PAP) initiated in the Seventh Five Year by the Central, State Governments together with UNICEF support. These programs aimed at the integrated development of poor women and children. The success of these programs in Alappuzha and Malapuram districts of Kerala induced its coverage in other parts of the state. The strategy focused is on the empowerment of poor by organizing them into Neighborhood Groups to promote thrift linked credit to members to take up micro enterprises and facilitate convergence of service and resources. And the Kudumbasree is a Government organized NGO (Go-NGO), registered under Societies Act with a prescribed byelaw and each Local Body will have to form such a unit. All the Community Development Societies (CDS) are federated into one single command structure under the Kudumbasree umbrella at the state level. Two major Central Government schemes SJSRY, NSDP and SGSY and JGSY for urban and rural areas respectively are linked to NHGs and its and its Self – Help Group unit activities as part of 'group approach' strategy<sup>(3)</sup>; for planning execution and monitoring of them and placed under the control of respective PRIs. However, the participatory basis of these women NHGs formed under the CDS model has been analyzed as grossly inadequate (Joseph ,2004)). The organizational and functional performance of these subsystems needed strengthening at all layers to achieve effective local self governance (Joseph ,2000)).

#### **Self Help Groups vis-à-vis Neighborhood Groups of Women**

2.5.1. The concepts of SHG and NHG of women are not the same. However, these two are often used to mean the same, but an erroneous approach. Thrift formation (small savings) and loan disbursal (micro credit) at consumption and micro enterprises formation are essential components of the activities of self help groups. These are specific purpose gathering or 'koottams'. An SHG membership may not be confined to one NHG only. While a neighborhood group (NHG) is an 'ayalkoottam' emergent based on favorable unifying factors like natural boundaries, settlements patterns, rivers-stream caste-religion-community, considerations etc. The NHGs are essentially bound and constrained by space, proximity and loyalty considerations.

2.5.2. In Kudumbasree parlance SHGs and NHGs have tented to be considered as the same, since thrift formation and credit disbursal through self-help by the risk affected families at micro enterprising and consumption demands are the key activities around which these NHGs are formed<sup>(4)</sup>. These are essentially NHGs of the poor people. Whereas in the 'peoples plan' of the PRIs general and specific purpose SHGs and NHGs have been formed to meet with the requirements of Central Government Scheme guidelines and to provide special protection to Women and Weaker section (SC/STs) etc. where in 'group approach' has been encouraged.

2.5.3 An array of experimentations with NHGs can be enlisted, apart from the popular state sponsored and UNICEF supported Alleppy and Malappuram models; the Kanjipadam Model by Pankajakshan (1989); the Nalpathimala Model by Abraham (1993); and the Kallyaseri Model of KSSP by Thomas et all (1995) besides those by some of the popular NGOs of the state like MDS-Kanjirapally, KSSS-Kottayam and PDS-Peermade models etc. The niche enjoyed and space occupied by these powerful NGOs at NHG and SHG activity had to reassess and reformulate its work given the onslaught of peoples plan SHGs and NHGs by women.

2.5.4 There had been a proliferation of SHGs in the state due to the facilitating environment offered by the peoples planning campaign from 1997-98 onwards. The group approach insisted upon by the Government of India for implementing its urban and rural development schemes; Swarnjayanthi Grama Swarozgar Yojana (SGSY), Swarna Jayanthi Shehari Rozgar Yojana (SJSRY), etc have encouraged SGH activity abetted by the peoples plan campaign. A strong positive correlation between SHG activity and Grama Sabah's smooth conducts in the state have been empirically established. Some of the Grama Panchayaths have 35 to 70 percent of its women population got registered in the SHG activities of the Local Bodies<sup>(5)</sup>. Their prime motive being receiving of economic assistance, availing of cheaper credit, training at micro enterprises formation etc. These women SHGs have become focal points were in subjects like; women and child development, literacy, health and education, plan projects and schemes, Grama Sabhas conduct etc get discussed. Members of these SHGs have subsequently moved up and became functionaries and office bearers of Beneficiary Committees, User Committees, Task Force Members, and Resource Persons and even got elected as Panchayath Members, Presidents and some got government jobs etc.



**Social Capital – Civil Society – State Action**

2.6.1. Peoples planning campaign have positively contributed to social capital formation and in building up a progressive civil society through the creation of new institution and organizations that enable local self-governance for sustainable local development. The peoples plan campaign" has added to the already dense network of associational life that Kerala has built up through years of social mobilization accompanied by concomitant" (Heller 1996). In Kerala the formation of social capital and emergence of civil society have not taken place independent of state action .And Grama Sabha is now the only sub system level mandatory institution in which social capital- civil society-state action and local self – good governance efforts are to converge.

2.6.2. According to Putnam (1993), "Social Capital fosters reciprocity, facilitates information flows for mutual benefit and creates trust and once these takes place, they tend to be self generating as future generations are induced into these norms, and hence assumes significance particularly in local level development and poverty alleviation. It is expected to have a positive effect on economic development and growth". However, the underlying realities of these theorizing are deeply embedded with the SHG and NHG based activities at local governance is implicit enough under the Panchayath Raj set up.

**III. THE ORGANIZATION CONSIDERED AND THE METHODOLOGY OF STUDY**

3.1.1. The Community Development Society (CDS) is a registered organization of poor women households identified through a statewide survey in 1995<sup>(6)</sup>. The poor households had been identified using a nine -point risk index of poverty as an alternative to the existing approach to measurement of poverty<sup>(7)</sup>. The risk affected poor families have been organized into a three-tier sub system consisting of the Neighborhood Groups (NHGs) at the grass roots level, the Area Development Society (ADS) at ward, and Community Development Society(CDS) at middle and apex levels respectively<sup>(8)</sup>. For each of these three tiers the roles and functions of ordinary members, elected office bearers and elected representatives are laid down in the byelaws made mandatory by the state government. The CDS has three other high power functional and policy-making committees as well<sup>(9)</sup>. All elected women representatives are also mandatory members in these high power committees at the Local body/Nagarapaliks levels. An elected member is the Chairman of each of the Area Development Committees at ward level. The four major functional areas for the CDS set up are: (1) women's participation in self help and thrift loan activities for self employment-micro enterprises promotion; (2) child and mother development; (3) convergence of resources and services for speedy achievement of the objective of poverty alleviation in absolute and relative terms and; (4) education and health care development of the poor women and children.

3.1.2. To achieve the above goals the CDS set up designed in such away to function only as a subsystem of elected local body in the urban and rural areas. And the two centrally sponsored schemes the Swarna Jayanthi Shehari Rozgar Scheme (SJSRY), Swarnjayanthi Garmin Roghar Yojana (SGSY) and the National Slum Development Scheme (NSDP) are exclusively implemented via the CDS organizational structures. At each of the three tiers micro, mini, and master plans are prepared by the NHGs, ADSs and the CDSs respectively, for every financial year and are approved, implemented, and monitored by the local bodies along with annual decentralized people's plans. The local body under study has an above average, medium level of performance in the district and state as such. Out of the thirty two members in this local body, eleven are women<sup>(10)</sup>. All these eleven members (i.e. 100 % coverage) have been met personally by the author<sup>(11)</sup> and explained the purpose of the study and questionnaires got filled up themselves and assisted by investigators. The details gathered are analyzed and presented below. There are 92 NHGs constituting 3226 risk families in the Chengancherry Nagarapaliks/Council of Kottayam district of Kerala from which the sample data was collected.

3.1.3. The CDS's ordinary members being poor women from the risk families grouped in to NHGs. In each NHG, on an average, there will be 20 to 40 risk families. Each NHG will have a five member elected body to manage its day-to-day activities. The president of the NHG will chair meeting and manage all NHG activities. The Secretary also known as Resident Community Volunteer (RCV) of an NHG will perform all secretarial functions in the NHG. The other three members from the five member committee will look after: i) health and education, ii) employment, and iii) infrastructure development functions respectively.

3.1.4. An ADS for every 200 risk family or for every 10 NHGs have to be formed. All the five members of the Governing body of an NHGs will constitute an ADSs electoral General Body, out of which a nine number Governing Body will be elected, of them the ADS Chairperson will have to be an NHG Secretary, and its Vice President be an NHG Secretary or President, and out of seven committee members four have to be from among NHG secretaries and two from NHG Presidents and one an ordinary committee member. A field level Government Official either a JPHI (Junior Public Health Inspector), a Nurse (JPHN), a Village Extension Officer (VEO) is being designated as the Community Organizer and to function as Member Secretary of the ADS. Besides these other field level officials can be co-opted into ADS Committee. Again, at the ADS level an Advisory Committee have been set up with the elected ward member as the Chairperson to provide guidance, co-operation and helps integration of all poverty alleviation activities of the NHGs. All NHG secretaries, two members elected from NHG presidents, all Anganwadi workers of the area, JPHI/JPHN/VEO in charge of the ward, and up to three nominated social workers will be members. An Official- the Community Organizer will be the Member Secretary to this Committee.

3.1.5. The CDS General Body consists of all ADS Chairpersons; all member secretaries of ADSs, one representative of a training institution, and the Child Development Project Officer will be a member. The nominated members will have no voting rights. The CDS Governing Body elected from the General Body consists of one president, one vice-president, four members from the ADS Chairpersons and three members from among ADS Vice Chairpersons. Another important committee has been formulated at the CDS level in the PRIs; the CDS Advisory Committee. These two high power committees are the decision-making bodies for the CDS at the local body level. All these CDS Structures are federated into one roof called the Kudumbhasree Mission of the State Government, set up with the sole objective of removal of poverty by 2008. This well streamlined institution at noble tasks needs a careful study is evident enough, as it gives thrust to SHGs, NHGs, and Grama Sabha activities of PRIs at local self-good Governance in the decentralized peoples planning in Kerala and aims at women empowerment. Both in the rural and urban areas of the state same organizational patterns are followed for these exclusive women manned organizations.

**IV. CASE STUDY RESULTS****Roles, Functions, and Organizational Arrangements**

4.1.1. The results of a sample survey conducted are revealing many appalling facets of this women empowerment strategy. Ten out of all the eleven women leaders in this local body correctly knew the number of NHGs functioning in their respective wards. Only one among these councilors did not attend to any of the NHG meeting so far. Three women members reported that the NHGs are not functioning satisfactory. Five out of the eleven members reported that they have so far not chaired an ADS Advisory Committee meeting of which they are the Chairperson as per bylaw. And, three of them reported that the functioning of ADS as not effective at all. All these women leaders do agree that NHGs exclusively for women are very relevant and useful for women empowerment and development, yet our findings indicate that these representatives have not fully identified themselves with NHG and SHG activities nor have they taken it up as a serious task of theirs in their capacity as people's elected representatives.

**Women Leaders Interface with Functionaries and Officials**

4.2.1. Two women representatives reported that a large number of the identified risk families are really not risk affected, as exemptions are noted by them. According to majority of these women members, most of the office bearers of ADSs do not have adequate knowledge to work for the NHGs. About forty percent of these lady representatives think that the ADS office bearers do not have the required sincerity and that they do not set good examples of service to the other NHG members as well. In fact forty percent of women members reported that ADS office bearers do not co-operate with them in the development efforts carried out by the local body. The officials that are found participating in the NHG level activities are only from the Nagarapaliks / Local body level, followed by Water Authority (WA) and Banks; and no other development staff of other governmental departments {Social Welfare (SW), Education (Edu)}; visited these NHGs as part of their routine duties as otherwise mandated. However, a visit to an NHG has yet not become part of a field level officials job chart prescribed by the local bodies and line departments, must be an eye opener to 'people's planners'. The CDS functionaries, its officials and related other development departmental staff have not sufficiently interfaced or lisoned with these women elected members in achieving the avowed objectives of poverty alleviation and decentralized development is evident.

**Needs Identified in Micro Plans**

4.3.1. Fifty percent of these women representatives have reported of their non-preparation of NHG and ADS level micro and mini plans; a similar number of them did not participate in the ADS level mini plan preparation efforts at all (Table 1). This may be a strong coincidence, but a strange one, a case to worry about the sort of participatory planning exercises going on in the Grama Sabhas. The Needs identified in the ADS level plans prepared have been for sanitation, housing, self-employment, drinking water, skill development etc in the descending order of priority ranked by NHGs and ADSs.

4.3. 2. These women leaders have reported that their ADS's have identified and demanded the inclusion of following items; thirty- nine houses, thirty-one latrines, thirty three self employment projects, and fifty nine training campus (Table .2) in the CDS level macro plan to be prepared. For the current year (2000-01) financial allocations mobilized by them varied from Rs 2 lakhs to Rs 12 lakhs in their respective wards as reported in (Table. 4). Further, two of these councilors reported of no resources or funds earmarked in their wards for NHGs are a matter of concern to find answers for. Such results indicate the poor performance of these elected members and also speak volumes regarding the state of affairs of women leadership functioning in this local body.

**TABLE 1: NEED IDENTIFICATION IN THE ADS PLANS OF WOMEN PEOPLES REPRESENTATIVES**

Ward Codes	NHG/ADS prepared Micro/Mini Plans		You participated in ADS/CDS plan preparation?		Needs identified in the ADS's plan prepared (items/Nos)						
	YES	NO	Yes	No	House (Nos)	Latrine (Nos)	Drinking water taps (Nos)	Electrification	Self Employment	Training	Others
	1W1	Yes			No	12	4	2		4	6
3W2		No		No	5	3	4	9	3	4	
6W3		No		No	10						
8W4	Yes			No	2	8	3	3	14	7	2
13W5	Yes			No	1						
18W6	Yes		Yes								
20W7	Yes		Yes		3	4	2	8	1	4	
24W8	Yes		Yes		15	20	10	25	15	10	5
26W9		No	Yes		20	10	4	10	15	10	10
30W10		No	Yes		8	12	2		24	15	
11W11		No		No	18	61	13	9	11	8	
Total					94	122	40	64	87	64	17

Source: Field study

However, during 1999-00 from People's Plan Fund Rs 30 lakhs had been converged to NHG levels these women functionaries (Table 4). The potential to earmark and expend resources exclusively for women development have been tapped by these women councilors to a limited extent, during the initial three years of the first peoples plan. The causes for wide variations in the realized and planned expenditures need to be separately analyzed, but done here. Yet the potential for convergence of resources at NHG level is remarkable and evident from experience in this case.

**TABLE 2: NHG NEEDS SANCTIONED BY AREA DEVELOPMENT SOCIETY**

Ward codes	How many application have your ADS given to CDS for approval.							
	House		Latrine		Drinking Water	Electrification	Self Empt	Training
	No	Rs	No	Rs	No	No	No	No
1W1	13		4		2		4	6
2W3	2	26500						
3W6								
4W8	2		3		1			1
5W13								
6W18	10		8		3		12	15
7 W20	3		4		2		1	5
8W24	8	24000	10				10	10
9W26	1	24000	2	1500 per	2	2	6	7
10W30								7
11W11								8
Total	39	2425000	31	46500	9	2	33	59

Source: Field study

**Elected Representatives' Evaluation of Officials**

4.4.1. Only three women representatives reported of participating in the CDS level Advisory and Management Committees that are live. In fact that all other eight members are not participating indicates that these committees have been not made functional at all. The performance of CDS Project Officer, the Govt. Official in charge of coordinating the program, has been assessed as 'good' by eight lady respondents to a note of exemption by three members. The performance of two other Local Body Officials functioning, as CDS Community Organizers (both women) have been rated 'good' to the exemption note by four of them. Women representatives have almost uniformly rated the performances of CDS's women President as 'poor', and that District Coordinator as consistently 'good'.

**The NHG's Needs Sanctioned**

4.5.1. Four of the women representatives have not reported of any item of NHG needs being sanctioned to their respective ADS may be due to non-access to data or due to lack of interest in ADS activities as such an outcome may not be conducive to the member's interests; while all the others have given details of sanction of at least one item of demand placed with CDS by their ADS. Only twenty-five houses, seventeen self-employment projects, fifteen skill formation trainings, thirteen sanitary latrines etc have been reported as being approved in the CDS action plans (Table .3). This involves gaps in sanctions and under reporting as the requirements in all these areas are at high levels.

**TABLE 3: THE NHGS NEEDS SANCTIONED TO ADS'S FROM THE CDS PLAN**

Ward Code	The NHGs Needs Sanctioned to ADS by CDS						
	Houses		Latrine		Drinking Water	Self Employment	Trainings
	Nos	Rs	Nos	Rs	Nos	Nos	Nos
1W1	10		4		2	4	6
2W3							
3W6							
4W8	2		1	1500	1	6	1
5W13							
6W18	4		6		1	1	1
7W20			2		2	1	5
8W24	8	24000				5	
9W26	1						2
10W30							
11W11							
Total	25	600000	13	19500	9	17	15

Source: Field study

**Progress of Works**

4.6.1. Physical progress of various works have been reported only by two women members, two others reported to have sanctioned some of the works and did not know the present position of works sanctioned from the CDS action plans in their respective wards. It was evident that the progress of works was tardy and they had not attended to the task of speedy implementation of these CDs works at infrastructure development as per Action plans of the NHGs. Hence the utilization of available funds on infrastructure development of NHG's had been negligible.

**TABLE 4: CONVERGED RESOURCES TO WOMEN NHGS AND CONVERGENCE POTENTIAL IN PEOPLES PLAN BY ELECTED WOMEN MEMBERS**

Ward Codes	You helped/ assisted the women NHGs in the ward from sources Other than CDS funds for 1999-00			Amount earmarked in 2000-01 Peoples Plan Funds for your wards Development to NHGs		
	Items	Nos	Rs	Items	Nos	Rs
1W1	Houses	6	200000	Roads	2	300000
	Latrines	13	32500			
	Subtotal	19	232500		2	300000
2W3	Nil					
3W6	Houses	2	50000	Works	6	300000
	Latrine	12	30000	SC/ST	1	125000
	Training	5	10000		1	100000
	Driving	5	10000	Bridge	1	300000
	Maintain houses	3	15000			
	Tailoring Machines	10	20000			
	Sub Total	37	115000		9	825000
4W8	Houses	1	32500	Roads	1	200000
	Latrines	3	5500			
	Training	2	6000			
	Driving	5	10000			
	Roads	1	10000			
	Sub Total	12	64000		1	200000
5W13	Houses	10	240000	Roads	2	540000
	Houses	11	330000	Bunds	1	250000
	Latrines	25	56250	Bunds	1	340000
	Training	15		House	3	90000
	SCP		600000	Latrine	5	10000
	TSP		75000			
	Bridge		800000			
	Sub Total	61	2101250		12	1230000
6W18	House Maintenance	3	25000	PWD work	1	300000
	Tailoring Machines	9	18000	SC/ST Development works		75000
	Electrification			House	3	84000
	Drinking water			Latrine	5	10000
	Sub Total	12	43000	Others		280000
7W20	House	3	114000	Roads	2	300000
	Latrines	2	5000			
	Sub Total	5	119000		2	300000
8W24	Book Distribution			Roads	2	300000
	Training of Computer			House	11	281000
	House			Latrine	5	12500
	Latrine			Electrification of House	20	25000
	Electrification of House			Maintenance of House	2	10000
Sub total				40	628500	
9W26	Roads	2	300000			
	House	1	24000			
	Latrines	2	3000			
	Subtotal	5	327000			
10W30	Nil					
11W11						
Grand total	-		3001750			4232500

Source: Field study.

**Convergence of Resources Realized and Potentials**

4.7.1. When the elected women members responded to a question as to funds expended for members of women NHGs in their respective wards from funds other than CDS funds, the figures of expenses and items executed showed wide variations with regard to item numbers and fund utilized. During the first three years of peoples planning the amounts expended varied from Rs.43 lakhs to 21 lakhs, from among these lady councilors (Table .4). The total amount of funds converged by 1999-00.was Rs 30 lakhs, is by all means a substantial gain to the NHGs and SHGs. And for the year 2000-01 the postulated amount have been Rs 42 lakhs, is indicative of positive growth in this regard (Table .4).

**V. MAJOR FINDINGS AND POLICY CONCERNS**

1. The risk family identification surveys were done inadequately and less comprehensively. Errors of omission and inclusion were rampant in the risk family lists, which could have been kept to a bare minimum had the elected members exercised their mandatory powers. On the contrary they themselves were encouraging erroneous list preparation.
2. Majority of women elected representatives reported that the CDSs' women functionaries and office bearers lacked the required knowledge to work for NHGs as sub systems at local planning and development. The CDSs' women functionaries are from among the lower socio economic strata and needs skill, knowledge and hand holding from the elected PRI functionaries. Whereas the power structures at the PRI and higher levels want to subjugate and make use of these SHGs for well entrenched partisan political interests. Hence, the SHGs fail to realize its avowed objectives of poverty alleviation and livelihood security promotion.
3. Forty percent of women representatives reported that the CDS women functionaries do not cooperate with them in carrying out developmental activities planned by the local body. These CDS functionaries are indirectly elected from the SHG to ADS and to CDS and into the PRI in a well streamlined manner as compared to the elected people's representatives who contest direct elections from within a political party set up. The lack of coherence between these two set of development functionaries at the grass roots have remained a major area of conflict of interests and divergent concerns. These functionaries need be trained in conflict resolution and peace negotiation skills for making peoples plans.
4. Forty per cent of these women representatives reported that no NHG/ADS level mini plans were prepared by these bodies contrary to the claims that all of the NHGs and ADSs have prepared micro and mini plans. What actually happens is preparation of semblance of plans only at the SHG and ADS levels and subsequently finalized by the dictates of bureaucracy. The capacity building of SHGs functionaries have to be more systematic and vigorously undertaken at the PRI levels.
5. As per the report of the Secretaries' of NHGs about forty percent of women councilors did not participate nor assisted in the NHG and ADS level plan preparation efforts. These weak organizations often do not receive the much needed hand holding and support from the elected members for oblivious reasons emanating from power equations at grass roots level. Ways to reconcile and co-ordinate the functioning of the formal mandatorily elected peoples representative and the informal voluntary functionaries is a felt need .
6. There had been wide variations between the needs identified by the NHGs and ADSs and that sanctioned by the CDS in turn to its beneficiary members. Much remains to be done to strengthen the vast scope of the tasks assigned to this institution by converging substantial resources to them. The wide gaps noted in the needs identified and sanctioned to these subsystems at decentralized planning have to be bridged by suitable resource redeployments strategies by the PRIs.
7. The peoples' elected women representatives did help the NHGs with funds from different sources in the range of Rs 34000 to Rs 21 lakhs, e.g. from Plans funds during 1997-00, to a total of Rs 30 lakhs, but not effected to the extent possible by convergence of resources and services. As these currently converged funds to the SHGs are tiny sums compared to the huge plan funds placed at the disposal per PRIs say to the tune of Rs 2 crores per annum i.e. Rs 7 lakhs per an elected member on an average. Thus out of Rs 77 lakhs per annum per member for three years which would work out to about Rs 24 crores of it only Rs 30 lakhs exclusively for SHGs is just only 13 percent of total plan funds converged for poverty alleviation and livelihoods promotion at the sub system level.
8. During the reference year of this study (2000-01) substantial funds had been placed by some of the lady representatives in their wards in the range of Rs 2 to 12 lakhs; to a total of Rs 42 lakhs from plan funds of the local body's People's Plan, for NHG's development needs is indicative of a spurt in resource commitments to grass roots level. The existent large scope for converging funds at NHG level is not tapped to the extent possible. Also the increase observed in the current year at fund convergence is marginal compared to previous years from 1997 to 2000.
9. The full participation of all women representatives in the local body level exclusive apex committees for SHG based development is not being ensured at the PRI level. These apex committees are not functional as its role play is not kept up by the elected members. The mandate to attend these committees is yet to find the proper role play by the power wielding interest groups at grass roots levels within the PRIs.
10. A majority of these peoples representatives reported that the performance of its indirectly elected women President of this subsystem (the CDS) as 'poor'. For the latter's poor performance the former is more responsible than the official bureaucracy is born out from the study. The CDS president finds it very a challenging task to push through its demand driven action plans through the PRI power structure.

**VI. CONCLUSION**

6.1. The enormous potentials existing at neighborhood levels for resource convergences, plan integration and implementation have been utilized only partially. Enabling roles assigned to peoples' women representatives for achieving decentralized participatory empowerment and development of women per se through the SHG and NHG development subsystems have yet to be consolidated and strengthened. Appropriate human resource, organization development and training strategies are the need of the time for promoting development of women through these grass roots level organizations. These women specific NHGs and SHGs have remained as the weakest links in decentralized planning efforts. In fact what has been achieved in the peoples planning at resource convergence, in integrated planning, in execution and monitoring of projects are only a tip of the iceberg as far as the needs identified and potentials existing at the neighborhood levels for poverty alleviation and livelihood security development.

6.2. The elected peoples representatives, government officials having development functions, and beneficiary micro organizations all have to work as a combined system with given set of objectives. This has remained a distant reality as each of these groups are trying to protect its own self interest only and in this process doesn't strike a note of harmony is a matter of grave concern for development of women through self help neighborhood activities at poverty alleviation. The importance of information Education Communication (IEC) strategy at capacity building of these grass roots level organizations, institutions, its functionaries and participant beneficiaries is evident from the results of this study.

6.3. Our findings suggest that on the one hand, decentralized development plan model building, social capital-civil society and state action theorizing are indeed useful but on the other hand the ground level realities of the situation pose formidable challenges to be overcome, to move in the directions of Good Local Self Governance that will bring happiness to the common man in the short run as well. At least ten per cent of the plan funds released to PRIs be mandated for capacity building of the Grama Sabha and its sub systems to ensure effective women empowerment and gender equality.

**NOTES**

1. G.O (MS) No. 19/98/plg. Dt. 4/5/1998, Department of Planning, Government of Kerala.
2. The various Government Orders and Circulars issued for the smooth conduct of Decentralized Planning have been brought in two volumes by the Cap-Deck, (2002) under the auspices of the State Planning Board.
3. See, Swarnjayanti Gramin Swarozgar Yojana (SGSY) (1999) and SJSRY (1998) guidelines of Government of India wherein group approach has been insisted upon and the Rural Development Block facilitated Group formation in Panchayaths. For e.g. The Ettumanoor Block of Kerala had formed 12 SHGs women



- and disbursed Rs 13 and Rs 14 lakhs each as subsidy and credit to 120 women members as part of SGSY in 1999-00. There are such 152 Block in Blocks in Kerala.
4. G.O (MS) 111/98/LAD Dt. 29/5/1998, Department of Local Administration Govt. of Kerala.P.2.
  5. John M.S (2002, p 1945) in Economic and Political Weekly, May 18-24, No.20.
  6. Trained volunteers were deployed by Government to conduct these surveys in the State. Ref. G.O (Rt) No. 794/95/LAD.Dt Thiruvananthapuram 18/2/95
  7. The poverty index consists of nine risk factors; (1) Do the respondent household own a fit for stay house? (2)Is there a sanitary latrine? (3) Is there safe drinking water within 150-meter distance? (4) There is only one earning member in the family; (5) There is a child below 5 years of age in the home; (6) There is a member addicted to drug, alcohol, (7) An SC/ST household, (8) An illiterate person is present, (9) the household is having only 2 square meals a day. A household scoring 4 out of these nine are identified as poor.
  8. The abbreviation often used in the study are: CDS-Community Development Society; ADS-Area Development Society; RCV-Residential Community Volunteer; NHG-Neighborhood Groups; SHG-Self Help Groups;
  9. These Advisory Committees have been given powers to approve or change etc of CDS action plans as and when felt needed only after getting clarification from CDS. Ref.G.O.(MS) No.292/94/LAD Dt. Thiruvananthapuram. 26/12/98. The other committees are (a) Management Committee, (b) the CDS Governing Committee, (c) and ADS Advisory Committees.
  10. One Third of seats in the Local Bodies are earmarked as per statute, for women, hence out of 32 council seats 11 have been reserved for lady members.
  11. Author of this paper was the District Level Coordinating Officer to this specific project in Kottayam district during 1999&2001-01, due to the personal touch involved the reliability of the data gathered is thought to be more trust worthy.

## ACKNOWLEDGEMENT

[I am grateful to Prof.R.Radhakrishna and Prof.S.Sudhakar Reddy at CESS Hyderabad for giving several useful comments on the final version of this paper. Very helpful comments on a preliminary draft of this paper has also been received from Dr.M.S. John, Reader in the Department of Gandhian Studies at Mahatma Gandhi University, and from Dr. P.M Thomas, Reader in the Department of Economics CMS College, at Kottayam. However, the usual disclaimers apply; the facts and views do not represent that of the organization to which the author then (Govt. of Kerala) belonged].

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**IMPACT OF RECESSION ON DIAMOND INDUSTRY IN INDIA: STRATEGIC SOLUTIONS****MUKESH R. GOYANI****ASST. PROFESSOR****R.V. PATEL & V.L. SHAH COLLEGE OF COMMERCE****AMROLI****DR. HEMANDRI TIKAWALA****ASST. PROFESSOR****R.V. PATEL & V.L. SHAH COLLEGE OF COMMERCE****AMROLI****ABSTRACT**

Numerous accounts have been made to explain the causes of this great financial disaster. There are a number of compounded factors that has resulted in the outbreak of this financial crisis of enormous proportions. Collapse of the US housing market, highly leveraged financial transactions and a low interest rate encouraging borrowings, among others, have all contributed to the downturn in the global financial market. Let us now look at these various causes in greater detail. The global financial crisis in 2008 is a major ongoing financial crisis, the worst of its kind since the Great Depression. It became prominently visible in September 2008 with the failure, merger or conservator ship of several large United States-based financial firms. The underlying causes leading to the crisis had been reported in business journals for many months before September, with commentary about the financial stability of leading US and European investment banks, insurance firms and mortgage banks consequent to the sub-prime mortgage crisis.

**KEYWORDS**

recession, diamond industry.

**1.1 DEFINITION**

A period of general economic decline; specifically a decline in GDP for two or more consecutive quarters.

**1.2 GLOBAL FINANCIAL CRISIS OF 2008**

Numerous accounts have been made to explain the causes of this great financial disaster. There are a number of compounded factors that has resulted in the outbreak of this financial crisis of enormous proportions. Collapse of the US housing market, highly leveraged financial transactions and a low interest rate encouraging borrowings, among others, have all contributed to the downturn in the global financial market. Let us now look at these various causes in greater detail.

The global financial crisis in 2008 is a major ongoing financial crisis, the worst of its kind since the Great Depression. It became prominently visible in September 2008 with the failure, merger or conservator ship of several large United States-based financial firms. The underlying causes leading to the crisis had been reported in business journals for many months before September, with commentary about the financial stability of leading US and European investment banks, insurance firms and mortgage banks consequent to the sub-prime mortgage crisis.

Beginning with failures of large financial institutions in the United States, it rapidly evolved into a global crisis resulting in a number of European banks' failures and declines in various stock indexes, and significant reductions in the market-value of equities (stock) and commodities worldwide. The crisis has led to a liquidity problem and the de-leveraging of financial institutions especially in the United States and Europe, which further accelerated the liquidity crisis. World political leaders and national ministers of finance and central bank directors have coordinated their efforts to reduce fears, but the crisis is ongoing and continues to change, evolving at the close of October 2008 into a currency crisis with investors transferring vast capital resources into stronger currencies such as the Yen, the Dollar and the Swiss Franc, leading many emergent economies to seek aid from the International Monetary Fund. The crisis has roots in the sub-prime mortgage crisis and is an acute phase of the financial crisis of 2007-2008.

**1.3 GLOBAL RESPONSES**

On September 15, 2008, China cut its interest rate for the first time since 2002. Indonesia reduced its overnight repo rate, by two percentage points to 10.25 percent. The Reserve Bank of Australia injected nearly \$ 1.5 Billion into the banking system, nearly three times as much as the market's estimated requirement. The Reserve Bank of India added almost \$ 1.32 Billion, through a re-finance operation, its biggest in at least a month.

In Taiwan, the Central Bank on September 16, 2008, said it would cut its required reserve ratios for the first time in eight years. The Central Bank added \$ 3.59 Billion into the foreign-currency inter bank market the same day. Bank of Japan pumped \$ 29.3 Billion into the financial system on September 17, 2008, and the Reserve Bank of Australia added \$ 3.45 Billion the same day. The European Central Bank injected \$ 99.8 Billion in a one-day money-market auction. The Bank of England pumped in \$ 36 Billion. Altogether, central banks throughout the world added more than \$ 200 Billion from the beginning of the week to September 17, 2008.

**1.4 US RESPONSES**

The Federal Reserve, Treasury, and Securities and Exchange Commission took several steps on September 19 to intervene in the crisis. To stop the potential run on money market mutual funds, the Treasury also announced on September 19 a new \$ 50 Billion program to insure the investments, similar to the Federal Deposit Insurance Corporation (FDIC) program. Part of the announcements included temporary exceptions to Section 23A and 23B (Regulation W), allowing financial groups to more easily share funds within their group. The exceptions would expire on January 30, 2009, unless extended by the Federal Reserve Board. The Securities and Exchange Commission announced termination of short-selling of 799 financial stocks, as well as action against short selling, as part of its reaction to the mortgage crisis.

**1.5 IMPACT OF THE CRISIS IN INDIA**

While the overall policy approach has been able to mitigate the potential impact of the turmoil on domestic financial markets and the economy, with the increasing integration of the Indian economy and its financial markets with rest of the world, there is recognition that the country does face some downside risks from these international developments. The risks arise mainly from the potential reversal of capital flows on a sustained medium-term basis from the projected slow-down of the global economy, particularly in advanced economies, and from some elements of potential financial contagion. In India, the adverse effects have so far been mainly in the equity markets because of reversal of portfolio equity flows, and the concomitant effects on the domestic forex market and liquidity conditions. The macro effects have so far been muted due to the overall strength of domestic demand, the healthy balance sheets of the Indian corporate sector, and the predominant domestic financing of investment.

As might be expected, the main impact of the global financial turmoil in India has emanated from the significant change experienced in the capital account in 2008-09 so far, relative to the previous year. Total net capital flows fell from US \$ 17.3 Billion in April-June 2007 to US \$ 13.2 Billion in April-June 2008. Nonetheless, capital flows are expected to be more than sufficient to cover the current account deficit this year as well.

While Foreign Direct Investment (FDI) inflows have continued to exhibit accelerated growth (US \$ 16.7 Billion during April-August 2008 as compared with US \$ 8.5 Billion in the corresponding period of 2007), portfolio investments by Foreign Institutional Investors (FIIs) witnessed a net outflow of about US \$ 6.4 Billion in April-September 2008 as compared with a net inflow of US \$ 15.5 Billion in the corresponding period last year.

Similarly, external commercial borrowings of the corporate sector declined from US \$ 7.0 Billion in April-June 2007 to US \$ 1.6 Billion in April-June 2008, partially in response to policy measures in the face of excess flows in 2007-08, but also due to the current turmoil in advanced economies. With the existence of a merchandise trade deficit of 7.7 per cent of GDP in 2007-08, and a current account deficit of 1.5 per cent, and change in perceptions with respect to capital flows, there has been significant pressure on the Indian exchange rate in recent months. Whereas the real exchange rate appreciated from an index of 104.9 (Base 1993-94=100) (US \$ 1 = Rs. 46.12) in September 2006 to 115.0 (US \$ 1 = Rs. 40.34) in September 2007, it has now depreciated to a level of 101.5 (US \$ 1 = Rs. 48.74) as on October 8, 2008.

Trends in Capital Flows			
Component	Period	US \$ Million	
		2007-08	2008-09
Foreign Direct Investment to India	April – August	8,536	16,733
FIIs (Net) *	April - September 26	15,508	-6,421
External Commercial Borrowings (Net)	April – June	6,990	1,559
Short-Term Trade Credits (Net)	April – June	1,804	2,173
Memo			
ECB Approvals	April – August	13,375	8,127
Foreign Exchange Reserves (Variation)	April - September 26	48,583	-17,904
Foreign Exchange Reserves (End-Period)	September 26, 2008	247,762	291,819

\* Data on FIIs presented in this table represent inflows into the country and, thus, may differ from data relating to net investment in stock exchanges by FIIs.

### 1.6 ABOUT INDIAN DIAMOND INDUSTRY

Diamonds are one of India's great business success stories from the past 30 years. One of the country's key export sectors, its polishers import rough diamonds, cut and then export them to the big jewellery markets of the US, the Gulf and Europe.

Today, India has a 55 per cent market share of the world's diamond cutting and polishing business. Some 800,000 jobs were created in this sector by virtue of India's low-cost but technically skilled labour force. And the sector is at the forefront of the economy's integration into global markets.

The industry imports more than half of its rough diamonds from Belgium and has strong links with De Beers, the global diamond group, Alrosa, the Russian diamond producer, and BHP Billiton, the resources group. By 2007-2008, diamond exports had risen to \$14bn. But in December 2008, the industry juddered to a halt and with it years of uninterrupted rising growth. It has yet to recover. That month there was a near 100 per cent decline in imports of rough diamonds from \$1bn a year before to \$85m. Worried about tumbling diamond sales in developed markets, Indian industry leaders took a controversial decision to stem supply and avoid flooding their production pipeline.

In the worst period, sales went down more than 50 per cent, says Vasant Mehta, the chairman of India's Gem and Jewellery Export Promotion Council. "The sales have stopped going down further. We have stopped dropping and that's where the hopes of revival are. We are now in wishful thinking.

Over the past eight months, the diamond industry has shed about 200,000 jobs. Hopes are pinned to a revival in the big US market ahead of Christmas, but there is more talk now of the domestic market and consumers in China coming to the rescue.

### 1.7 ABOUT SURAT DIAMOND INDUSTRY

Surat the business capital of Gujarat in India is the largest market of diamond polishing, cutting and crafting in the whole world. Availability of skilled but low waged workers and the presence of international market have earned a worldwide fame for the Surat Diamonds. More than 70% of the world diamonds are cut and polished in the Surat city of Gujarat (India). It is a \$17 billion industry and cuts and polishes diamonds around \$11 billion worth of diamonds every year. Eight out of ten diamonds in the world are processed in India. About 90% of these diamonds are exported to Europe and North America while the rest are purchased by Indian jewellery retailers.

Although India produces a very negligible amount of diamonds, the country dominates the world's diamond polishing industry. Despite the fact that Bombay is the commercial center of India's diamond trade, Surat with its advantages has emerged as the hot spot of the diamond industry.

More than 700,000 people earn their livelihood from the diamond industry of Surat while 2.5 million are indirectly related to this industry. Although Indian exports only 4% of the global diamond, it represents "almost 25% value addition to imported rough diamonds." In 2006-07, India imported \$8.8 billion rough diamonds and exported \$10.9 billion polished gems

## 2. LITERATURE REVIEW

**2.1 L G P Kimothi in his study**—"Geological condition of diamonds deposits and prospects of their search in India", had given a detailed survey analysis of Kimberlite of India. The researcher had identified certain areas where there is a possibility of having a Kimberlite deposits and diamond mining. Also he had given a detailed historical analysis of diamond mining and exploration of India.

**2.2 S N Sharma in his study**—"Imperative and potential for diamond finds (search) and production in India", presented a focus on various geographical areas like, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Orissa and Maharashtra where there is a possibility of having diamond deposits. Also he had given a study of Panna mines where the diamond production is around 20,000 Carats. He had developed a model for a self-sufficiency of rough diamond supply for our industry in which he emphasized on the role of mining engineers and geologists for better India.

## 3. RESEARCH METHODOLOGY

### 3.1 RESEARCH PROBLEM:

As the global country, face the depression and recession in variety of industry. The study is in the reference of diamond industry. The recession in the diamond industry required to be overcome. The government and other group of peoples were making effort to solve the global recession.

### 3.2 SCOPE OF STUDY:

The scope of the study is related to variety of diamond companies which have direct or indirect relation with export and import of diamond. The study all pay attention to the companies in Surat city.

<sup>2</sup> L G P Kimothi, Geologist, Geological condition of diamonds deposits and prospects of their search in India, National Mineral Development Corporation (NMDC), Panna, M.P., Papers and Proceedings of the Seminar : The many Facets of the Indian Diamond Industry, Hindustan Diamond Company (HDC), Gem and Jewelry Export Promotion Council (GJEPC), National Mineral Development Corporation (NMDC) and Industrial Diamond Association of India, Mumbai, March 6-7, 1980

<sup>3</sup> S N Sharma, Chairman and Managing Director, Hindustan Diamond Company Ltd., Imperative and potential for diamond finds and production in India, Papers and Proceedings of the Seminar : The many Facets of the Indian Diamond Industry, Hindustan Diamond Company (HDC), Gem and Jewelry Export Promotion Council (GJEPC), National Mineral Development Corporation (NMDC) and Industrial Diamond Association of India, Mumbai, March 6-7, 1980





interactions with shareholders, employees, banks and Government so as to ensure that there is fairness to all stakeholders and that its action benefit the greater number of shareholders.

The Board of Directors has the important role of overseeing management's performance on behalf of the stakeholders.

Except the Chairman cum Managing Director all other Directors on the Board are Independent Directors with rich experience and expertise in the areas of management, banking, finance, administration and law.

#### 4.4 CODE OF CONDUCT

The Board of Directors has approved and adopted a Code of Conduct for the members of the Board and Senior management of the Company. This code helps to maintain the standards of business conduct for SDJL and ensures compliance with legal requirements, particularly the requirements under clause 49 of the Listing Agreement with Stock Exchange(s).

To ensure a transparent and fair administration, the Company is having a Governance Structure that provides for checks and balances throughout its operations.

#### Audit Committee

The Audit Committee is headed by an Independent Director and supported by professional Internal Auditors, interalia, provides re assurance to the Board on the effective internal control and compliance environment that ensures:

- Efficiency and effectiveness of operations both domestic and overseas.
- Reliability of financial and management information and adequacy of disclosures.

#### Shareholders'/Investors' Grievance Committee

The Shareholders'/Investors' Grievance Committee functions with the objective of looking into redressed of Shareholders' and Investors' grievances relating to non receipt of dividend, Annual Report, transfer of shares etc. The Company has taken all steps to ensure that shareholders' grievances are given high priority and are resolved at the earliest.

#### Internal Control System

The Company has adequate internal control procedure commensurate with its size and nature of the business. The internal control system is supplemented by extensive internal audits, regular reviews by management and well-documented policies and guidelines to ensure reliability of financial and all other records to prepare financial statements and other data. Moreover, the Company continuously upgrades these systems in line with best accounting practices. The Company has independent audit systems to monitor the entire operations and the Audit Committee of the Board review the findings and recommendations of the internal auditors.

#### Prevention of Insider Trading

The Company has adopted a code of conduct (SDJL(Dealing in Securities & Prevention of Insider Trading) Rules, 2002) for prevention of insider trading in the shares of the Company. The Code interalia prohibits purchase/sales, dealing of shares of the Company by the insiders while in possession of unpublished price sensitive information in relation to the Company.

#### 4.5. MANUFACTURING PROCESS

##### Diamonds:

The Cutting and Polishing of diamonds is a highly labour intensive process, which demands a significant level of skill and attention in detail on the part of the worker. Each small diamond has to be processed individually and due to the small size and high cost of raw material being processed "rough diamonds" or "roughs" – a great deal of accuracy is required. Constant supervision to ensure minimum wastage and constant vigilance to prevent any pilferage is essential.

#### 4.6 CLASSIC DIAMONDS : ABOUT US

With an annual turnover in excess of \$100m, Classic Diamonds (India) Ltd is one of the leading diamond companies in India, Being cognizant of the huge future potential for our company in India, Classic Diamond converted from a partnership to a corporate structure in 1986. We have been one of the few publicly quoted companies on the stock exchange ever since. We are recognized sight holders of the Aber group, customers of Alrosa and other South African mines. It is a recognition of the fact that we are one of the largest Indian manufacturers of Stars (2 pointer) with a monthly output of 25,00,000 million stones.

Classic Diamond is a fully integrated business, buying its rough diamonds from the major mining companies, manufacturing it under our direct control, sorting the polished into regular assortments and finally selling to jewellery manufacturers or our own jewellery manufacturing company.

With a 37-year sparkling experience in the industry, Classic Diamond is the ideal partner for riving business growth for you.

A sight holder with Aber, we are rightly geared to deliver all-round product consistency. From procurement of rough diamonds to supplying polished diamonds assortment, we guarantee the best for our discerning customers worldwide.

All our diamonds are manufactured in our own diamond manufacturing factories, each one state-of-art and ISO certified, thus enabling better cut & clarity and low cost of production. Sales offices in the strategic diamond jewellery centers of the world like Dubai, Hong kong, Antwerp, Israel, New York, allow better coordination & service and help us cater to client needs most effectively.

As Classic Diamond does business with the whole range of customers ranging from jewellery manufacturers, wholesalers, independents and the major chain stores, the company is recognized for the great emphasis it places on understanding and responding to the needs of our entire customer base.

We have three state of the art jewellery factories equipped with the latest technology, in order to provide our customers with their exact requirements. Our staff are well trained in the use of the most modern equipment and this combined with our design capabilities, strict quality control procedures and an on line order tracking system, enable us to provide our customers with extremely high standard of service.

Moreover, since 2003, our retail brand of couture diamonds jewellery, Classic jewels, has been making an increasing foray into the Indian retail market, with 5 signature stores dazzling an ever demanding audience.

Thus, its our vertical integration and our through understanding of the diamonds business, right from rough procurement to jewellery retailing, propels us to the high pedestal to be the right partner for you, with whom you can grow your business.

#### 4.7. DIAMOND FACTORIES

##### DIAMOND CITTING & POLISHING FACTORY, SURAT

Classic Diamonds have set up a large 2,20,000 square foot diamond cutting and polishing factory in surat, built to the standards of ISO 9001. The factory can accommodate 5000 workers and will produce 15,00,000 stones per month.

The factory incorporates the latest state of the art technology that will not only improve productivity but will help in reducing manufacturing costs and will produce a more superior and uniformly cut diamonds. The factory will enable our group to exercise more direct control over the entire manufacturing process and will fully compliant with the high standards set by the DTC Best Practice Principles and BHP's business excellence model.

With the inauguration of this factory Classic Diamonds will be able to better serve it's customers by providing them with timely delivery of well made diamonds, consistently.

Classic Diamonds India Ltd.

**5. ANALYSIS AND INTERPRETATION**

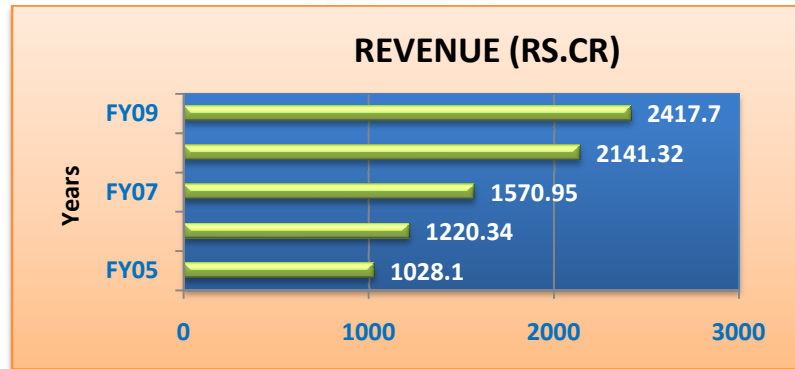
5.1 Suraj Diamonds Ltd

**5.1.1 REVENUE: GROWTH FALLS BUT STILL MAINTAINED UPWARD JOURNEY**

**TABLE: 5.1. REVENUE: GROWTH FALLS BUT STILL MAINTAINED UPWARD JOURNEY**

REVENUE	RS.CR
FY05	1028.1
FY06	1220.34
FY07	1570.95
FY08	2141.32
FY09	2417.7

**FIGURE 5.1: REVENUE: GROWTH FALLS BUT STILL MAINTAINED UPWARD JOURNEY**

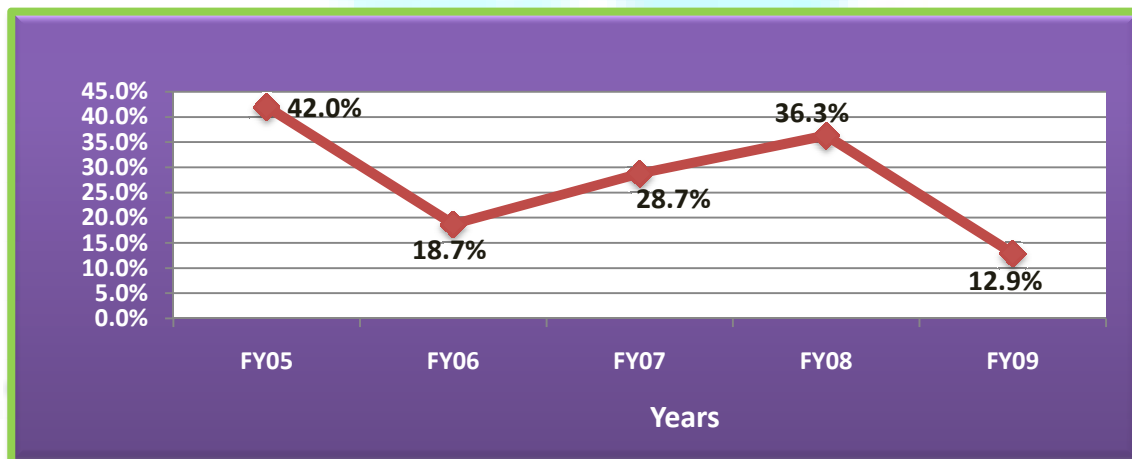


As can be seen from the chart above, revenue of the company was Rs.2417.7 Cr in FY09 vs. Rs.2141.32 Cr of FY08. However, if we do not see this absolute higher amount in revenue and concentrate on growth as percentage term, we can see from below chart that, revenue grew at 12.9% in FY09 against previous two years (FY06-FY08) period in which revenue growth was higher yoy at 28.7% and 36.3% mainly due to better business duration.

**TABLE: 5.2. REVENUE GROWTH**

REVNUUE	GROWTH(%)
FY05	42.0%
FY06	18.7%
FY07	28.7%
FY08	36.3%
FY09	12.9%

**FIGURE 5.2.: REVENUE GROWTH**



**5.1.2 OPERATING PROFIT: DECLINED AMIDST FALLING MARGINS**

As can be seen from below charts, operating profit of the company declined by 6.5% yoy to Rs.71.9 Cr in FY09. This fall in operating profit was mainly attributed to decline in profit margins amidst impacts of falling demand from recession.

**TABLE: 5.3. OPERATING PROFIT**

Operating Profit	Rs. Cr
FY05	45.43
FY06	57.1
FY07	72.59
FY08	76.87
FY09	71.9

FIGURE 5.3: OPERATING PROFIT

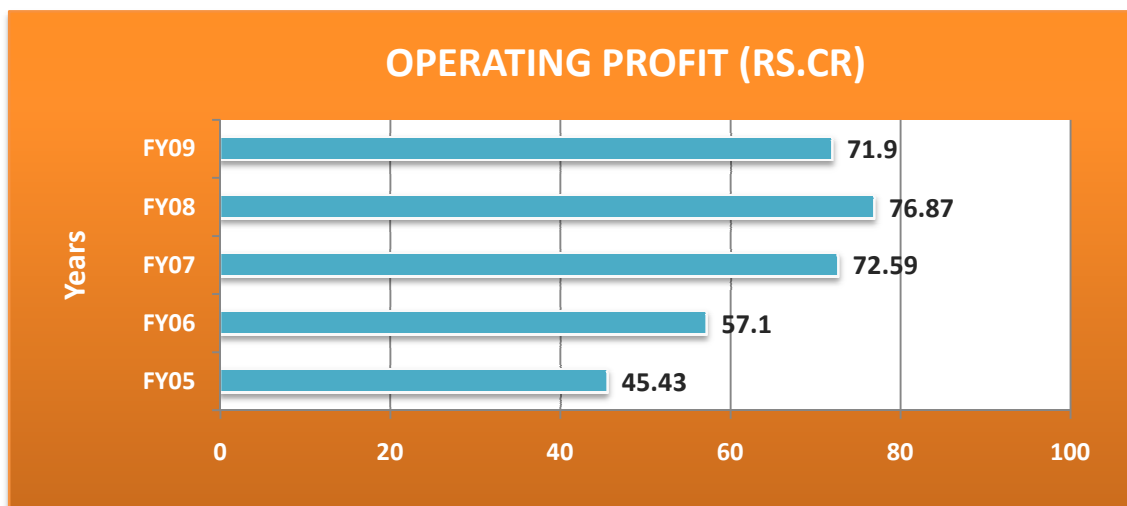


TABLE: 5.4. OPERATING PROFIT GROWTH

OPERATING PROFIT	GROWTH (%)
FY05	20.7%
FY06	25.7%
FY07	27.1%
FY08	5.9%
FY09	-6.5%

FIGURE: 5.4. OPERATING PROFIT GROWTH

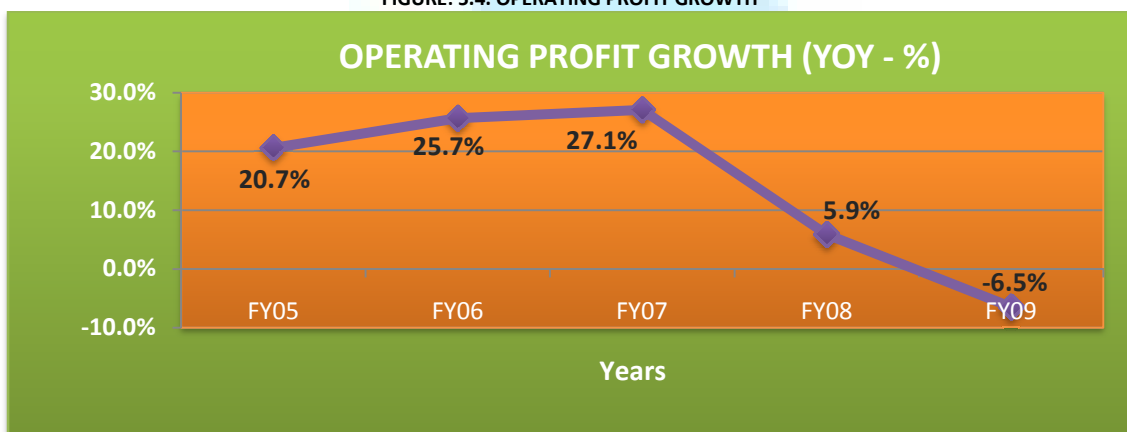
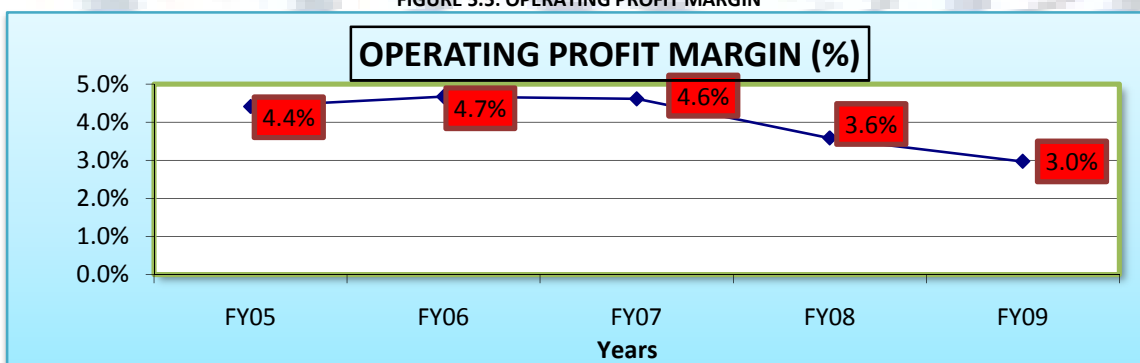


TABLE 5.5: OPERATING PROFIT MARGIN

YEAR	OPERATING PROFIT MARGIN
FY05	4.4%
FY06	4.7%
FY07	4.6%
FY08	3.6%
FY09	3.0%

FIGURE 5.5: OPERATING PROFIT MARGIN



Operating profit margins of the company declined to 3% in FY09 from 4.6% of FY07 and 3.6% of FY08.

5.1.3. NET PROFIT: DECLINE DUE TO LOWER OPERATING PROFITABILITY AND HIGHER INTEREST COSTS.

TABLE 5.6. . NET PROFIT

NET PROFIT	RS.CR
FY05	30.08
FY06	38.93
FY07	49.37
FY08	62.63
FY09	33.44

FIGURE 5.6: NET PROFIT

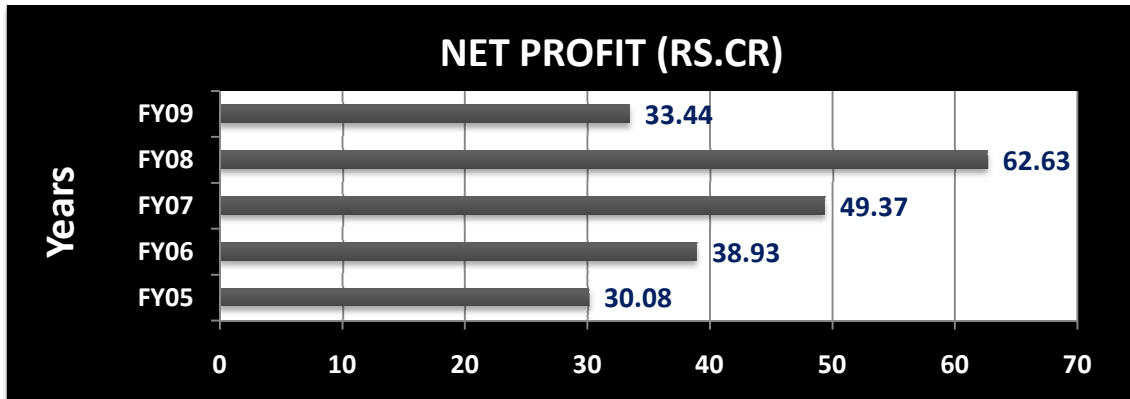


TABLE 5.7: NET PROFIT GROWTH

NET PROFIT	GROWTH (%)
FY05	30.8%
FY06	29.4%
FY07	26.8%
FY08	26.9%
FY09	-46.6%

FIGURE 5.7: NET PROFIT GROWTH

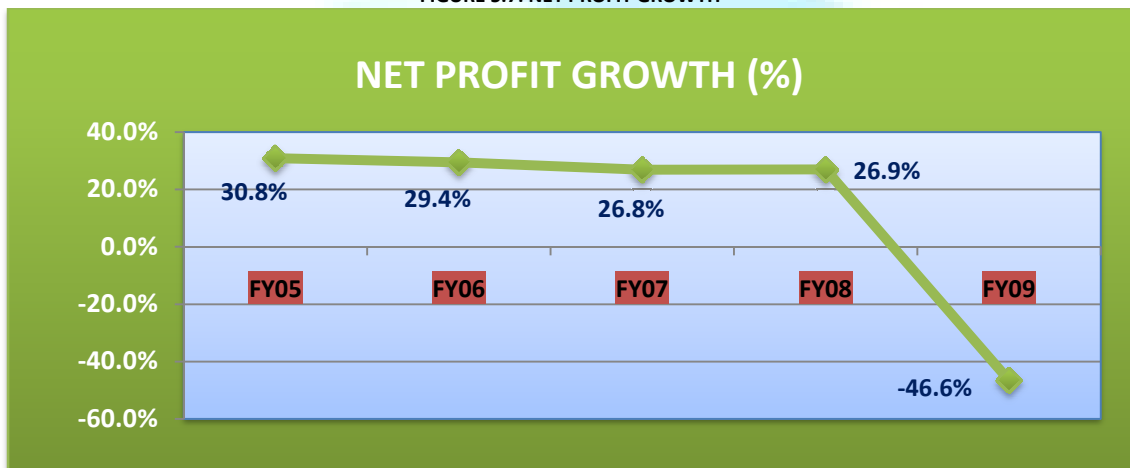
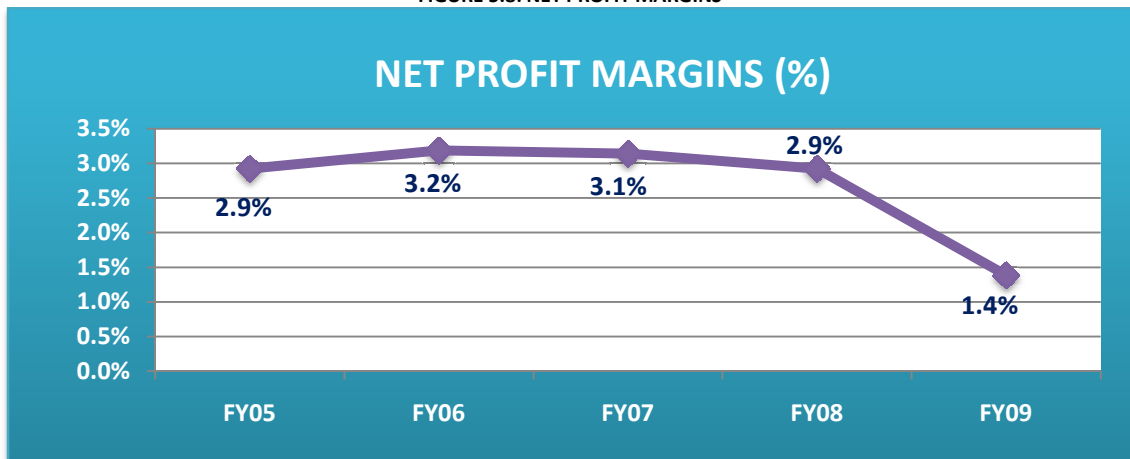


TABLE 5.8: NET PROFIR MARGINS

Net Profit Margin	NPM
FY05	2.9%
FY06	3.2%
FY07	3.1%
FY08	2.9%
FY09	1.4%



FIGURE 5.8: NET PROFIT MARGINS



As can be seen from the above diagrams, net profit of the company decline by 46.6% yoy to Rs.33.44 Cr in FY09. This fall in the net profit was mainly due to decline in operating profitability with higher operating expenditure. There was also higher component of non-operating expenditure in the form of higher interest cost.

As can be seen from below diagram interest cost of the company has risen sharply from just Rs.4.41Cr of FY08 to Rs.32.6Cr of FY09. this rise in interest cost was mainly attributed to substantial rise in loan amount.

TABLE 5.9: INTEREST COST

YEAR	INTEREST COST
FY05	10.48
FY06	15.43
FY07	19.15
FY08	4.41
FY09	32.6

FIGURE 5.9: INTEREST COST

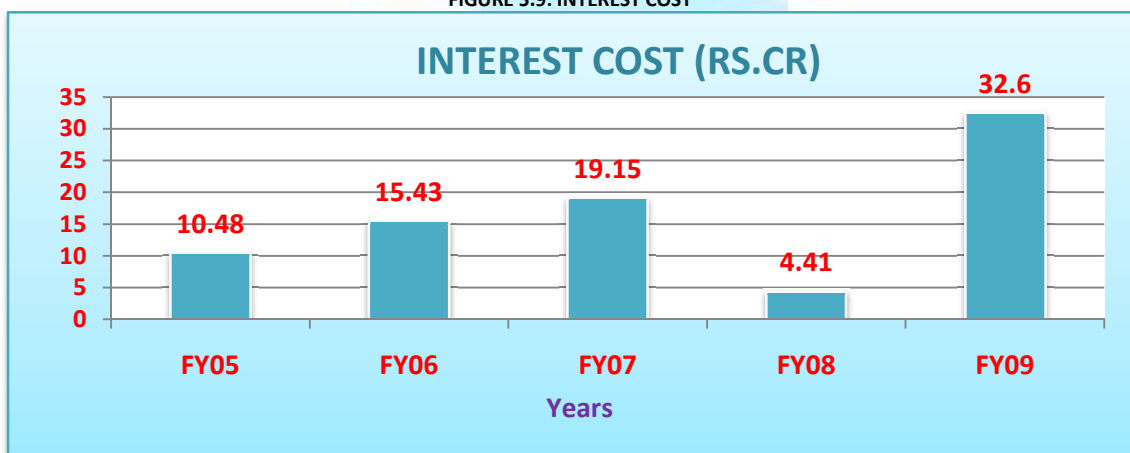


TABLE 5.10: SECURED LOAN

YEAR	SECURED LOAN
FY08	284.15
FY09	502

FIGURE 5.10: SECURED LOAN

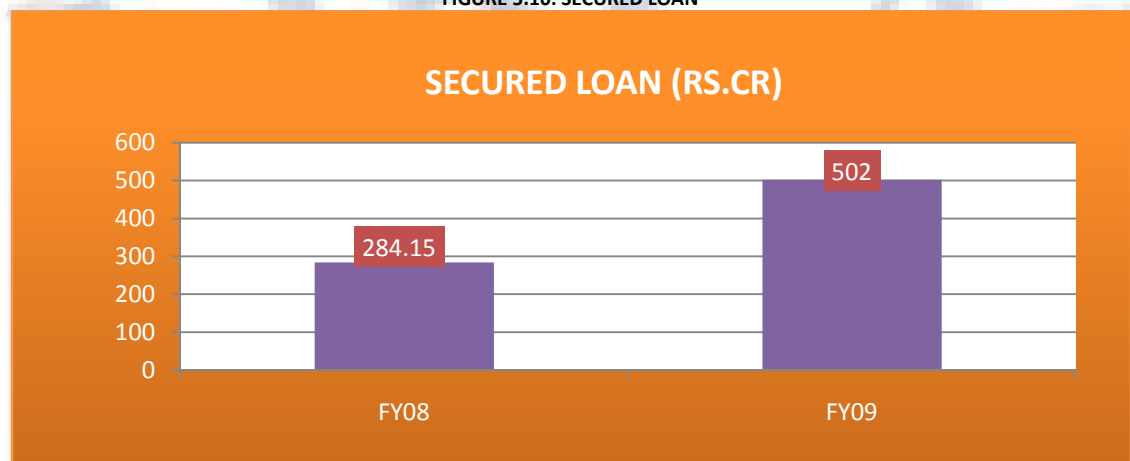
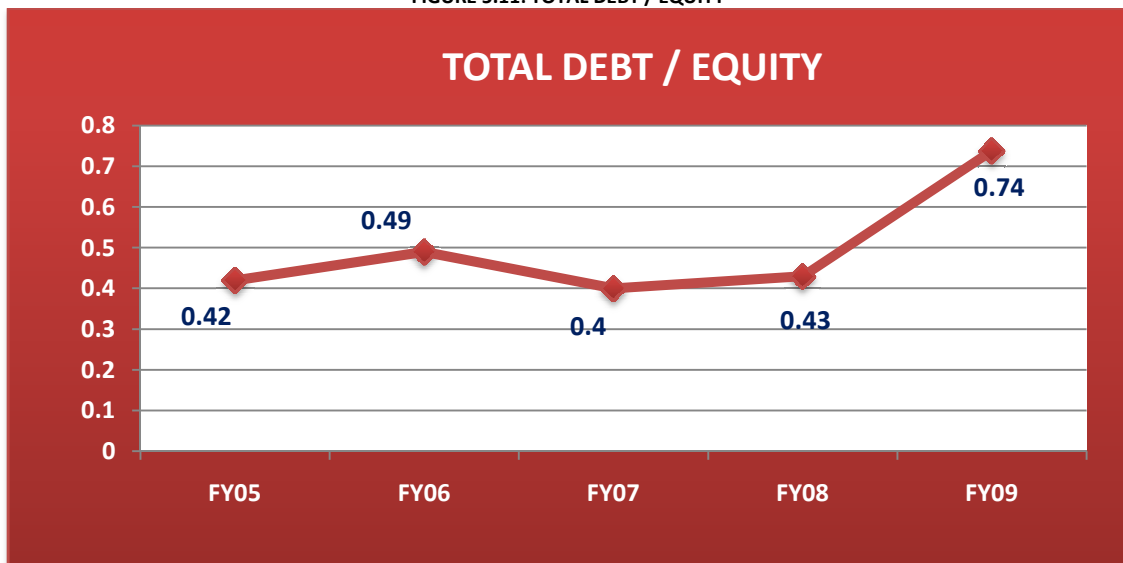


TABLE 5.11: TOTAL DEBT / EQUITY

YEAR	TOTAL DEBT / EQUITY
FY05	0.42
FY06	0.49
FY07	0.4
FY08	0.43
FY09	0.74

FIGURE 5.11: TOTAL DEBT / EQUITY



The company's secured loan grew by whopping 77% to Rs.502Cr in FY09, which had ultimately cramped down net profit margins. With rise in debt, overall debt: equity ratio increased to 0.74 in FY09 from 0.43 of FY08.

5.1.4: EARNING PER SHARE: FALLS IN LINE WITH DECLINE IN NET PROFIT

TABLE 5.12: EPS

YEAR	EPS
FY05	7.62
FY06	9.32
FY07	11.92
FY08	14.27
FY09	7.65

FIGURE 5.12: EPS



With no equity dilution or reduction, Earning per share of the firm declined to Rs.7.65 in FY09 from Rs.14.27 of FY08.

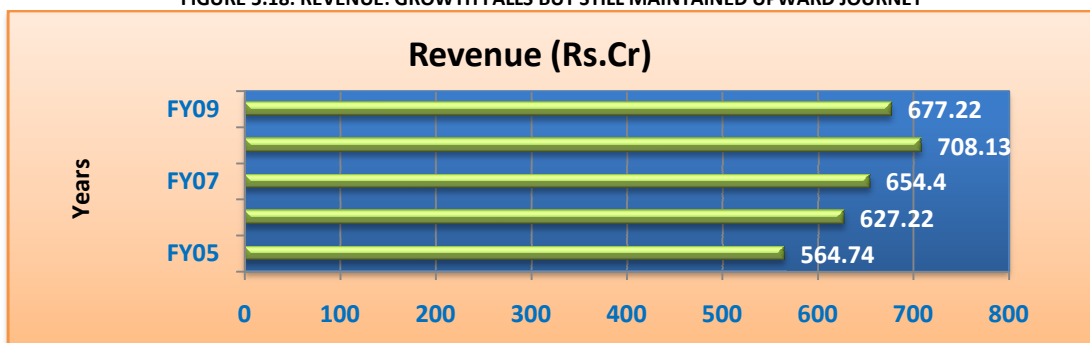
5.2 Classic diamond

5.2.1 REVENUE: GROWTH FALLS BUT STILL MAINTAINED UPWARD JOURNEY

TABLE 5.18: REVENUE: GROWTH FALLS BUT STILL MAINTAINED UPWARD JOURNEY

REVNUUE	RS.CR
FY05	564.74
FY06	627.22
FY07	654.4
FY08	708.13
FY09	677.22

FIGURE 5.18: REVENUE: GROWTH FALLS BUT STILL MAINTAINED UPWARD JOURNEY



As can be seen from the chart above, revenue of the company was Rs.677.22 Cr in FY09 vs. Rs.708.13 Cr of FY08. However, if we do not see this absolute higher amount in revenue and concentrate on growth as percentage term, we can see from below chart that, revenue down at 4.36% in FY09 against previous two years (FY06-FY08) period in which revenue growth was higher yoy at 4.33% and 8.06% mainly due to better business duration.

TABLE 5.19: REVENUE GROWTH

REVNUUE	GROWTH(%)
FY05	-7.3%
FY06	11.1%
FY07	4.3%
FY08	8.2%
FY09	-4.4%

FIGURE 5.19: REVENUE GROWTH



**5.2.2 Operating Profit: Declined amidst Falling Margins**

As can be seen from below charts, operating profit of the company declined by 35.4% yoy to Rs.42.89 Cr in FY09. This fall in operating profit was mainly attributed to decline in profit margins amidst impacts of falling demand from recession.

TABLE 5.20: OPERATING PROFIT

Operating Profit	Rs. Cr
FY05	40.65
FY06	72.49
FY07	77.44
FY08	66.44
FY09	42.89

FIGURE 5.20: OPERATING PROFIT

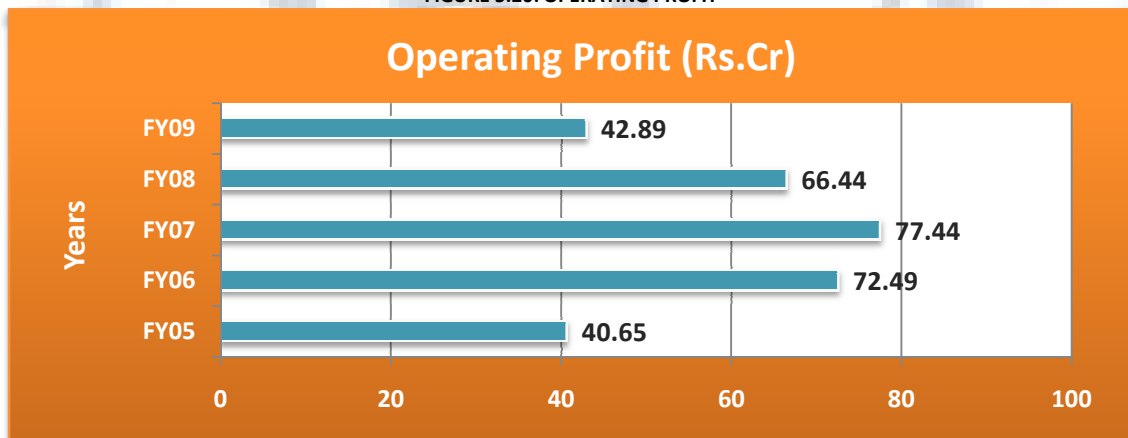


TABLE 5.21: OPERATING PROFIT GROWTH

Operating Profit	Growth (%)
FY05	-12.4%
FY06	78.3%
FY07	6.8%
FY08	-14.2%
FY09	-35.4%

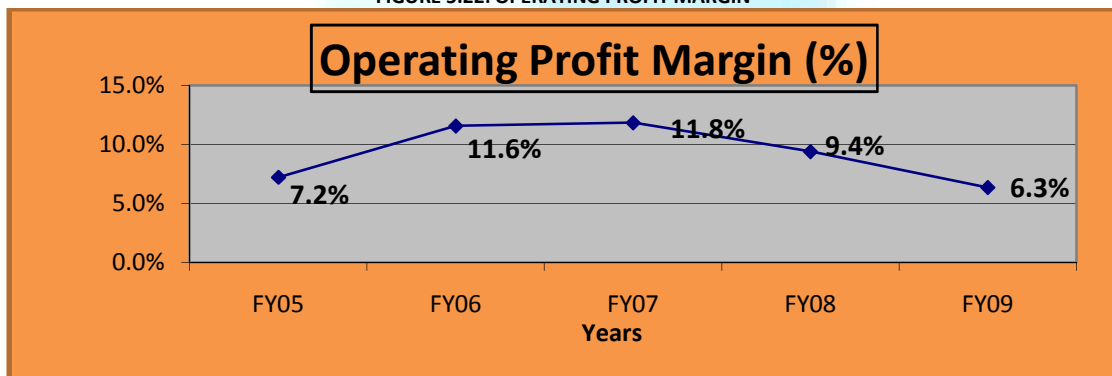
FIGURE 5.21: OPERATING PROFIT GROWTH



TABLE 5.22: OPERATING PROFIT MARGIN

YEAR	OPM
FY05	7.2%
FY06	11.6%
FY07	11.8%
FY08	9.4%
FY09	6.3%

FIGURE 5.22: OPERATING PROFIT MARGIN



(Operating profit margins of the company declined to 6.3% in FY09 from 11.8% of FY07 and 9.4% of FY08.)

**5.2.3 NET PROFIT: DECLINE DUE TO LOWER OPERATING PROFITABILITY AND HIGHER INTEREST COSTS.**

TABLE 5.23: NET PROFIT

Net Profit	Rs.Cr
FY05	12.03
FY06	15.8
FY07	22.55
FY08	33.75
FY09	3.57



FIGURE 5.24: NET PROFIT

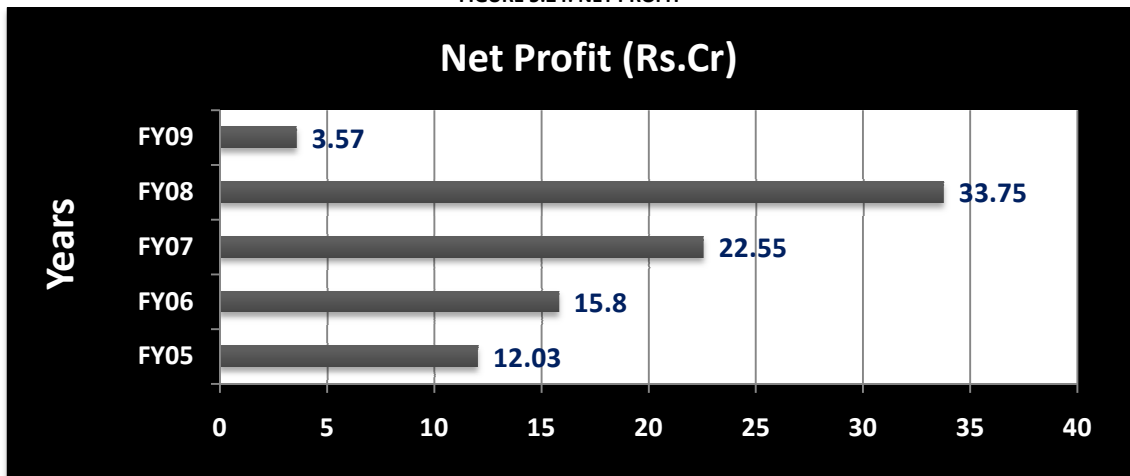


TABLE 5.25: NET PROFIT GROWTH

Net Profit	Growth (%)
FY05	-46.2%
FY06	31.3%
FY07	42.7%
FY08	49.7%
FY09	-89.4%

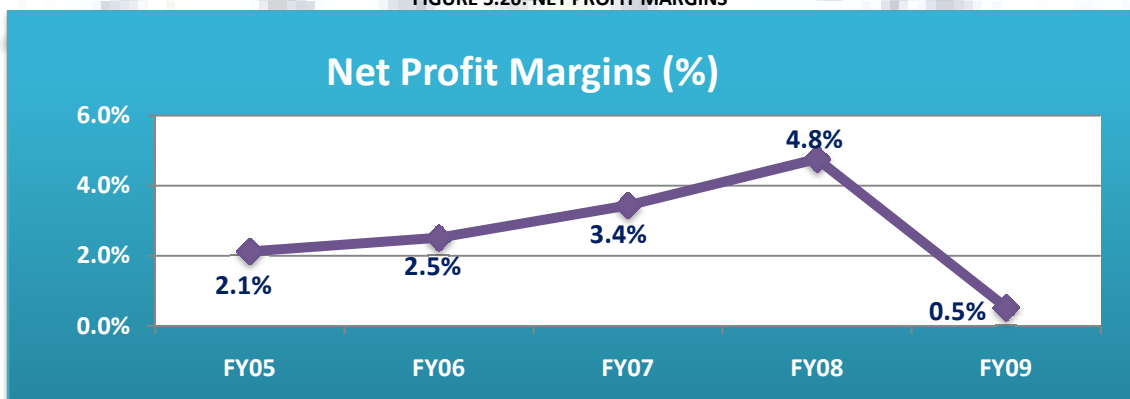
FIGURE 5.7: NET PROFIT GROWTH



TABLE 5.26: NET PROFIT MARGINS

Net Profit Margin	NPM
FY05	2.1%
FY06	2.5%
FY07	3.4%
FY08	4.8%
FY09	0.5%

FIGURE 5.26: NET PROFIT MARGINS



As can be seen from the above diagrams, net profit of the company decline by 89.4% yoy to Rs.3.57 Cr in FY09. This fall in the net profit was mainly due to decline in operating profitability with higher operating expenditure. There was also higher component of non-operating expenditure in the form of higher interest cost.

TABLE 5.27: INTEREST COST

YEAR	INTEREST COST
FY05	20.66
FY06	26.97
FY07	34.1
FY08	30.33
FY09	34.15

FIGURE 5.27: INTEREST COST

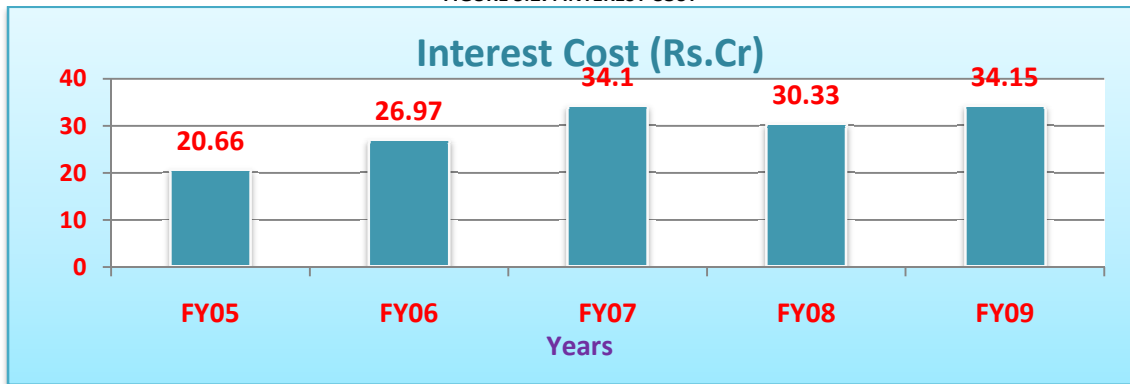


TABLE 5.28: SECURED LOAN

year	Secured Loan
FY08	565.39
FY09	581.28

FIGURE 5.28: SECURED LOAN

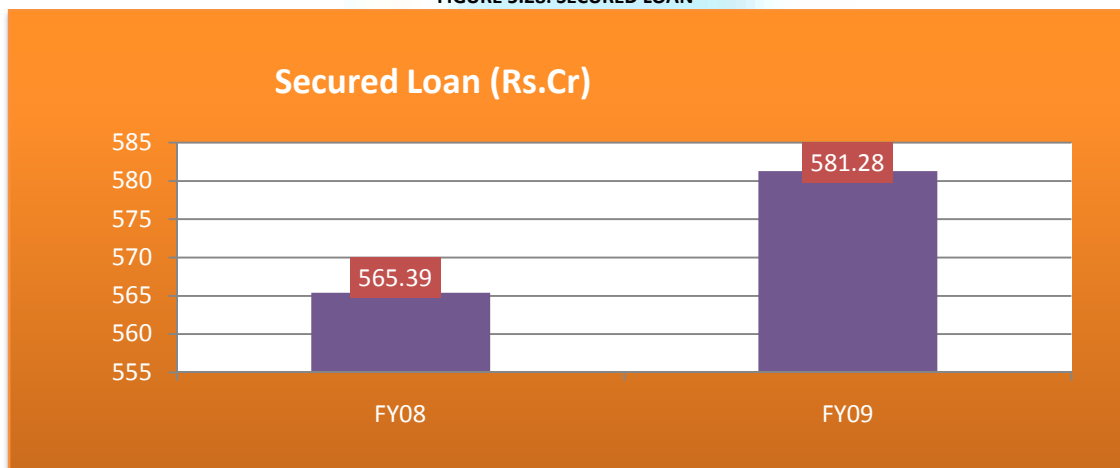
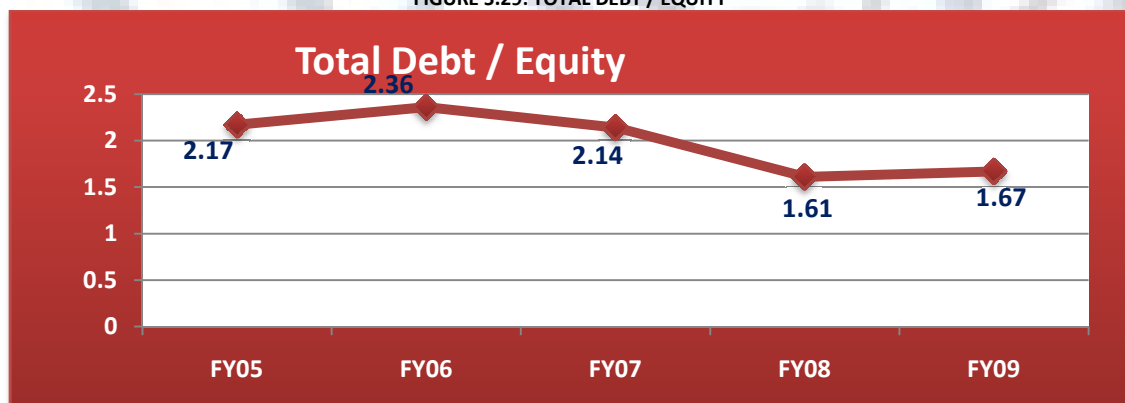


TABLE 5.29: TOTAL DEBT / EQUITY

YEAR	TOTAL DEBT / EQUITY
FY05	2.17
FY06	2.36
FY07	2.14
FY08	1.61
FY09	1.67

FIGURE 5.29: TOTAL DEBT / EQUITY



The company's secured loan grew by whopping 2.81% to Rs.581.28Cr in FY09, which had ultimately cramped down net profit margins. With rise in debt, overall debt: equity ratio increased to 1.67 in FY09 from 1.61 of FY08.

## 6. FINDINGS, CONCLUSIONS

This chapter is divided into three parts. First part shows the findings. Second part shows the conclusion from the findings. Third part is given suggestions if diamond Companies.

### 6.1 FINDINGS

#### 6.1.1 findings of su-raj diamonds

##### A) Revenue Analysis:

The revenue of the Su-raj Diamonds Ltd. Can be analyzed with the help of *Revenue Chart* and *Revenue Growth Chart, Various Ratios and Statistical Tools and Techniques*.

- The revenue of the Su-raj Diamonds Ltd. In FY 05 was Rs. 1028.10 CR while in FY 09 it rises to Rs. 2417.70 CR. It can be clear from the above figure and graph that the revenue of the company becomes almost 2.35 times (or it has raised by nearly 135%).
- But if we throw the light on the *REVENUE GROWTH CHART* we can see that revenue increased with the decreasing growth rate although the revenue had become 2.35 times during the period of 5 years study. The revenue growth rate which was 42.0% in FY 05 becomes only 12.9% in FY 09. Of course, there was increase in growth rate in the FY 07 & FY08 after there was deep fall in FY06
- The operating profit of the company is not only unsatisfactory but also there is declining trend in it during the period of 5 years study. The operating profit of the company which was Rs. 45.43 Cr in FY05 has raised to Rs. 71.90 Cr in FY09. From the revenue chart it is seen that though the revenue has become more than two times but operating profit becomes only 1.58 times during this 5 years period. So, it can be said that operating profit has raised by only 58% as against an increase in revenue by 135%.
- Moreover, the operating growth rate increases from 20.7% in FY05 to 27.1% in FY 07 but it became only 5.90% in FY 08 while in FY 09 it shows negative growth rate i.e. (-) 6.50% which is looking very serious for future.
- On the other hand, the operating profit margin which was 4.40% in FY05, it shows only 3.0% in FY 09 whereas revenue growth chart shows revenue becomes 2.35 times from FY 05 to FY 09 and revenue growth rate chart shows it has raised by almost by 58% from FY 05 to FY 09. While operating profit margin shows a continuously a negative trend from FY 05 to FY 09.
- The net profit of the company shows an increasing trend from FY 05 to FY 08 ( Rs. 30.08 Cr in FY 05 whereas Rs. 62.63 Cr in FY 08) but there is a sharp fall in net profit of the company to Rs. 33.44 Cr only in FY 09. So, it can be seen that there is a decrease in net profit by 46.61% in FY 09 as against in FY 08 though there is an increase in revenue by 12.90% in FY 09 as compared to revenue in FY 08. The reason for such decrease in the net profit can be as follows:-
  - Decrease in operating profit in FY 09 as compared to FY 08 (decrease by 6.50% in FY 09 as compared to FY 08).
  - The high interest cost in FY 09 as compared to FY 08 i.e. Rs. 32.60 Cr in FY 09 as against of Rs. 4.41 Cr only in FY 08). There is a sharp increase in interest cost by 639.23% in FY 09 as compared to FY 08 or it becomes 7.39 times in FY 09 against in FY 08.
  - There is an increase in net profit of the company but it increase with the diminishing trend.
  - The sharp increase in the secured loan in FY 09 as compared to FY 08.
- There is an increase in the secured loan from Rs. 284.15 Cr in FY 08 to Rs. 504 Cr in FY 09. Therefore, it increases by 77.37% in FY 09 as compared to FY 08.
- The debt equity ratio of the company is 0.42 : 1 in FY 05 and it remains nearly to it in the FY 06 to FY 08 whereas it was 0.74 : 1 in FY 09. But the ideal debt equity ratio recommended is 2:1.
- The Earning Per Share (EPS) of the company in FY 05 is Rs. 7.62 and it shows an increasing trend with the increasing trend in the net profit while it again split to Rs. 7.65 in FY 09 as already discussed due to sharp decrease in net profit in FY 09. So, we can say that EPS of the company came back in FY 09 as it was in FY 05.

#### 6.1.2 Findings of Classic diamonds

##### A) REVENUE ANALYSIS:-

The revenue of the Classic Diamonds can be analyzed with the help of *Revenue Chart* and *Revenue Growth Chart, Various Ratios and Statistical Tools and Techniques*.

- The revenue of the Classic Diamonds in FY 05 was Rs. 564.74 Cr. While in FY 09 it raised to Rs. 677.22 Cr. Therefore, the revenue of the company raised by 20% during the 5 years of the period or in other words we can say that it becomes the 1.20 times in FY 09 as compared to the FY 05.
- If we throw our eyes on the *REVENUE GROWTH RATE* we can see that in FY 05 the growth rate of revenue of the company was (-) 7.30% and in FY 09 it was (-) 4.40%. So, we can say that there is an improvement of 2.90% in FY 09 as compared to FY 05. But if we see the growth rate of the years between the FY 05 and FY 09 we can find there is a movement of both upside and downside in the growth rate of the revenue during these years. The growth rate of the company raised to 11.10% in FY 06 as compared to that of (-) 7.30% in FY 05 and again it falls to 4.30% in FY 07 as compared to that of 11.10% in FY 06. The growth rate raised to 8.20% in FY 08 as compared to that of 4.30% in FY 07 and again it falls and shows a negative growth rate of (-) 4.40% in FY 09. So, we can say that there is nothing about stagnant in the revenue growth of the company. Moreover, it also shows that there is too much risky in the revenue generation of the company.
- The operating profit of the company was Rs. 40.65 Cr in FY 05 while in FY 09 it raised to Rs. 42.89 Cr. Hence, we can say that operating profit of the company becomes 1.06 times in FY 09 as compared to FY 05 or it increased by 5.51% only during these 5 years whereas the revenue of the company was increased by 20% during the same period of time.
- The growth rate of operating profit of the company was (-) 12.40% in FY 05 whereas it was (-) 35.40% in FY 09. But if we see the operating profit growth rate between the financial years of 2005 and 2009 we can find that there is an unimagined movement of upside and downside of its trend as that we had seen in revenue growth rate of the company. The operating profit growth rate in the FY 06 shows 78.30% as compared to that of (-) 12.40% in FY 05 and we can see that it was increased by 90.70% in the FY 06 in comparison to FY 05. In the same way, its growth rate shows 6.80% & (-) 14.20% in the FY 07 and FY 08 respectively in comparison to that of 78.30% and 6.80% in the FY 06 and FY 07 respectively. Hence we can say that the operating profit growth rate decreased by 71.50% and 21% in FY 07 and FY 08 as compared to the increases of 90.70% in FY 06.
- The operating profit margin of the company declined to 6.30% in FY 09 from 7.20% of FY 05 or 11.80% of FY 07 and 9.40% of FY 08 while it remains almost same in the FY 06 and FY 07.
- The net profit of the company in FY 05 was Rs. 12.03 Cr while in FY 09 it falls to Rs. 3.57 Cr. But the net profit of the company shows a continuously increasing trend upto the FY 08 in which it was Rs. 33.75 Cr. Hence the net profit of the company declined to Rs. 3.57 Cr in FY 09 from the 33.75 Cr. of FY 08 which shows that there is an almost decreasing of 90% in the net profit on FY 09 as compared to FY 08.
- The net profit growth rate of the company declined to (-) 89.40% in FY 09 from (-) 46.20% in FY 05. It increases by 77.50% in FY 06 as compared to the FY 05 and it becomes 31.30%. In the same way, it raised to 42.70% and 49.70% in the FY 07 and FY 08 respectively & hence it increased by 11.40% and 7.00% in the FY 07 and FY 08 respectively in comparison to the FY 06 and FY 07 respectively. Whereas the net profit growth rate of the company decreases by 139.10% in FY 09 as compared to the FY 08 and it falls to (-) 89.40% in the FY 09.
- The net profit margin (NPM) of the company was 2.10% in FY 05 and shows a continuously increasing trend up to FY 08 which it raised to 4.80% in FY 08 and hence we can say that it becomes more than 2 times in FY 08 in comparison to FY 05. But in FY 09, it declined to 0.5% or it has decreased by 75% and 90% in comparison to the FY 05 and FY 08 respectively.
- The interest cost of the company which was Rs. 20.66 Cr in FY 05 rose to Rs. 34.15 Cr in FY 09. This rise in the interest cost of the company was mainly due to the substantial rise in the amount of the loan. The secured loan which was Rs. 565.39 Cr in the FY 08 raised to Rs. 581.28 Cr in the FY 09.

10. The debt equity ratio of the company in FY 05 was 2.17:1 times whereas it becomes 1.67:1 times in the FY 09. The ideal debt-equity ratios recommend is 2:1 which we can say that the company has maintained this ideal debt equity ratio during the FY 05, FY 06 and FY 07 and nearly to this ideal debt equity ratio in the FY 08 & FY 09.
11. The Earning Per Share (EPS) of the company was Rs. 17.19 in FY 05 and it increased up to Rs. 32.21 in FY 07. But it sharply declined to Rs. 8.10 and Rs. 0.92 in the FY 08 and FY 09 respectively. In the FY 09 the EPS of the company becomes less than Rs. 1.00. Hence, we can see the effect of the decreasing trend of net profit of the company on the EPS.

#### 6.2 CONCLUSIONS

So, from the above findings, facts and figures we can conclude that the company is facing really tough time and pass from the poor financial performance due to mainly of reducing operating profit, profit margin and increasing in non operating expenses and huge interest costs. Because of these reasons there is also decreasing in the share holding of the public as the trust of the public is showing decreasing in the company.

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## COST-BENEFIT ASSESSMENT OF COMMON PROPERTY RESOURCES (CPRS) IN RURAL WEST BENGAL: AN EVALUATIVE STUDY

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### ABSTRACT

*The importance of Common Property Resources (CPRs) to the dwellers of the villages is no longer in question but the quantification in monetary terms of CPRs collection from various sources is a very crucial task. In this paper an attempt has been made to measure the collected CPRs from different sources by the villagers in different parts of West Bengal. Their quantification and actually how far the dwellers are benefited from the collected commons or more benefited from the opportunity man-days with local wage rate in their locality compare to cost incurred for collection of CPRs are analyzed here along with tables and diagrams. The ratio of benefit in cost is the highest in case of minorities and the lowest in case of OBC groups. Both total cost and total benefit measured in terms of money are the highest in case of minorities. But in case of OBC groups, the money value of benefit is the lowest, as compared with the cost associated with it. Poor as well as a section of middle class depends largely on this commons.*

### KEYWORDS

benefit, cost, common property, employment, income.

### INTRODUCTION

Lack of natural resources available to the poor of any country is the main cause of poverty of the world. That is, most poor people are poor because they do not possess any income-generating Private Property Resources (PPRs) and do not have access to Common Property Resources (CPRs) or CPRs are not locally available at all in their area. Even today, most of the rural poor of the earth depend, to a great extent, for their livelihood on CPRs.

Though many of these poor people, whether they belong to general caste or schedule caste or tribes, have been allotted vested land and ownership rights (called Patta) particularly in West Bengal, the land amount is so small and the quality of the land is so poor and that they can hardly manage their families with the income from the property. Seasonal character of agriculture and lack of attention gainful employment opportunities forces these poor families to look for some other sources of income and CPRs become an important source for them. But while we recognize the importance of CPRs in the life of these poor rural people, it is also painfully observed that the areas under CPRs are gradually declining. Another important observation is that there is lack of quality management and overall planning of these resources, which has not been given adequate attention earlier. Beck and Ghosh<sup>2</sup> (2000) makes several observations on the basis of a study of CPRs in seven villages in West Bengal carried out between 1993 and 1996, selected from different agro-ecological zones of West Bengal. The main findings from this study were: -

CPRs made about 12% of poor household's income. Fuel and fodder were the most important CPRs accessed by the poor and women and girls are mainly responsible for collection of CPRs. Although it is crucial for the poor people livelihood, but there is no proper management for these resources and the dictum is very fruitful here that 'every body's property is nobody's property'. So the village people over graze or overuse the resources and conflict arises in time of collection, which is particularly mentioned in the Beck's<sup>3</sup> (1994) study in three villages of west Bengal. He pointed out that, despite in West Bengal there is a lack of local common's land (found in other states of India) it is very important for subsistence of poorest households and particularly for woman and children and or poor people, and it add between 19 and 29 percent to household income of very poor villagers.

Although the rich people enjoy a significant amount of these resources in different ways, they are not dependent on these resources like poor for their livelihood sustenance.

The importance of CPRs described by Singh<sup>10</sup>(1996) as "in the past the peasants who had small piece of land, who couldn't eke out enough from it for their survival, who used to eat fruits from their nearby forests and used to collect leaves, flowers and dried branches, and by selling these to others supplemented their income from other sources. They also used to maintain a couple of cows, goats and were living happily in their villages depending on their village common grazing land."

The poor people collect, free of charge, firewood, crop wastes, cow dung, weeds, fodder, organic manure [dry leaves' forest litter], building materials [polls, thatch and silt], fruits and vegetables, herbs, fiber etc. from CPRs. Water which is essential for survival is also collected from community ponds, lakes, rivers, canals etc. Besides, CPRs also provide raw materials for traditional occupations including art and craft, and thus indirectly support employment in these occupations.

Collection of food, fuel as well as fodder like spinach, vegetables, mushrooms, small fish, grass, green leaves, dry leaves and dry branches of trees, small timber, building and constructional materials directly from common places as well as private places helps the dwellers by strengthening their daily livelihood sustenance and generate income from sales of these excess items after fulfilling their daily needs.

These Common Property Resources (CPRs) like playground, various types of roads, bathing (in the ponds, river, canals etc.), defecation, Sansan (places of burning dead bodies), Bhagard (a wasteland for depositing dead bodies of animals), Hariparia (depositing place of unshaped & unused clay pot and other unused materials), market / haat, school / college, grazing places etc. help the mass directly in different way.

In urban areas, people also depend on the CPRs like playground, parks, roads, lakes, footpath, dustbin and vats, hawker's corners, parking places, canals, river and drainages etc. They have some direct contribution as well as indirect. They not only contribute amenities to the city dwellers but also help the poor to earn their livelihood utilizing those places and corners.

The CPRs in different forms and manifestations play a crucial role in providing livelihood to the people of that locality. In urban area CPRs play an important role of a different kind. But there is a pertinent question that, in what way do CPRs help the mass of that locality?

The CPRs help the people of any locality by generating income and employment by way of collection of commons apart from another source of income and employment.

**REVIEW OF LITERATURE**

The CPRs become a topic of considerable interest since the publication of 'the tragedy of commons' by Hardins<sup>4</sup> in 1968 where he focused on the overexploitation of the Common Property Resources (CPRs). David Hume was among the earliest to mention the problem of overexploitation of Commons in respect of grazing cattle on village pastures.

Ever since the publication of Garrett Hardin's influential article 'The Tragedy of Commons' (Hardin, 1968), there has been a great deal of research on poverty, environment and natural resource degradation.

Chhatrapati Singh<sup>9</sup> (1986) showed that till the end of the 19th century, at least 80 percent of India's natural resources were common property. The CPRs then formed the backbone of India's economy, which was predominantly non-cash, and a non-market economy. Freely available wood, shrubs, and cow / buffalo dung were used for cooking and heating, mud, bamboo and other timber and palm leaves for housing, wild grasses and shrubs as fodder; and a variety of fruits and vegetables as food. Thus, no cash expenditure was required to meet the basic needs of food, fuel, housing and fodder; only physical labour and energy were necessary.

N.S. Jodha<sup>5</sup> in the mid 1986's and 1990's on the CPRs has shown that CPRs contribute to employment generation, income generation and asset accumulation for rural poor. A study of 550 households in 60 villages of the state of Madhya Pradesh conducted by Urvashi Narain<sup>6</sup> (spring-2006), pointed out that: Dependence on common natural resources does not decrease as income of the families rises. The rich depend heavily on fodder collection and on constructional wood because they have larger animal's holdings and therefore a greater demand. Rich households are just as dependent on natural resources as the poor, though the rich and the poor depend on different resources. Among the households that collected natural resources, the poorest derive about 12% of their total income from resources. And the wealthier households depend on the commons as much as the poorest ones.

B Agarwal<sup>1</sup> (1989) studies on various field works throughout India pointed out that 30 millions people or more depend wholly or substantially on non-timber forest products, which are of particular importance in the lean season. Woman and children play a central role in accessing CPRs, and have a more detailed knowledge of non-cultivated and wild crops than men in some cases. Access to CPRs has declined across India over the last 30 years. He describes the CPR in India as – a wide variety of essential items are gathered by rural households from the village commons and forests, for personal use and sale: food, fuel, fodder, fiber, small timber, manure, bamboo, medicinal herbs, oils, materials for house buildings and handicrafts, resin, gum, honey, spices and so on.

The World Resource Institute<sup>11</sup> (1990) states that the CPRs provide a significant portion of income and growth of the people of India. They also observed that merely 500 million Indian people depend upon Non-timber Forest product (NTFP) for their daily livelihood maintenance and this NTFP collection generates about 1063 million man-days of employment in India.

In a study of three villages in Karnataka, Pasha<sup>8</sup> (1992) observed the CPRs contributed 10 percent of gross income of poor households. The CPRs are very important for poor village people for their income and employment generation, although it is declining at very alarming rate.

Singh<sup>100</sup> (1996) pointed out that CPRs contributed about 27 and 22 percent to the total gross income of landless and 22 percent to that of cultivating households respectively.

NSSO<sup>7</sup> reports 1998 states that CPRs refer to all such resources that are accessible to the whole community to which no individual has exclusive property rights. The rights relating access to these resources are generally conventional. This report also states that, resources held or owned by an individual or a family or an organization are not considered as CPRs, but the CPLR within the boundary of the village and by legal sanction or official assignment held by village panchayat are treated as CPRs. It includes grazing land; pasture land, go-char, village forest and woodlots, village sites and threshing floor etc.

**OBJECTIVES OF THE STUDY**

This present paper has been carried out to achieve the specific objectives mentioned below.

1. To make an attempt to enquire into the nature and existence of CPRs in rural areas of West Bengal.
2. To investigate the contribution of CPRs towards the employment and income generation for the dwellers of the surveyed area.
3. To examine the importance of CPRs to the poor in rural West Bengal.

**METHODOLOGY**

The present study shows that they require data on benefits drawn from CPRs. For data on benefits from CPRs, basic unit of investigation was households. Multistage Sampling Technique has been used here. At the first stage four districts of West Bengal have been selected for collection of data. These are Paschim Medinipur, Purba Medinipur, Bankura and Purulia. Below the district level in the second stage 08 Blocks were selected out of 96 blocks in total of four selected districts using Random Number Table. In the third stage 10 mouzas were selected out of 1437 mouzas of 08 selected blocks.

The selected Blocks and their corresponding selected Mouzas of the four districts and other various sources provide necessary information and other demographic data.

The list of selected Districts, Blocks and Mouzas which gives necessary information are given below (Table 1):

Not only the poor household, but also the middle class and rich households have been taken into consideration for our study. The sample households are drawn from the total households of the selected mouza for our study. The data has been collected through direct interview using a suitably designed structured questionnaire. Pilot survey was conducted in one Mouza. Results have been reviewed and the final questionnaire was prepared. Samples of households were chosen following stratified random sampling techniques. However in this paper we present an analysis of CPR based on the data collected from ten villages of four districts out of the southern part of West Bengal.

In the present study 345 households were surveyed from the ten villages. For this purpose a structured questionnaire was framed. Apart from the questionnaire, the oral history about Commons was collected directly from the old aged persons of the respective villages and about the problems of collection of commons from the woman and children, who are the main collector of CPRs.

**TABLE 1: LIST OF SELECTED DISTRICTS, BLOCKS AND VLIAGES / MOUZAS**

Name of the District	Name of the Block	Mouza / Village	J.L. Number
Paschim Medinipur	Midnapur Sadar	Bagdubi	139
		Mohanpur	071
		Kharagpur-I	Ch. Kalakai
Purba Medinipur	Egra-I	Gokulpur	143
	Bhagwanpur-II	Ramchak-	248
	Kolaghat	Baisnabchak	257
	Ramnagar-II	Dadanpatrabarh	284
Bankura	Bishnupur	Hikimdanga-Gopalpur	133
		Gholardanga	NA
Purulia	Kashipur	Jorapukur	11

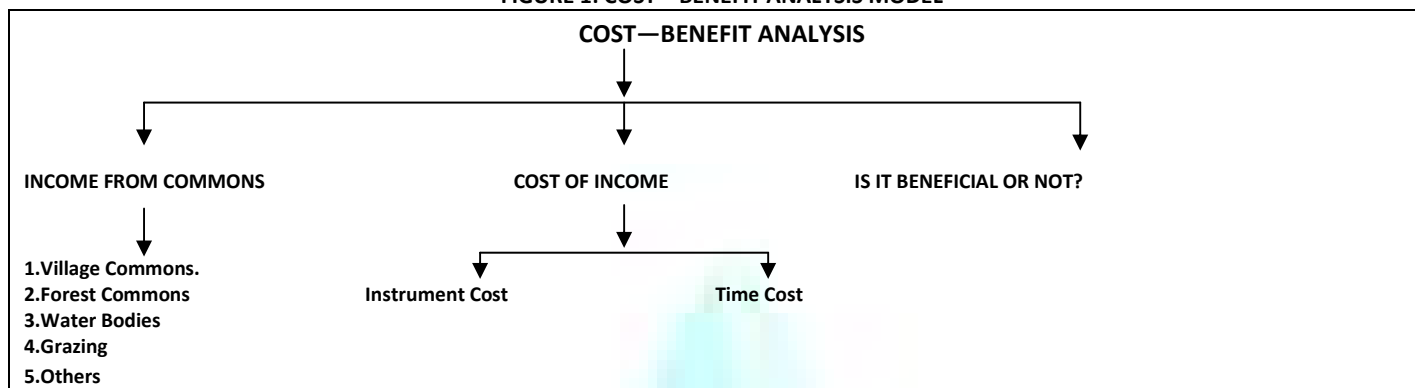
Source: Primary Survey 2010-11

**COSTS AND BENEFITS FROM COMMONS**

Cost Benefit Analysis is an economic tool to aid social decision-making, which enables systematic comparison to be made between the estimated costs and estimated benefits and values which may arise from any operation. Systematic and quantitative appraisals are necessary to determine whether the estimated

benefits justify the estimated costs for any operation or not. It is particularly mentioned that this study has interdisciplinary relevance and is associated with commerce and the cost, benefit, accounts etc. needs to be introduced. A model of cost-benefit analysis was depicted in the following manner for our study.

FIGURE 1: COST – BENEFIT ANALYSIS MODEL



This analysis explains the cost of drawing associated with the drawing benefits from CPRs, in the time of collection and in the time of processing of commons i.e. time cost. Also the earnings or benefits drawn by the people who has been collected from CPRs in various forms after excluding the collection cost, analyses here. Time spent on for collection of benefits from the CPRs is the main cost. That means how much time they devote for their collection? The alternative option before the collectors is to engage themselves in other employment of various sources (five sources) of commons (namely village commons, forest commons, water bodies commons, grazing commons and other commons) and their collection cost (instruments which were used in the time of collection plus the time cost for collection of commons) in monetary terms and also to assess the number of man days created by considering the information on the time spent for collection of different items from CPRs.

### ANALYSIS OF COLLECTED DATA

Here an attempt has been made for quantify the collected items from village premises, forests, water bodies, livestock grazing and other commons in monetary terms and also to assess the number of man days created from the information on the time spent by the members of any households for collection of different items from CPRs and to analyse the cost required for the collection of commons.

The grazing income from commons and other collected materials for the cattle were deliberately considered as common income of the households.

Then we have collected data in relation to Commons' Income and Employment. We have segregated the common income into following five categories. This are-

1. Collection of different types materials from Village as commons in a particular year,
2. Collection of different types materials from Forests as commons in a specific year,
3. Collection of different types materials from Water Bodies as commons during the year,
4. Income generated through Grazing of the Household animals for this year,
5. Collection of different type materials from Other Sources, apart from the above four sources as commons for the same year.

The Total Common Income of any family was computed with the sum total of the above five sources of Common.

Average collection of benefits per day per member  $\times$  approximate market value  $\times$  number of approximate days in a year (say 300 days).

As they earn from the occupation reflect the total income similarly the employment generation from the collection of commons also reflect their total income.

The Per Capita Total Income and Per Capita Common Income was calculated in the following way-

Per Capita Total Income = Total Income of a family / Total number of family members.

Per Capita Common Income = Total Commons Income of a family / Total number of family members.

The annual average amount of instrument expenses was calculated on the approximate rate of various instruments like ropes, chopper, net, mallet, boat, etc. used by the dwellers for collection of commons. The approximate use rate of the instruments were calculated by dividing its value by its life expectancy (in years approximately). This is per year cost. Then maintenance cost, if any, that is included with the per year costs.

Annual average time spent for collection of commons (in hours) was calculated on the basis of the information available from the sample households.

Then the total required hours for collected commons transform into working man days. The total working man-days requirements are calculated by the following formula:

Total hours requirement / 8 hours for one working man days.

The opportunity cost or wages cost has been calculated on the basis of average daily wage rate prevailing in that sample area.

Total cost means amount of expenses plus the total opportunity cost or wages cost at specific areas wages rate. All of these are depicted in **Table 2**. From this table it is observe that the overall maydays (item no. 4) spent for commons collection is 185 days. But it is the highest in Purba Medinipur i.e. 204 days, which is on the above of overall standard. Bankura is the below in rank (152 man days) of the overall position. So it can be said that the Purba Medinipur district generate maximum man-days and Bankura generate minimum man-days for collection of CPRs. From the point of collection expenses, Purba Medinipur is very high by their instrument as well as time cost. But the time cost is very low in Purulia district. From the point of net benefit it is examined that Purulia get the highest benefit and Purba Medinipur earns the lowest benefit and interestingly Purulia earns more than their total costs.

TABLE 2: COSTS OF AND BENEFITS FROM THE COLLECTIONS FROM COMMON PROPERTY RESOURCES (CPRS) IN THE SAMPLE FAMILIES IN THE SAMPLE DISTRICTS

Items /Districts	Paschim Medinipur	Purba Medinipur	Bankura	Purulia	Over All
Number of Families	86	164	65	30	345
1. Average amount of expenses (Rupees)	159.00	584.00	159.00	159.00	265.25
2. Average value of Benefits (Rupees)	15887.79	14905.57	14673.91	19035.30	15455.91
3. Average time spent for collection of commons (hours)	1439.24	1635.06	1213.68	1349.17	1481.99
i) Village Commons	281.22	433.51	279.69	192.50	345.61
ii) Forests Commons	617.67	117.07	272.14	1096.67	356.26
iii) Water bodies Commons	47.67	414.42	74.31	0.00	222.88
iv) Grazing Commons	398.49	425.85	380.23	60.00	378.62
v) Other Commons	94.19	244.21	207.31	0.00	178.62
4. Time spent (in Days): Row 3 / 8 hours	179.91	204.38	151.71	168.65	185.25
5. Opportunity cost at mouza average wage rate: (Rs)	53.00	65.00	55.00	50.00	55.75
6. Total opportunity cost (Rupees.) (Row4 * Row 5)	9534.97	13284.86	8344.05	8432.31	10327.69
7. Total costs (1+6) (Rs)	9693.97	13868.86	8503.05	8591.31	10592.94
8. Net Benefits (2-7) (Rs)	6193.83	1036.71	6170.86	10443.99	4862.97
9. Benefit- Cost Ratio (8/7)	0.64	0.07	0.73	1.22	0.46

Source: Primary Survey 2010-11

Districts of Paschim Medinipur, Purba Medinipur, Bankura, Purulia and over all sample family are shown in X-axis and in Y-axis benefits and costs are measured in monetary terms. The monetary cost-benefit analysis from collection of commons is shown in the Figure 2. The costs (opportunity cost of labour hours spent plus equipment cost in the form of depreciation and maintenance) are well below the total benefits, generating surplus from collections. The cost-benefit ratio is very high in case of Purulia and is very low in case of Purba Medinipur. This may be due to high amount of expenses on one hand and high opportunity cost (average wage available from next alternative). In case of Purulia complete reverse situation is witnessed. The gross monetary value of collection is very high in Purulia combined with least total cost associated with it.

FIGURE 2: TOTAL COSTS AND BENEFITS FROM THE COLLECTION OF COMMONS IN DIFFERENT DISTRICTS OF SAMPLE HOUSEHOLDS: COSTS AND BENEFITS FROM THE COLLECTION OF COMMONS IN THE SAMPLE DISTRICTS

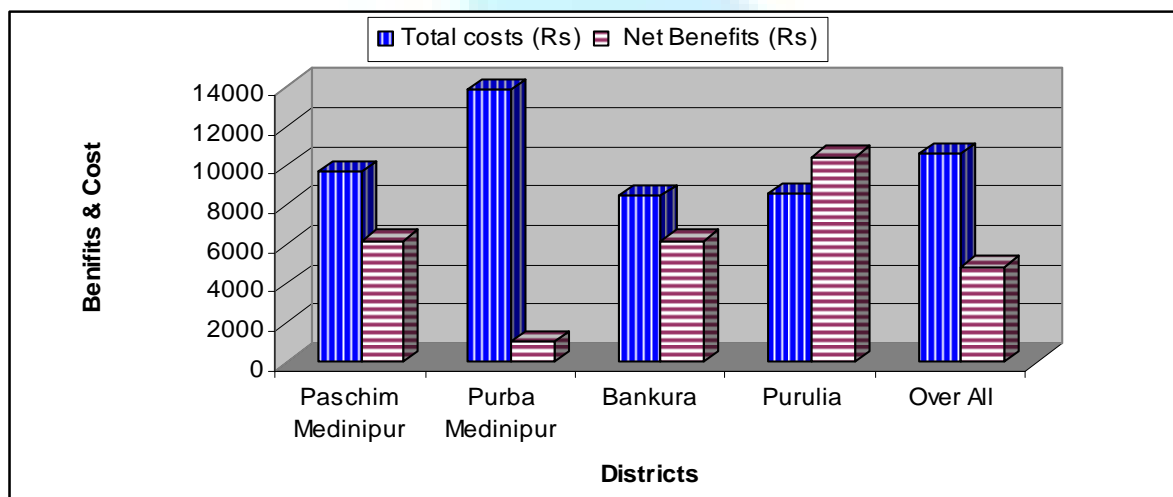


Table 3 examines more or less equivalent results like district wise cost-benefit analysis in the above Table 2. Here General and OBC families are less depended for collection of commons in man days than all other family like SC, ST and minority family who are generated maximum days (more or less 60 % days in a year) for collection of commons in man days. The benefits earned by the minorities are highest in all castes families but it is lowest in OBC families. And the ratio of cost and benefit is the lowest in case of OBC families and the highest in minority families.

TABLE 3: CASTE WISE COSTS OF AND BENEFITS FROM THE COLLECTIONS FROM COMMON PROPERTY RESOURCES (CPRS) IN THE SAMPLE FAMILIES

Caste	SC	ST	OBC	General	Minorities	Over all
Number Of Families	128	23	29	130	35	345
1. Average amount of expenses (Rupees)	265.25	265.25	265.25	265.25	265.25	265.25
2. Average value of Benefits (Rupees)	18289.84	18551.83	10788.34	11730.93	21045.09	15455.91
3. Average time spent for collection of commons (hours)	1752.88	1629.57	1245.70	1215.02	1581.69	1481.99
i) Village Commons	352.85	349.57	415.52	329.61	318.00	345.61
ii) Forests Commons	644.76	501.74	129.31	100.00	345.40	356.26
iii) Water bodies Commons	263.32	50.00	195.69	197.80	304.29	222.88
iv) Grazing Commons	341.56	586.96	331.04	390.69	371.86	378.62
v) Other Commons	150.39	141.30	174.14	196.92	242.14	178.62
4. Time spent (in Days): 3/8 hours	219.11	203.69	155.71	151.88	197.71	185.25
5. Opportunity cost at mouza average wage rate:	55.75	55.75	55.75	55.75	55.75	55.75
6. Total opportunity cost (Rupees.) 4*5	12215.38	11355.72	8680.83	8467.31	11022.33	10327.69
7. Total costs (1+6)	12480.63	11620.97	8946.08	8732.56	11287.58	10592.94
8. Net Benefits (2-7)	5809.21	6930.86	1842.26	2998.37	9757.51	4862.97
9. Benefit- Cost Ratio (8/7)	0.47	0.60	0.21	0.34	0.86	0.46

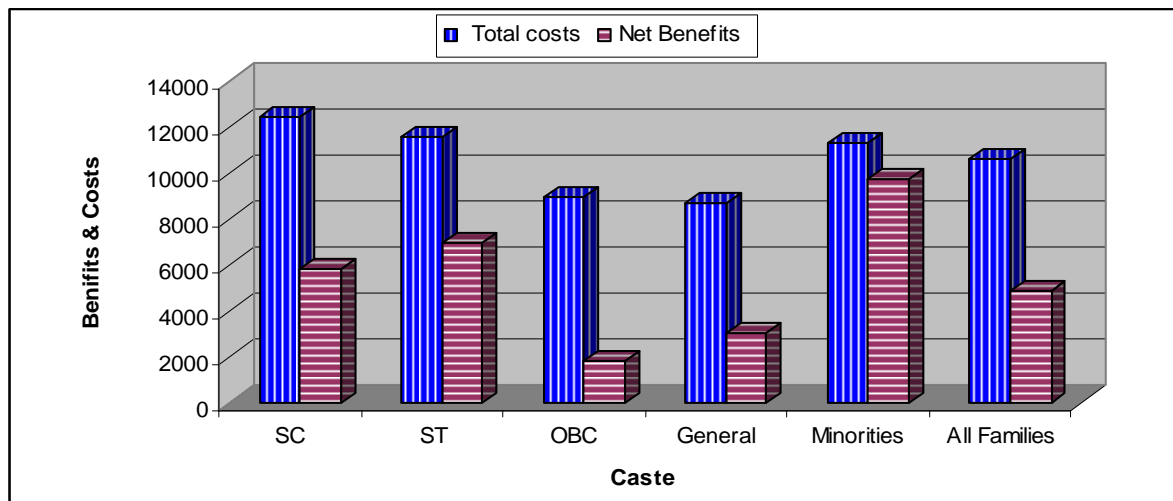
Source: Primary Survey 2010-11

Various castes in our sample families has been shown in X-axis whereas benefits and costs are shown in Y-axis in monetary terms. The caste-wise cost-benefit analysis shows the varied performance by different social groups. The ratio of benefit in cost is the highest in case of minorities and lowest in case of OBC



groups. Both total cost and total measured in terms of money are the highest in case of minorities. But in case of OBC groups, the money value of benefit is the lowest, as compared to the cost associated with it (Figure 3).

FIGURE 3: TOTAL COSTS AND BENEFITS FROM THE COLLECTION OF COMMONS IN DIFFERENT CATEGORY OF SAMPLE HOUSEHOLDS:



### FINDINGS OF THE STUDY

The above two Tables (02 & 03) is depicted that the benefit collected from Common Property Resources (CPRs) is always high in compared with the cost required for collection of commons. And it is always benefited to collection of commons when the dwellers of the villages get opportunity to work in their locality on the rate except in case of OBC families; they are more benefited if there is opportunity to work in their locality for collection of commons. These Tables also shown in above that it is more beneficial to collect commons than the opportunity to work in their locality in above two rates. In caste wise and mouza wise classification of the households, it is observed that the benefit is always high compared to the cost required for collection of commons. Though, the people of different localities derive more benefit out of collection of commons, than to earn wages by employing themselves in other daily jobs in their respective localities. Although the wage /day is not available in different areas in lean season.

The caste-wise cost-benefit analysis shows various performances by different social groups. The ratio of benefit in cost is the highest in case of minorities and the lowest in case of OBC groups. Both total cost and total benefit measured in terms of money are the highest in case of minorities. But in case of OBC groups, the money value of benefit is the lowest, as compared with the cost associated with it.

District wise cost-benefit analysis shows the same situation like caste wise table that it is more beneficial to collect from commons than the opportunity to work in their locality / mouza at a specific wage rates which is normally lower than monetary benefit from commons.

And it can be said that if the dwellers of any mouza are working in their locality in the rate fixed by the government or is worked in the NREGS, they must be more benefited for collection of commons. The CPRs makes a substantial contribution to the total annual income not only to the rural poor but also on rural rich and generates substantial employment in particular for the rural poor.

### CONCLUSION

So it is of great importance that the dwellers of the villages engage major portion of their working days for the collection of commons for their income generation. It is clearly envisaged from the study that the significance of Commons has several dimensions. 'Commons' happens to be least important concern for the administration and policy makers. Poor as well as a section of middle class depends largely on this commons. It requires clear quantification to properly manage these resources. Further studies on each specific aspect are also needed before taking major decisions in this direction.

Note: According to "West Bengal Land Reforms Act-1955", Agricultural Year means the whole Bengali Year, which comprises the date from 1st Baisakh to 30th Chaitra.

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## ASSESSING THE RELATIONSHIP BETWEEN AWARENESS AND ATTITUDE OF TOURISTS TOWARDS ECOTOURISM AND CONSERVATION IN KERALA

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### ABSTRACT

*Nature, a wonderful gift of God, with its full diversity and glory, has always been attractive to man. Since ancient times, men have been keeping a symbiotic relation with nature in all his activities, including travel. In due course of time, by making addition to the mode and purpose of travel, industrial revolution and greater disposable income, man-made attractions and recreational facilities have led to modern mass tourism. It has grown to be a major dynamic component of the world economy and one of the highly developed and dynamic industries with an important contribution to income and employment. While countries benefit due to the growth of tourism industry, on the other hand, it destroys the nature and environment which is considered as important attractions for the tourists. Ecotourism is a new concept in tourism, which was originally sparked off by the idea of making harmonious co-existence with nature a reality, once again. Among the Indian states Kerala is a highly potential state which has undertaken many initiatives to develop ecotourism. An attempt has been made in the present paper to assess the level of awareness and attitude of tourists towards ecotourism and conservation in Kerala. The paper also explore the relationship between awareness and attitude of tourists towards ecotourism and conservation with the help of correlation and regression analysis.*

### KEYWORDS

Attitude, awareness, ecotourism, conservation.

### INTRODUCTION

Tourism is a complex phenomenon. It encompasses almost all the facets of social life – economic, socio-cultural and environmental. Till the 18<sup>th</sup> century, nature was as unkempt and fit to be tamed. Nature was a raw material to be moulded. It did not occur to man that nature was as well a resource to be conserved. In the 19<sup>th</sup> century, a new attitude to the natural environment emerged. By the end of 19<sup>th</sup> century, the impact of human activity on the environment became a matter of serious concern. In the modern world, the increase in the capacity to consume, disposable income and high level of literacy create a widespread desire for travel. The desire for travel was so intense that tourism acquired the status of the world's largest and fastest growing economic activity. From being the preserve of a few wealthy and leisurely people, tourism was transformed into a mass market. Now, tourism is about enriching people's lives. Usually, for people, holidays and travel are among the happiest recollections. Tourism is leisure activity and recreation is the main purpose for participation in tourism. But, according to WTO, tourism is a model form of economic development that is designated to improve the quality of life in the host community, provide a high quality experience for the tourist, and maintain the quality of the environment on which both the host community and the tourist depend. Mass tourism has no doubt ruined the landscape and caused environmental pollution and disrupted the indigenous way of life of societies with weak cultural traditions. Although, even in the near past, environmental friendliness was used as a differentiating factor, it is now taking the shape of being a necessary factor. This shift is giving rise to a new product offer called 'Ecotourism' and is considered a specialty segment of the larger nature tourism market. As per the estimates of World Tourism Organization, nature tourism contributes 7 percent of all international travel expenditure (Lindberg et al, 1997).

### ECOTOURISM AND CONSERVATION

The term 'ecotourism' was unknown in the English language as recently as the mid 1980s. The Mexican ecologist Hector Ceballos-Lascurain used the Spanish word 'ecoturismo' even earlier in the decade, while the National Forestry Service in Canada was marketing the concept of an educational 'ecotour' along the Trans-Canada Highway as far back as 1973. Fennel suggests that ecotourism most likely has a convergent evolution 'where many places and people independently respond to the need for more nature-travel opportunities in line with society's efforts to become more ecological minded' (Fennel 1998).

Hvenegaard and Orams write that the term 'ecotourism' can be traced back only to the late 1980s (Hvenegaard 1994; Orams 1995), while others suggest that it can be traced to the late 1970s through the work of Miller on ecodevelopment (Miller 1989). The term has been traced further back to the work of Hetzer who used it to explain the intricate relationship between tourists and the environments and cultures in which they interact (Hetzer 1970). This particular stand in illustrating that the idea of ecotourism is in fact an old one, which manifested itself during the late 1960s and early 1970s (Nelson 1994). There seems to be universal acceptance of the fact that ecotourism was in practice long before 1980s. The relationship between tourism and the natural environment tended to be one of conflict, but that the potential existed for a relationship based on symbiosis or mutual benefit (Budowski 1976).

The terms "nature tourism" and "ecotourism" were used interchangeably (Mc Neely *et al*, 1992). Since the early 1990's a plethora of non-governmental organizations' (NGOs) campaigns and academics have advocated ecotourism as a way of overcoming the dichotomy between conservation and development. The rationale, put simply is that, if tourists will pay to experience the relatively untouched nature, then the revenue they bring, can be used to maintain those environments and provide benefits for the local community. This ecotourism - for - conservation agenda is an important one.

The estimation enumerated by the WTO on nature travel was 7 percent of all international expenditure. WTO's prediction on the prospect of nature travel is estimated to be rising by 20 percent which will be 5 times more than the average rate of growth in tourism industries as a whole. Developing countries will capitalize the abundant potential of ecotourism by generating US\$ 5 to 10 billion revenue annually. According to The Ecotourism Society (TES) in 1998, 40–60 percent of all international tourists were nature tourists and 20–40 percent wildlife tourists. The demand for ecotourism and nature-based holidays is expected to get doubled and even tripled in the next 20 years.

The Green Travel Guide assess that tourism can be a powerful force for conservation and notes that there are more than 5000 National Parks, Wildlife Sanctuaries and reserves around the world today, many depending on tourism for financial need. The aid arm of the United States Government, USAID, uses ecotourism as a strategic tool for 'environmentally responsible development' in more than a dozen countries. Conservation International, one of the biggest and richest players in international conservation, utilizes ecotourism in 17 out of the 25 countries in which they operate. Thus, it is clear that ecotourism in Protected Areas, National Parks and Reserve forests will help to reduce negative impacts on these environmentally fragile areas and bring income to the local community which would prevent them from destroying forests and encourage to conserve the natural assets. Thus ecotourism is accepted and used widely as a tool for supporting the conservational efforts of the Protected Areas which have lot of tourism potential. Creating awareness among the tourists about the ecotourism activities and conservational efforts in nature based tourism destinations will help to bring a favourable attitude among the tourists towards ecotourism and conservation of nature and will result in their active involvement.

### IMPORTANCE AND NEED FOR THE STUDY

Tourism in natural and protected areas is economically important to many countries, both developing and developed (Lindberg *et al.*, 1998). The impressive, relatively recent, growth of the world's network of 30,361 parks now covers an area of 8.84 per cent of the total land area of the planet (Eagles, 1999). In India,

the Government owns more than 95 percent of the forests, including 88 National Parks and 490 Wildlife Sanctuaries, where people do not have any rights. Policing seems to be a failure in several instances. The rules and regulations pertaining to forests and wildlife always alienated people and private sector from using such resources suitably. These areas are environmentally fragile but needs to be protected.

Major chunk of the population in India is contained in rural areas and is below poverty line. Hence, how far conservation efforts will be successful in the long run without generating income from Protected Areas and how best we will be able to justify such an extent of reserves in a highly populated country like India, are the real concerns. But these areas are rich in biodiversity and are very attractive to the nature lovers, having high potential for ecotourism. However, the relationship between tourism and protected areas is not an easy one, and the threat of negative ecological impacts from rapidly increasing levels of visitation and visitor infrastructure continues to cause considerable anxiety for protected area managers and conservation agencies (Sheppard, 1999). The main motivation behind ecotourism development is the employment of tourism receipts for protection of resources, sustainably.

Many Protected Areas have already developed as mass tourism centers and losing their natural beauty. Though it is very difficult to replace the mass tourism practised here by ecotourism, it is very much required to protect these area from environmental degradation. At the same time, tourism is also a must to this area. Otherwise, it will lead to heavy encroachment and will destruct the forests. To avoid this, it is necessary to develop a suitable pattern of tourism which contributes to the preservation of the natural beauty and biodiversity of this area and generate income to the local people and the government.

## OBJECTIVES OF THE STUDY

The main objectives of the study are:

1. To assess the level of awareness and attitude of tourists towards Ecotourism and conservation of Protected Areas in Kerala.
2. To explore the relationship between awareness and attitude of tourists towards Ecotourism and conservation.

## HYPOTHESES OF THE STUDY

In the course of the study, following hypotheses have been formulated.

1. There is a significant correlation between the attitude of the tourists and their awareness towards ecotourism and conservation.
2. The attitude of the tourists towards ecotourism and conservation depends significantly on their awareness of ecotourism and conservation.

## METHODOLOGY OF THE STUDY

This study, based on both primary and secondary sources of data. The population considered for the purpose of this study is the tourists who visited Kerala in the year 2010. For collecting primary data from the tourists, convenience sampling method has been adopted. The respondents were selected merely on the basis of their being available on the spot where survey was conducted and the willingness of the tourists to co-operate with the researcher. The sample size is 1000 (750 domestic tourists and 250 foreign tourists). Primary data were collected from the tourists through a Structured Questionnaire. For measuring the awareness and attitude level of tourists towards ecotourism and conservation, ten statements each were given to each respondent and a five point Likert scale has been used. The level of awareness and attitude of tourists towards ecotourism and conservation have been analysed through cross tabulation. Correlation analysis has been used for measuring the degree of association between attitude and awareness of tourists and Regression analysis has been applied to determine the variation in attitude based on the variation in awareness.

## PROFILE OF THE STUDY AREA

Kerala – one of the beautiful states of India, richly blessed with serene beaches, enchanting backwaters, mist clad hill stations, lush forests, exotic wildlife, exciting trekking trails, scintillating waterfalls, extensive plantations, tropical islands, invigorating monsoon, ayurvedic health care, historic monuments, spectacular art forms, splendid cultural heritage, spectacular boat races, spicy cuisines and everything else enthralls a visitor<sup>4</sup>. Kerala has achieved a remarkable growth in tourism both in arrival and receipts during the last decade.

The picturesque state of Kerala, forming part of the Western Ghats, contains a strictly Protected Area of 2324 km<sup>2</sup> in two National Parks and 12 Wildlife Sanctuaries. Ecotourism is a sustainable management option for this state, since a major part of tourists paying visit to Kerala are visiting the Protected Areas. Kerala's natural resources are unique and known worldwide. Ecotourism provides the opportunity to present Kerala's natural environment to the world for a long period. Ecotourism can create new and exciting tourism experiences, promote excellence in tourism, preserve and protect natural areas, benefit local communities and encourage commercially successful and environmentally sound tourism operations in Kerala. As the first step in developing ecotourism, Government of Kerala has formulated a project in Thenmala and its surroundings. In the year 1998, the 'Thenmala Ecotourism Society' was established as a Government of Kerala undertaking to promote ecotourism activities at Thenmala and its surroundings with the co-operation of the Forest, Irrigation and Tourism departments. This is India's first planned ecotourism destination, based on sound principles of ecological sustainability and has become a model for other ecotourism destination development programmes. Afterwards almost all the nature based tourism destinations in Kerala have started to practice ecotourism and taken conservational efforts from the revenue generated through ecotourism.

## AWARENESS AND ATTITUDE OF TOURISTS TOWARDS ECOTOURISM AND CONSERVATION

Awareness means the information or knowledge possessed by a person about something. As far as this study is concerned, awareness of tourists about ecotourism is assumed to play an important role in participation and co-operation of ecotourism implementation, as tourists who are not aware of ecotourism in the particular destination, will not follow the environmental rules applicable to that area.

The term attitude means the way of thinking or behaving towards somebody or something. It may vary from person to person. According to the view of the experts, unfavourable attitude towards ecotourism and conservation and lack of awareness about ecotourism and need for conservation, among the tourists are the most important problems in implementation of ecotourism initiatives (Shini,2009). This paper measures the level of awareness and attitude of tourists towards ecotourism and conservation of Protected Areas in Kerala and explore the relationship between the awareness and attitude of tourists. Since awareness and attitude of tourists are qualitative factors, which cannot be measured in quantitative terms, these can be measured with the help of Likert scaling technique.

## FRAMING OF AWARENESS AND ATTITUDE SCALE

On the basis of the ecotourism resources, practices and activities, required measures for the implementation of ecotourism, totally twenty statements-ten each representing the awareness and attitude of a tourist towards ecotourism and conservation in Kerala were framed. All the ten statements from each category jointly measure the awareness and attitude level of tourists towards ecotourism and conservation in Kerala respectively. For every statement, five choices, namely, strongly agree, agree, neither agree nor disagree, disagree and strongly disagree were given to the respondents for measuring their responses.

If a respondent has given his opinion as 'strongly agree' for all the ten statements in each case, the respondent's total score will be 50 (10x5), in each case. If the respondent 'disagrees' with all the statements the total score of that respondent will be 10 (10x1) in each case. Hence, the total score of a respondent varies from 10 to 50 for each case. Table - 1 classifies the respondent's awareness and attitude into high, medium and low level towards ecotourism and conservation in Kerala.

TABLE – 1: AWARENESS AND ATTITUDE SCORES OF THE RESPONDENTS

Particulars	Awareness	Attitude
Sum of scores	32847	36024
Number of respondents	1000	1000
Percentiles 33.3333	29.00	32.00
66.6667	36.00	43.00
Low level	≤ 29	≤ 32
Medium level	30 – 36	33 – 43
High level	> 36	> 43

Source: Survey data

On the basis of the scores for awareness and attitude of the respondents, the distribution is divided into three equal parts. Each part consists of 33.33 percent of the normal distribution. In case of awareness, the first part in the distribution is up to the total awareness score of 29. So, respondents who secured awareness score equal to or below 29 are considered as respondents with low level of awareness. The second part is from a total awareness score of 30 – 36 and the respondents who scored in between 30 – 36 are having medium level of awareness. The third part is the total awareness score above 36 and those who secured 36 – 50 are considered as having a high level of awareness about ecotourism and need for conservation in Kerala.

In case of attitude, the first part has a total attitude score of 32 and below 32 are considered as respondents with low level of attitude towards ecotourism and conservation in Kerala. The second part of the distribution is from a total attitude score of 33 – 43 and the respondents who scored in between 33 – 43 are having medium level of attitude. The third part has the total attitude score above 43 and those who secured 43 – 50 are considered as having a high level of attitude towards ecotourism and conservation in Kerala. Table - 2 shows the classification of respondents on the basis of their level of awareness and attitude.

TABLE – 2: CLASSIFICATION OF THE RESPONDENTS BASED ON AWARENESS AND ATTITUDE

Sl. No.	Level	Awareness		Attitude	
		Number of respondents	Percentage	Number of respondents	Percentage
1	Low	535	53.5	509	50.9
2	Medium	305	30.5	232	23.2
3	High	160	16.0	259	25.9
Total		1000	100.0	1000	100.0

Source: Survey data

It could be assessed from table - 2 that in case of awareness, out of the total 1000 respondents, 535(53.5 percent) respondents are in the low level, 305(30.5 percent) respondents are in the medium level and the remaining 160(16 percent) are highly aware of ecotourism conservation in Kerala. In case of attitude, 509(50.9 percent) respondents are in the low level, 232(23.2 percent) respondents are in the medium level and 259(25.9 percent) respondents are in the high level attitude.

Nationality of the respondents also influence the awareness and attitude level of tourists. On the basis of nationality, tourists are broadly classified into domestic tourists and foreign tourists. Foreign tourists are visiting India for her natural beauty and they are very much interested in participating in the nature-based tourism activities than domestic tourists. So, it is assumed that their awareness and attitude are higher than that of domestic tourists.

TABLE – 3: NATIONALITY STATUS AND LEVEL OF AWARENESS AND ATTITUDE

Sl.No.	Nationality	Level of Awareness			
		Low	Medium	High	Total
1	Domestic(India)	462(61.6)	197(26.3)	91(12.1)	750(100)
2	Foreign	73(29.2)	108(43.2)	69(27.6)	250(100)
Total		535	305	160	1000
		Level of Attitude			
1	Domestic (Indian)	440(58.7)	178(23.7)	132(17.6)	750(100)
2	Foreign	69(27.6)	54(21.6)	127(50.8)	250(100)
Total		509	232	259	1000

Source: Survey data

It could be inferred from the table - 3 that only 28.4 percent of domestic tourists have medium and high level of awareness. But, in the case of foreign tourists, 70.8 percent have medium and high level of awareness. It is also evident from the table that only 41.3 percent of domestic respondents have medium and high level of attitude. But, in case of foreign tourists, 72.4 percent have medium and high level of attitude. 52.4 percent of the domestic tourists show a low level of attitude towards ecotourism and conservation in Kerala.

**CORRELATION AND REGRESSION BETWEEN AWARENESS AND ATTITUDE**

Attitude is highly influenced by awareness. If a person has a clear idea about the merits and demerits of certain things, it will be reflected in his attitude. So, it is acceptable that the level of attitude of tourists towards ecotourism and conservation vary according to their level of awareness about ecotourism and conservation.

**Hypothesis 1: There is a significant correlation between the attitude of the tourists and their awareness towards ecotourism and conservation.**

Correlation analysis is used to test the above hypothesis and to measure the degree of association between the two sets of quantitative data. Table - 4 shows the correlation between Awareness score of tourists and their Attitude score towards ecotourism and conservation in Kerala.

TABLE – 4: CORRELATION BETWEEN AWARENESS AND ATTITUDE

	Mean	Standard deviation	Awareness	Attitude
Awareness	2.03	0.81	1.000	0.805**
Attitude	2.11	0.81	0.805**	1.000

\*\* Correlation is significant at the 0.01 level ( 2- tailed)

The result of the analysis reveals that the two variables, namely, awareness of tourists and their attitude towards ecotourism and conservation in Kerala are highly and significantly correlated. Hence the first hypothesis of the study, **there is a significant correlation between the attitude of the tourists and their awareness towards ecotourism and conservation** holds true.

**Hypothesis 2: The attitude of the tourists towards ecotourism and conservation depends significantly on their awareness of ecotourism and conservation.**

Regression analysis is applied to test the above hypothesis. It explains the variation in one variable (attitude - Y), based on the variation in other variable (awareness - X). A regression equation of attitude on awareness is constructed as follows :

$$Y = 4.16 + 0.970 X$$



The ANOVA table pertaining to the testing of significance for this regression is given in Table - 5.

TABLE – 5: ANOVA FOR TESTING REGRESSION OF ATTITUDE ON AWARENESS

Source	Sum of Squares	df	Mean Square	F	R <sup>2</sup>
Regression	420.762	1	420.762	1832.608	.647
Residual	229.138	998	.230		
Total	649.900	999			

Source: Survey Data

R<sup>2</sup> is a measure of the percent variation explained by the independent variable (awareness) on the dependent variable (attitude). The critical value of F (1,998) is 3.85 (Rao.C.R, 1966). Clearly from the ANOVA table there is significant effect of awareness on the attitude score of the tourists. Hence, it is concluded that the **second hypothesis, the attitude of the tourists towards ecotourism and conservation depends significantly on their awareness of ecotourism and conservation**, is true.

### SUMMARY OF FINDINGS

Awareness about ecotourism and conservation among the tourists is playing an important role in effective implementation of ecotourism in destinations. The analysis of the study shows that out of 1000 respondents, only 160 respondents (16 percent) have high level of awareness; 305 respondents (30.5 percent) have medium level of awareness and the majority of 535 respondents (53.5 percent) have only low level of awareness. Out of the 1000 respondents, 509 respondents (50.9 percent) have low level of attitude, 259 of them (25.9 percent) have high level of attitude and 232 respondents (23.2 percent) have medium level of attitude towards ecotourism and conservation in Kerala. Foreign tourists are highly aware and having a more favourable attitude than domestic tourists towards ecotourism and conservation in Kerala. The awareness and attitude of tourists towards ecotourism and conservation are significantly correlated with each other. The result of the regression analysis shows that there is significant effect of awareness on the attitude of the respondents towards ecotourism and conservation.

### SUGGESTIONS

1. Attitude is directly affected by the awareness. So, it is necessary to make the tourists aware of the need for conservation and the importance of ecotourism in this direction. This will create a favourable attitude among tourists towards ecotourism and conservation. Without the support of the tourists, it is impossible to implement ecotourism effectively. A 'Cause related marketing' approach i.e., relating tourism with environmental protection will bring the desired result in this direction.
2. The promotional materials like pamphlets and brochures published by the Tourism Department, District Tourism Promotion Council, Forest and Wildlife Department of Kerala, Kerala Forest Development Corporation etc. should include the details regarding the need for conservation and ecotourism practices in Kerala.
3. Foreign tourists should be targeted more, since they are having higher level of awareness and attitude towards ecotourism and conservation in Kerala.
4. Setting up of an Environmental Education Centre at the entry point of the ecotourism destinations will be useful to make the tourists aware of the features of the ecosystem of the area, the flora and fauna available, need for conservation of that place, the environmental rules to be followed by the tourists during their visit and the consequences of the depletion of the natural and ecological resources.

### CONCLUSION

Though ecotourism is considered as a special type of tourism used to attract tourists having an interest in nature and environmental consciousness, it can be used as a powerful weapon for preventing environmental degradation of ecologically sensitive tourism destinations. Also, the expenditure for the conservation of habitats in these areas can be contributed by the revenue generated from ecotourism. Ecotourism has the advantage of winning the co-operation and participation of tourists for the preservation of the natural attractions of a particular tourism destination. As far as Kerala is concerned, tourism growth depends on the natural beauty of the state, and it is necessary to preserve this beauty to continue the present benefits of tourism in this state. To make it practical, the need for the hour is to create awareness among the tourists about the ecotourism activities, environmental laws followed and the conservational efforts of the tourism destinations they are visiting. This leads to a favourable attitude in tourists towards ecotourism and conservation of natural tourism resources of the destination and ensure their full co-operation and involvement in the promotion of a low impact form of responsible tourism.

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**RISK MINIMIZATION TRADING STRATEGIES IN BULLISH MARKET**

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**ABSTRACT**

Awareness of derivatives as an important tool of risk management is indispensable now a days. Derivative securities have penetrated into the Indian stock market and Investors are using these securities for different purposes such as speculation, hedging & arbitrage. Important aspect is the awareness and its usage in downturn and undecided market. Markets are very volatile and hence it becomes crucial for investors to frame strategy according to their risk appetite. In the long run, fundamental analysis works but in the short perspective, investors have to frame volatile market strategies. This paper explores various strategies which can be used by the investors in bullish market. It gives you an idea about the various combinations of equity derivative products which can be used to create effective strategies. The study focuses on different types of strategies which can be used in bullish market using different variants of equity derivatives with their possible future outcomes. The paper shows how a strategy can be created with futures and various types of options along with their payoffs and payoff diagram. The best strategy is the one which minimizes loss and gives maximum profit.

**KEYWORDS**

Derivatives, futures, options, trading strategies.

**DEFINITIONS**

**Derivatives**-They are financial instruments whose price depends on the price of the underlying asset. They derive their value from the price of the underlying asset. Example Reliance Futures derive their price from the price of the RELIANCE shares in cash market. They are an important risk management tool. They act as a form of Insurance. They are used to hedge other instruments and thereby reduce risks & rewards.

**Futures** – A contract with an agreement between two parties to buy or sell an asset at a certain time in the future for a certain price. Unlike forward contracts, futures contract are normally traded on an exchange. To make trading possible, the exchange specifies certain standardized features of the contract. The contract is referred to by its delivery month, and the exchange specifies the period during the month when delivery must be made.

**Options**: A contract that conveys the right, but not the obligation, to buy or sell a particular item at a certain price for a limited time. Only the seller of the option is obligated to perform. There are two types of options-Call & Put Option.

**Payoff**-It is the value of the option contract in terms of loss or profit arising from the contract to the two parties-buyer and seller of the contract.

**Trading Strategies**- A strategy is a plan of action designed to achieve a vision. In order to achieve the objective, trader creates a plain vanilla strategy or complex strategy using various combinations of derivative products.

**INTRODUCTION TO DERIVATIVES**

One of the interesting developments in financial markets over the last 15 to 20 years has been the growing popularity of derivatives or contingent claims. The term "**Derivative**" connotes that it derives its value from the value of the underlying asset. It has no independent value. The underlying asset can be securities, commodities, bullion, currency, live stock or anything else. The existence of Derivatives is associated with the existence of risks in business. Hence derivatives are an important risk management tool. The parties managing risks in the market are known as **HEDGERS**. Some people/organisations are in the business of taking risks to earn profits. Such entities represent the **SPECULATORS**. The third player known as the **ARBITRAGERS**, take advantage of the market mistakes or imperfections.

**FACTORS DRIVING THE GROWTH OF FINANCIAL DERIVATIVES**

1. Increased volatility in asset prices in financial markets.
2. Increased integration of national financial markets with the international markets.
3. Marked improvement in communication facilities and sharp decline in their costs.
4. Development of more sophisticated risk management tools, providing economic agents a wider choice of risk management strategies, and
5. Innovations in the derivatives markets, which optimally combine the risks and returns over a large number of financial assets leading to higher returns, reduced risk as well as transactions costs as compared to individual financial assets.

**GROWTH OF DERIVATIVE MARKET OVER LAST 2 DECADES IN INDIA**

1991	Liberalization process initiated
14-Dec-95	NSE asked SEBI for permission to trade index futures.
18-Nov-96	SEBI setup L.C.Gupta Committee to draft a policy framework for index futures
11-May-98	L.C.Gupta Committee submitted report.
07-Jul-99	RBI gave permission for OTC forward rate agreements (FRAs) and interest rate swaps
25-May-00	SEBI gave permission to NSE and BSE to do index futures trading.
June 2000	Trading of BSE & NSE Futures
02-Jun-01	Individual Stock Options & Derivatives
04-Jun-01	Index options on Nifty
09-Nov-01	Futures on Individual Securities at NSE
Aug-03	Futures & Options on CNX IT Index at NSE
Jun-05	Futures & Options on BANK NIFTY Index
Jun-07	Derivatives on NIFTY JUNIOR & CNX 100
Oct-07	Derivatives on NIFTY MIDCAP 50
Jan-08	Mini Nifty Derivatives Contract
Mar-08	long Term Options Contracts on NIFTY Index
Aug-08	Currency Derivatives
Aug-09	Interest Rate Futures
2010 & 2011	Derivatives on Global Indices EMERGE-NSE SME Platform-Investment Opportunities for Emerging Companies

Source-www.nseindia.com

**REVIEW OF LITERATURE**

There are various strategies available in the market. Strategy depends on the view point of the market or Individual stock. Viewpoint can be bullish, bearish or uncertain. Strategy is framed by an individual depending on many factors. It depends on objective of trading i.e. hedging, arbitrage or speculation, volatility of individual stock, viewpoint, technical indicators like open Interest, volume, turnover, put call ratio, implied volatility, option premiums etc. It also depends on the risk taking capability of investor.

Strategy can be plain vanilla or combinations of put+call+spread. As surveyed by Anjali Choksi (2010) majority of investors are not aware of strategies like butterfly, straddle and strangle strips & straps. They use their own strategies. Such Investors follow their own strategies like using call & put simultaneously on same underlying asset, 2 calls and 1 put or 2 puts and 1 call to take advantage of premium income. There are also some of them who know about such strategy but have no knowledge about its usage. She found that there was awareness of derivatives among mass investors and those Investors having no knowledge of it depend mostly on broker or take friends advice in order to make investment.

Sandeep Srivastava et al. (2008) studied derivative trading from brokers perception & found that derivative securities have definitely penetrated into the Indian stock market & investors are using these securities for different purposes, namely risk management, profit enhancement, speculation & arbitrage. Active Investors continuously search for investment strategies that provide returns greater than market return. Hence they resort to different strategies that are either based on fundamental analysis, technical analysis, market anomalies & security attributes. The Study explores the different combination of derivative products which can be used in bullish market giving an insight of the various possibilities of the loss and profit scenarios. It helps us to understand the complex nature of options.

**NEED/IMPORTANCE OF THE STUDY**

**There has been a substantial change in investment strategies used by active investors in Indian stock market over the past five years.** In a nutshell investors have shifted from purely technical analysis to both fundamental and technical. But there have been a few studies on using these strategies together & finding the best one which has a combination of all of them.

**One of the most challenging areas in derivative is increased volatility.** In few minutes one can earn fantastically or erode his capital. Due to which investors have reduced their investment horizon. Investors have shifted from blue chip stocks to emerging stocks. P/E ratios are no longer the most important base for investment.

Here comes the acute need of finding more reliable factors or indicators or well framed strategies which can give us good returns in both the markets-bullish & bearish as well as now even in volatile markets.

Future research must address these deficiencies to provide investors with more reliable tools & effective trading strategies.

But Indian future market is still unexplored for effective & proven derivative trading strategies. Fundamental factors behind this can be awareness, abnormality of Indian markets, knowledge & usage of products etc. In fact in international markets like US, investors use more options than future and cash product. India has to go long a way to increase the usage of these products and changed the whole picture of Indian derivative market.

This study therefore undertakes the academic research of Trading Strategies in Derivative Market with higher degree of worthiness and effectiveness with respect to bullish market.

**STATEMENT OF THE PROBLEM**

How do investors in India improve their trading strategies in bullish market in Indian Derivative Market?

**OBJECTIVES**

To determine the derivatives trading strategy on the basis of bullish outlook which will minimize the risk and maximize the profit..

**RESEARCH METHODOLOGY**

**Scope of study-** The strategies are limited to bullish market scenario using equity derivatives.

**Data collection sources**

Primary –Nil

Secondary

- Stock market web sites
- Journals
- ACEEQUITY Software.
- ODIN Diet Software

**Beneficiaries of study**

- Investors & Derivative Traders
- Students
- Share brokers

**Limitations**

- There can be other complex strategies which one can explore. The list is not exhaustive.
- Strategies may fail if the market moves in unfavourable direction.

**RESULTS & DISCUSSION****THE RISK MINIMISATION TRADING STRATEGIES USING FUTURES AND OPTIONS ON THE BASIS OF:**

- Bullish Outlook
- **Any Strategy Creation requires following Key Steps**
- Market View-When to use
- Products to be used in strategy-Calls or puts or combination or futures
- Upside Potential
- Downside Risk

**I. TRADING STRATEGIES USED FOR BULLISH OUTLOOK****1. LONG CONDOR LADDER**

**Strategy:** - Buy a Call at a low Strike price K1,

Sell a call at a high Strike price K2

Sell a call at a higher Strike price K3

**When to Use:** - When u have a Bullish Outlook but not very Bullish

**Payoff:**

- **At  $St < K1$ , fixed profit of Net Premium Received**
- **At  $K2 > St > K1$ , Profit increases linearly with the St**
- **At  $K3 > St > K2$ , Fixed Profit ; i.e Net Premium Received + Difference between K2 & K3**
- **At  $St > K3$ , Profit falls linearly with StMarket expectation:** Direction bullish/volatility bearish. In this case the holder expects the market to settle between K2 and K3 but feels that volatility will not rise.

Profit & loss characteristics at expiry:

**Profit:** Limited to the difference between strikes K1 and K2 plus (minus) net credit (debit).

**Loss:** Unlimited if underlying rallies. At A or below, loss limited to net cost.

**Break-even:** Lower break-even reached when the underlying exceeds the lower strike option K1, by the same amount as the net cost of the position. Higher break-even point reached when the intrinsic value of option K1, plus (minus) the net credit (debit) from establishing the position, is equal to the intrinsic value of the two higher strike options at K2 and K3.

**Example:**

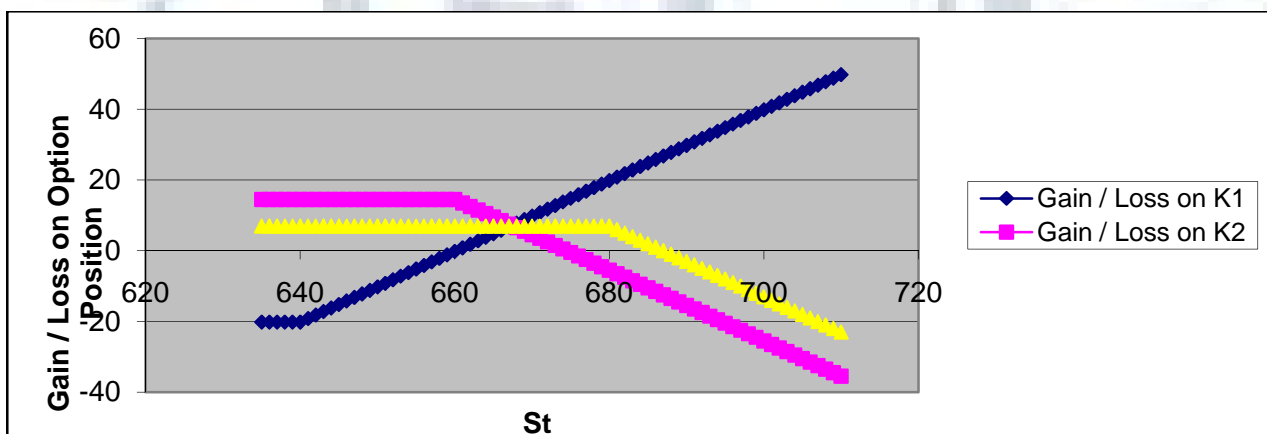
Current Price of the Stock = $S_0$ =	648	Strike Price of Call Option= $K_2$ =	660
Strike Price of Call Option= $K_1$ =	640	Premium of Call Option = $K_2$ = Rs.	14.45
Premium of Call Option = $K_1$ = Rs.	20.2	Strike Price of Call Option= $K_3$ =	680
		Premium of Call Option $K_3$	6.95



PAY-OFF TABLE

St	Premium for K1	Gain / Loss on K1	Premium for K2	Gain / Loss on K2	Premium for K3	Gain / Loss on K3	Total Gain/Loss
635	20.2	-20.2	14.45	14.45	6.95	6.95	1.2
636	20.2	-20.2	14.45	14.45	6.95	6.95	1.2
637	20.2	-20.2	14.45	14.45	6.95	6.95	1.2
638	20.2	-20.2	14.45	14.45	6.95	6.95	1.2
639	20.2	-20.2	14.45	14.45	6.95	6.95	1.2
640	20.2	-20.2	14.45	14.45	6.95	6.95	1.2
641	20.2	-19.2	14.45	14.45	6.95	6.95	2.2
642	20.2	-18.2	14.45	14.45	6.95	6.95	3.2
643	20.2	-17.2	14.45	14.45	6.95	6.95	4.2
644	20.2	-16.2	14.45	14.45	6.95	6.95	5.2
645	20.2	-15.2	14.45	14.45	6.95	6.95	6.2
646	20.2	-14.2	14.45	14.45	6.95	6.95	7.2
647	20.2	-13.2	14.45	14.45	6.95	6.95	8.2
648	20.2	-12.2	14.45	14.45	6.95	6.95	9.2
649	20.2	-11.2	14.45	14.45	6.95	6.95	10.2
650	20.2	-10.2	14.45	14.45	6.95	6.95	11.2
651	20.2	-9.2	14.45	14.45	6.95	6.95	12.2
652	20.2	-8.2	14.45	14.45	6.95	6.95	13.2
653	20.2	-7.2	14.45	14.45	6.95	6.95	14.2
654	20.2	-6.2	14.45	14.45	6.95	6.95	15.2
655	20.2	-5.2	14.45	14.45	6.95	6.95	16.2
656	20.2	-4.2	14.45	14.45	6.95	6.95	17.2
657	20.2	-3.2	14.45	14.45	6.95	6.95	18.2
658	20.2	-2.2	14.45	14.45	6.95	6.95	19.2
659	20.2	-1.2	14.45	14.45	6.95	6.95	20.2
660	20.2	-0.2	14.45	14.45	6.95	6.95	21.2
661	20.2	0.8	14.45	13.45	6.95	6.95	21.2
662	20.2	1.8	14.45	12.45	6.95	6.95	21.2
663	20.2	2.8	14.45	11.45	6.95	6.95	21.2
664	20.2	3.8	14.45	10.45	6.95	6.95	21.2
665	20.2	4.8	14.45	9.45	6.95	6.95	21.2
666	20.2	5.8	14.45	8.45	6.95	6.95	21.2
667	20.2	6.8	14.45	7.45	6.95	6.95	21.2
668	20.2	7.8	14.45	6.45	6.95	6.95	21.2
669	20.2	8.8	14.45	5.45	6.95	6.95	21.2
670	20.2	9.8	14.45	4.45	6.95	6.95	21.2
671	20.2	10.8	14.45	3.45	6.95	6.95	21.2
672	20.2	11.8	14.45	2.45	6.95	6.95	21.2
673	20.2	12.8	14.45	1.45	6.95	6.95	21.2
674	20.2	13.8	14.45	0.45	6.95	6.95	21.2
675	20.2	14.8	14.45	-0.55	6.95	6.95	21.2
676	20.2	15.8	14.45	-1.55	6.95	6.95	21.2
677	20.2	16.8	14.45	-2.55	6.95	6.95	21.2
678	20.2	17.8	14.45	-3.55	6.95	6.95	21.2
679	20.2	18.8	14.45	-4.55	6.95	6.95	21.2
680	20.2	19.8	14.45	-5.55	6.95	6.95	21.2
681	20.2	20.8	14.45	-6.55	6.95	5.95	20.2
682	20.2	21.8	14.45	-7.55	6.95	4.95	19.2

PAY OFF DIAGRAM- LONG CONDOR LADDER



**2. BULL SPREAD**

**Strategy:** - Long on 1 Call at low Strike price K1

Short on 1 Call at higher strike price K2

**When to Use:** - Mildly Bullish Perspective

**Payoff:** At  $St \leq K1$ , Loss is Fixed; i.e Net Premium Paid  
 At  $K2 \geq St \geq K1$ , Loss Reduces linearly with increase in Price  
 At  $St > K2$ , Profit is Fixed; i.e  $K2 - K1 -$  Net Premium paid

**Market Expectation:** Market bullish/volatility neutral. The spread has the advantage of being cheaper to establish than the purchase of a single call, as the premium received from the sold call reduces the overall cost. The spread offers a limited profit potential if the underlying rises and a limited loss if the underlying falls.

**Profit and loss characteristics at expiry:**

**Profit:** Limited to the difference between the two strikes minus net premium cost. Maximum profit occurs where the underlying rises to the level of the higher strike K2 or above.

**Loss:** Limited to any initial premium paid in establishing the position. Maximum loss occurs where the underlying falls to the level of the lower strike K1 or below.

**Break-even:** Reached when the underlying is above strike K1 by the same amount as the net cost of establishing the position.

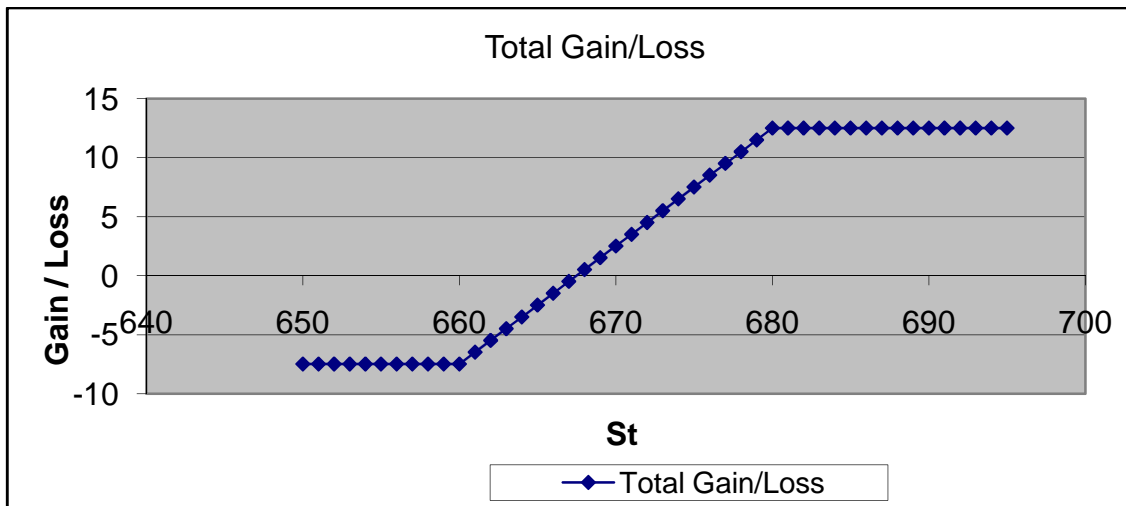
**Example:**

Current Price of the Stock = $S_0$ =	648	Strike Price of Call Option= $K_2$ =	680
Strike Price of Call Option= $K_1$ =	660	Premium of Call Option = $K_2$ = Rs.	6.95
Premium of Call Option = $K_1$ = Rs.	14.45		

**PAY-OFF TABLE**

St	Premium for Kc1	Gain / Loss on Kc1	Premium for Kc2	Gain / Loss on Kc2	Total Gain/Loss
650	14.45	-14.45	6.95	6.95	-7.5
651	14.45	-14.45	6.95	6.95	-7.5
652	14.45	-14.45	6.95	6.95	-7.5
653	14.45	-14.45	6.95	6.95	-7.5
654	14.45	-14.45	6.95	6.95	-7.5
655	14.45	-14.45	6.95	6.95	-7.5
656	14.45	-14.45	6.95	6.95	-7.5
657	14.45	-14.45	6.95	6.95	-7.5
658	14.45	-14.45	6.95	6.95	-7.5
659	14.45	-14.45	6.95	6.95	-7.5
660	14.45	-14.45	6.95	6.95	-7.5
661	14.45	-13.45	6.95	6.95	-6.5
662	14.45	-12.45	6.95	6.95	-5.5
663	14.45	-11.45	6.95	6.95	-4.5
664	14.45	-10.45	6.95	6.95	-3.5
665	14.45	-9.45	6.95	6.95	-2.5
666	14.45	-8.45	6.95	6.95	-1.5
667	14.45	-7.45	6.95	6.95	-0.5
668	14.45	-6.45	6.95	6.95	0.5
669	14.45	-5.45	6.95	6.95	1.5
670	14.45	-4.45	6.95	6.95	2.5
671	14.45	-3.45	6.95	6.95	3.5
672	14.45	-2.45	6.95	6.95	4.5
673	14.45	-1.45	6.95	6.95	5.5
674	14.45	-0.45	6.95	6.95	6.5
675	14.45	0.55	6.95	6.95	7.5
676	14.45	1.55	6.95	6.95	8.5
677	14.45	2.55	6.95	6.95	9.5
678	14.45	3.55	6.95	6.95	10.5
679	14.45	4.55	6.95	6.95	11.5
680	14.45	5.55	6.95	6.95	12.5
681	14.45	6.55	6.95	5.95	12.5
682	14.45	7.55	6.95	4.95	12.5
683	14.45	8.55	6.95	3.95	12.5
684	14.45	9.55	6.95	2.95	12.5
685	14.45	10.55	6.95	1.95	12.5
686	14.45	11.55	6.95	0.95	12.5
687	14.45	12.55	6.95	-0.05	12.5

PAY OFF DIAGRAM- BULL SPREAD



**3. Covered Call Writing**

**Strategy:** - Long on Underlying Asset & Short on Call Option at a very high Strike Price.

**When to Use:** - When the trader feels that the Stock Price will Increase but not up to the level of Strike Price

**Payoff:-**

- At  $St = (So - \text{Premium Received})$ , Profit = zero
- When  $St < (So - \text{Premium Received})$ , Loss on Underlying is reduced by the Amount of Premium
- When  $K > St > (So - \text{Premium Received})$ , Gain on Underlying is increased by the Amount of Premium
- When  $St > K$ , profit is fixed, i.e  $St - So + \text{Premium Received}$

**Example**

Current price of the stock  $S_0 = 648$

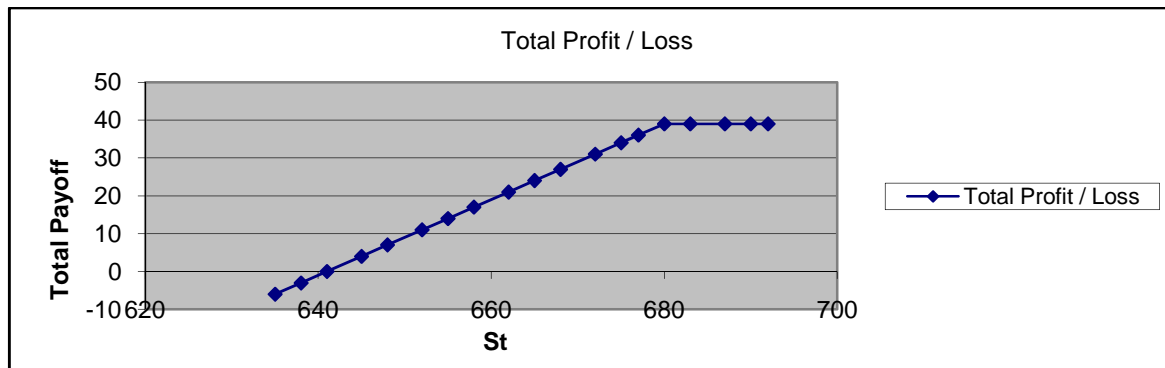
Strike Price =  $K = 680$

Premium of Call Option  $C = 6.95$

**PAY-OFF TABLE**

Price of Stock on Expiry Day	Gain / Loss on Stock ( $St - So$ )	Premium Received ( C )	Profit / Loss on Option Position	Total Profit / Loss
635	-13	6.95	6.95	-6.05
638	-10	6.95	6.95	-3.05
641	-7	6.95	6.95	-0.05
645	-3	6.95	6.95	3.95
648	0	6.95	6.95	6.95
652	4	6.95	6.95	10.95
655	7	6.95	6.95	13.95
658	10	6.95	6.95	16.95
662	14	6.95	6.95	20.95
665	17	6.95	6.95	23.95
668	20	6.95	6.95	26.95
672	24	6.95	6.95	30.95
675	27	6.95	6.95	33.95
677	29	6.95	6.95	35.95
680	32	6.95	6.95	38.95
683	35	6.95	3.95	38.95
687	39	6.95	-0.05	38.95
690	42	6.95	-3.05	38.95
692	44	6.95	-5.05	38.95

PAY OFF DIAGRAM-COVERED CALL



**4. Protective Put Buying**

**Strategy:** - Long on the Underlying & Long on the Put Option

**When to Use:** - When the trader wants to hold the Stock but is worried about the fall in Price of the Stock

**Payoff:-**

- At  $St = K$  or  $St < K$ , Maximum Loss is fixed; i.e Put Premium + (  $So - K$  )
- At  $St = So + Premium$  Paid, there is no profit no Loss
- At  $K < St < So + Premium$  Paid, Loss on underlying is Increased by the amount of Premium Paid
- At  $St > So + Premium$  Paid, Profit is reduced by the amount of Premium Paid

**Example**

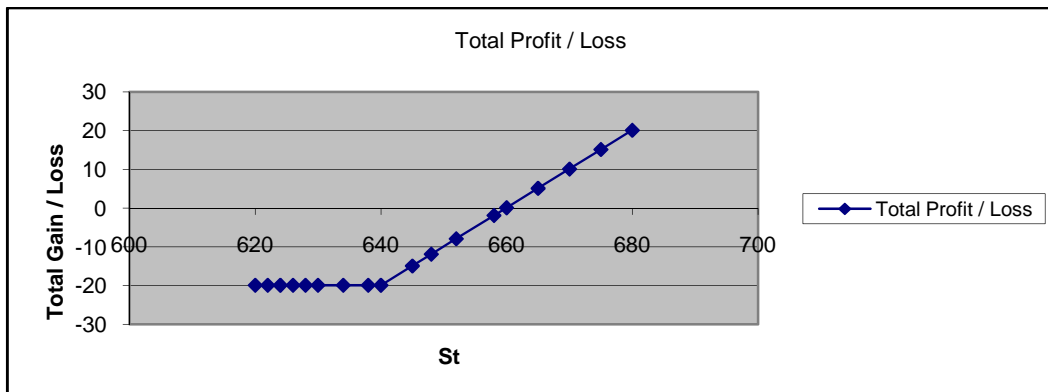
Current Price of the Stock $So = 648$
Strike Price = $K = 640$
Premium of Put Option $P = Rs.11.9$

**PAY-OFF TABLE**

Price of Stock on Expiry Day	Gain / Loss on Stock ( $St - So$ )	Premium Paid	Profit / Loss on Option Position	Total Profit / Loss
620	-28	11.9	8.1	-19.9
622	-26	11.9	6.1	-19.9
624	-24	11.9	4.1	-19.9
626	-22	11.9	2.1	-19.9
628	-20	11.9	0.1	-19.9
630	-18	11.9	-1.9	-19.9
634	-14	11.9	-5.9	-19.9
638	-10	11.9	-9.9	-19.9
640	-8	11.9	-11.9	-19.9
645	-3	11.9	-11.9	-14.9
648	0	11.9	-11.9	-11.9
652	4	11.9	-11.9	-7.9
658	10	11.9	-11.9	-1.9
660	12	11.9	-11.9	0.1
665	17	11.9	-11.9	5.1
670	22	11.9	-11.9	10.1
675	27	11.9	-11.9	15.1
680	32	11.9	-11.9	20.1



PAYOFF DIAGRAM-PROTECTIVE PUT



**5. COLLAR STRATEGY**

**Strategy:** - Combination of Covered Call Writing & Protective Put Buying

Long on Underlying, Short on Call Option at a high Price & long on Put Option at a lower Strike Price than that of Call Option.

**When to use:** - A Trader holds an underlying & feels that the stock is very volatile & can go in any direction

**Payoff:**

- At  $St = So + \text{Premium Paid} - \text{Premium Received}$ , there is no profit no loss
- At  $St \leq \text{Strike price of Put } K_p$ , Loss is fixed
- At  $St \geq \text{Strike Price of Call } (K_c)$ , Profit is fixed

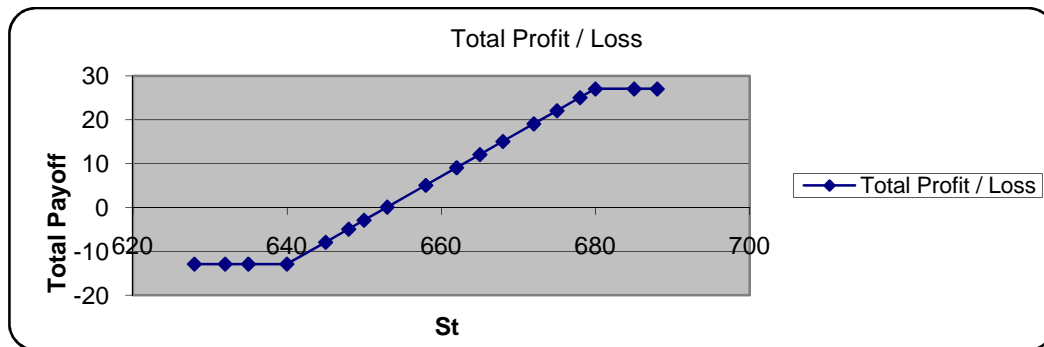
**Example**

Current Price of the Stock=648	Strike Price of Call Option= 680
Strike Price of Put Option= 640	Premium of Call Option =6.95
Premium of Put Option = 11.9	

**PAYOFF TABLE**

Price of Stock on Expiry Day ( St )	Gain / Loss on Stock (St - So)	Premium Paid ( P )	Profit / Loss on Put Position	Premium Received ( C )	Profit / Loss on Call Position	Total Profit / Loss
628	-20	11.9	0.1	6.95	6.95	-12.95
632	-16	11.9	-3.9	6.95	6.95	-12.95
635	-13	11.9	-6.9	6.95	6.95	-12.95
640	-8	11.9	-11.9	6.95	6.95	-12.95
645	-3	11.9	-11.9	6.95	6.95	-7.95
648	0	11.9	-11.9	6.95	6.95	-4.95
650	2	11.9	-11.9	6.95	6.95	-2.95
653	5	11.9	-11.9	6.95	6.95	0.05
658	10	11.9	-11.9	6.95	6.95	5.05
662	14	11.9	-11.9	6.95	6.95	9.05
665	17	11.9	-11.9	6.95	6.95	12.05
668	20	11.9	-11.9	6.95	6.95	15.05
672	24	11.9	-11.9	6.95	6.95	19.05
675	27	11.9	-11.9	6.95	6.95	22.05
678	30	11.9	-11.9	6.95	6.95	25.05
680	32	11.9	-11.9	6.95	6.95	27.05
685	37	11.9	-11.9	6.95	1.95	27.05
688	40	11.9	-11.9	6.95	-1.05	27.05

PAY-OFF DIAGRAM-COLLAR STRATEGY



**6. Short Combo**

**Strategy:** - Long on Call Option at a high Strike Price & Short on Put at a Low Strike Price

**When to use:** - Moderately Bullish Outlook

**Payoff:**

- At  $St < Kp$ , Loss keeps on decreasing linearly with rise in Price
- At  $Kc > St > Kp$ , Loss is Fixed
- At  $St > Kc$ , Profit keeps on increasing linearly with rise in Price

**Example:-**

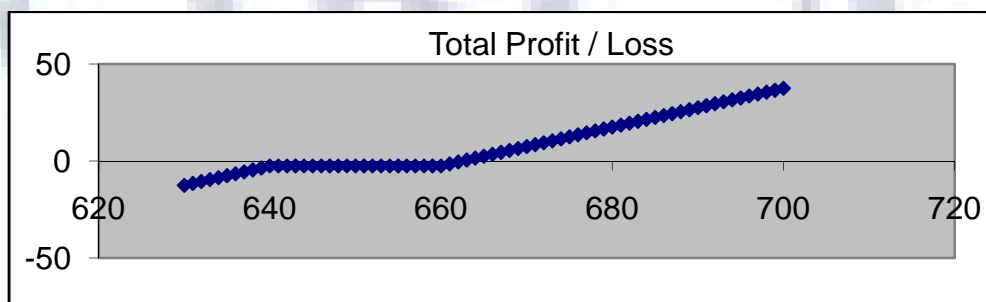
Current Price of the Stock =648	Strike Price of Put Option $Kp=640$
Strike Price of Call Option $Kc=660$	Premium of Put Option= $P= 11.9$
Premium of Call Option = 14.45	

**PAY-OFF TABLE**

Price of Stock on Expiry Day ( $St$ )	Premium Paid ( $C$ )	Profit / Loss on Call Position	Premium Put ( $P$ )	Profit / Loss on Put Position	Total Profit / Loss
630	14.45	-14.45	11.9	1.9	-12.55
631	14.45	-14.45	11.9	2.9	-11.55
632	14.45	-14.45	11.9	3.9	-10.55
633	14.45	-14.45	11.9	4.9	-9.55
634	14.45	-14.45	11.9	5.9	-8.55
635	14.45	-14.45	11.9	6.9	-7.55
636	14.45	-14.45	11.9	7.9	-6.55
637	14.45	-14.45	11.9	8.9	-5.55
638	14.45	-14.45	11.9	9.9	-4.55
639	14.45	-14.45	11.9	10.9	-3.55
640	14.45	-14.45	11.9	11.9	-2.55
641	14.45	-14.45	11.9	11.9	-2.55
642	14.45	-14.45	11.9	11.9	-2.55
643	14.45	-14.45	11.9	11.9	-2.55
644	14.45	-14.45	11.9	11.9	-2.55
645	14.45	-14.45	11.9	11.9	-2.55
646	14.45	-14.45	11.9	11.9	-2.55
647	14.45	-14.45	11.9	11.9	-2.55
648	14.45	-14.45	11.9	11.9	-2.55
649	14.45	-14.45	11.9	11.9	-2.55
650	14.45	-14.45	11.9	11.9	-2.55
651	14.45	-14.45	11.9	11.9	-2.55
652	14.45	-14.45	11.9	11.9	-2.55
653	14.45	-14.45	11.9	11.9	-2.55
654	14.45	-14.45	11.9	11.9	-2.55
655	14.45	-14.45	11.9	11.9	-2.55
656	14.45	-14.45	11.9	11.9	-2.55
657	14.45	-14.45	11.9	11.9	-2.55
658	14.45	-14.45	11.9	11.9	-2.55
659	14.45	-14.45	11.9	11.9	-2.55
660	14.45	-14.45	11.9	11.9	-2.55

661	14.45	-13.45	11.9	11.9	-1.55
662	14.45	-12.45	11.9	11.9	-0.55
663	14.45	-11.45	11.9	11.9	0.45
664	14.45	-10.45	11.9	11.9	1.45
665	14.45	-9.45	11.9	11.9	2.45
666	14.45	-8.45	11.9	11.9	3.45
667	14.45	-7.45	11.9	11.9	4.45
668	14.45	-6.45	11.9	11.9	5.45
669	14.45	-5.45	11.9	11.9	6.45
670	14.45	-4.45	11.9	11.9	7.45
671	14.45	-3.45	11.9	11.9	8.45
672	14.45	-2.45	11.9	11.9	9.45
673	14.45	-1.45	11.9	11.9	10.45
674	14.45	-0.45	11.9	11.9	11.45
675	14.45	0.55	11.9	11.9	12.45
676	14.45	1.55	11.9	11.9	13.45
677	14.45	2.55	11.9	11.9	14.45
678	14.45	3.55	11.9	11.9	15.45
679	14.45	4.55	11.9	11.9	16.45
680	14.45	5.55	11.9	11.9	17.45
681	14.45	6.55	11.9	11.9	18.45
682	14.45	7.55	11.9	11.9	19.45
683	14.45	8.55	11.9	11.9	20.45
684	14.45	9.55	11.9	11.9	21.45
685	14.45	10.55	11.9	11.9	22.45
686	14.45	11.55	11.9	11.9	23.45
687	14.45	12.55	11.9	11.9	24.45
688	14.45	13.55	11.9	11.9	25.45
689	14.45	14.55	11.9	11.9	26.45
690	14.45	15.55	11.9	11.9	27.45
691	14.45	16.55	11.9	11.9	28.45
692	14.45	17.55	11.9	11.9	29.45
693	14.45	18.55	11.9	11.9	30.45
694	14.45	19.55	11.9	11.9	31.45
695	14.45	20.55	11.9	11.9	32.45
696	14.45	21.55	11.9	11.9	33.45
697	14.45	22.55	11.9	11.9	34.45
698	14.45	23.55	11.9	11.9	35.45
699	14.45	24.55	11.9	11.9	36.45
700	14.45	25.55	11.9	11.9	37.45

Payoff Diagram-Short Combo



**7. LONG STRAP**

Strategy: - Long on 2 Call & 1 Put at the same Strike Price

When to use: - The chances of Market going up are more than the chances of going down

Payoff:

- As St approaches from low Price towards K, Loss Increases linearly with St

- At  $S_t > K$ , Loss keeps on reducing & will start making Profit

Example:

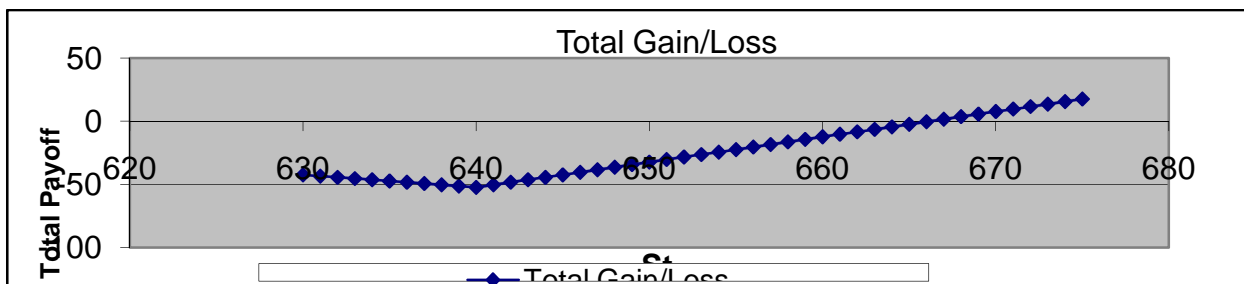
Current Price of the $S_t=648$	Strike Price of Put Option=640
Strike Price of Call Option=640	Premium of Put Option= 11.9.
Premium of Call Option= 20.2	

PAY-OFF TABLE

St	Premium for Kc	Gain / Loss on Kc	Premium for Kp	Gain / Loss on Kp	Total Gain/Loss
630	40.4	-40.4	11.9	-1.9	-42.3
631	40.4	-40.4	11.9	-2.9	-43.3
632	40.4	-40.4	11.9	-3.9	-44.3
633	40.4	-40.4	11.9	-4.9	-45.3
634	40.4	-40.4	11.9	-5.9	-46.3
635	40.4	-40.4	11.9	-6.9	-47.3
636	40.4	-40.4	11.9	-7.9	-48.3
637	40.4	-40.4	11.9	-8.9	-49.3
638	40.4	-40.4	11.9	-9.9	-50.3
639	40.4	-40.4	11.9	-10.9	-51.3
640	40.4	-40.4	11.9	-11.9	-52.3
641	40.4	-38.4	11.9	-11.9	-50.3
642	40.4	-36.4	11.9	-11.9	-48.3
643	40.4	-34.4	11.9	-11.9	-46.3
644	40.4	-32.4	11.9	-11.9	-44.3
645	40.4	-30.4	11.9	-11.9	-42.3
646	40.4	-28.4	11.9	-11.9	-40.3
647	40.4	-26.4	11.9	-11.9	-38.3
648	40.4	-24.4	11.9	-11.9	-36.3
649	40.4	-22.4	11.9	-11.9	-34.3
650	40.4	-20.4	11.9	-11.9	-32.3
651	40.4	-18.4	11.9	-11.9	-30.3
652	40.4	-16.4	11.9	-11.9	-28.3
653	40.4	-14.4	11.9	-11.9	-26.3
654	40.4	-12.4	11.9	-11.9	-24.3
655	40.4	-10.4	11.9	-11.9	-22.3
656	40.4	-8.4	11.9	-11.9	-20.3
657	40.4	-6.4	11.9	-11.9	-18.3
658	40.4	-4.4	11.9	-11.9	-16.3
659	40.4	-2.4	11.9	-11.9	-14.3
660	40.4	-0.4	11.9	-11.9	-12.3
661	40.4	1.6	11.9	-11.9	-10.3
662	40.4	3.6	11.9	-11.9	-8.3
663	40.4	5.6	11.9	-11.9	-6.3
664	40.4	7.6	11.9	-11.9	-4.3
665	40.4	9.6	11.9	-11.9	-2.3
666	40.4	11.6	11.9	-11.9	-0.3
667	40.4	13.6	11.9	-11.9	1.7
668	40.4	15.6	11.9	-11.9	3.7
669	40.4	17.6	11.9	-11.9	5.7
670	40.4	19.6	11.9	-11.9	7.7
671	40.4	21.6	11.9	-11.9	9.7



Payoff Diagram-Long Strap



RECOMMENDATIONS/SUGGESTIONS

It's true that the more we explore strategies the better our picture will be. But in practice some strategies are more suited for view based markets while other strategies are oriented towards consolidated markets. So only those feasible strategies which are applicable in bullish market are selected. Investors have to understand very clearly and precisely the objectives of the strategy, the risk appetite in terms of loss potential and importantly the market movement. It is easy to execute the strategy but the challenge is to close the position in terms of both-profit booking as well as loss booking in unfavorable market movement.

FINDINGS

There are many outlooks prevailing in the market. There may be range bound market, volatile market and many more but popular ones & widely used are bullish n bearish outlook.

The following table reflects the best suited strategies out of the strategies mentioned in the bullish market:

VIEW	STRATEGY
BULLISH	(a) Collar Strategy
	(b) Short Combo
	(c) Long Strap

By practicing such type of trading strategy, one can earn unlimited profits if the market turns in favorable zone & if the market moves other way round, loss exposure is also limited to a certain extent.

By practicing such trading strategies, an investor can predict his maximum loss in advance which is not the case if he trades without framing such trading strategies.

CONCLUSION

Trading strategy can be framed by individual taking several considerations like view for the market-bullish, bearish or uncertain, type of trader-hedger, speculator or arbitrageur, risk appetite, period of investment, type of analysis-fundamental or technical analysis etc. **But important thing is to minimize loss & take the right opportunity.** Now a day markets are very volatile, so it is in the interest of investors to frame market strategies in such a way that even if it is unfavorable the loss is minimum and also known to the investors as shown in the payoff at different market prices. The paper makes an attempt to explore new strategies in upward markets with an objective to know possible payoffs at different market prices. The investor can select the best strategy according to his/her risk appetite. However there can also be strategies where markets are volatile or are range bound or bearish. Now a days with increased volatility arbitrage based or opportunistic strategies are also used by analysts who gives fix amount of profit irrespective of market fluctuations.

SCOPE FOR FURTHER RESEARCH

Since strategies are framed by individual taking various factors into consideration there are numerous areas for research but the challenge is to maximize profit and minimize loss. One can research into strategies dealing with other market outlooks like bearish, volatile, range bound & arbitrage trading. Now a days algorithm trading is also widely used by investors.

ACKNOWLEDGEMENTS

The project was done in 2010 with my student Mr.Ankit Shah.I am thankful to him for the first communication with the Arcadia Shares & stock Brokers pvt ltd.

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SOFTWARE

11. CAPITALINE NEO
12. ODIEN DIET OF NSE

**APPENDIX**

**Bear:** Someone who thinks market prices will decline.

**Bull:** Someone who thinks market prices will rise.

**Call:** An option contract granting the purchaser the right to buy the underlying instruments at the agreed strike price. A call obliges the seller to sell the underlying instrument at the agreed strike price, if the option is assigned to him.

**Closing:** Conducting a transaction, this offsets the original trade and liquidates an existing position.

**Contract unit:** The number of units of the underlying instrument on which the contract bears, i.e. contract size. This may vary according to the underlying on which the contract bears.

**European-style options:** An option that can be exercised by the buyer only on the contract expiration date.

**Exercise:** A decision, reserved for the option holder, to request execution of the contract.

**Expiration date:** The date on which the option contract expires.

**Hedge:** A conservative strategy used to limit investment loss by effecting a transaction, which offsets an existing position.

**Holder:** The party who purchased an option.

**Liquidity:** Market situation in which quick purchase or sale of a security is possible without causing substantial changes in prices.

**Long position:** An investor's position where the number of contracts bought exceeds the number of contracts sold. He is a net holder.

**Lot size:** Number of contract you want to buy or sell

**Premium:** The price of an option—the sum of money that the option buyer pays and the option seller receives for the rights granted by the option.

**Put:** An option contract granting the purchaser the right to sell the underlying instruments at the agreed strike price. A put obliges the seller to purchase the underlying instrument at the agreed strike price, if the option is assigned to him.

**Short position:** An investor's position where the number of contracts sold exceeds the number of contracts bought. The person is a net seller.

**Spot Price:** Refers to the underlying current market price.

**Strike price or exercise price:** The price at which the option holder may purchase (in case of call) or sell (in case of put) the underlying instrument.

**Time value:** It is determined by the remaining lifespan of the option, the volatility and the cost of refinancing the underlying asset (interest rates).

Time value = option price - intrinsic value

**Underlying asset, underlying instrument:** The instrument (shares, bonds, stock index...) that can be purchased (in case of call) or sold (in case of a put) by a buyer who exercises his option.

**Volatility:** It is a measure for the fluctuation range of the underlying price. The greater the volatility, the higher the option price.

**FARMER TO MARKET LINKAGES: REVAMPING UNDER THE EMERGING VALUE-CHAIN SYSTEM**

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**LUCKNOW CAMPUS**  
**LUCKNOW**

**ABSTRACT**

*The fate of human settlement and development has taken place either through agriculture or it is largely affected by agriculture. The farmers are the only producers providing materials for other sectors to thrive on the demand and supply of basic raw material clearly evident from backward and forward linkages. In the recent economic system too each and every activity pertaining to Agriculture and Allied Activities has close relation with market environment. Recent surging Food prices could be the best example of serious repercussions of broken link of farmers and the channel members such as wholesaler, retailer and other middle men in which wholesale price index for food articles has risen 17.5% since March 2009 and pulses by a steep 41.5%. Had the linkage among farmers and other marketing networks been incidentally appropriate, price of food products should have been accommodating with the contemporary market forces. The paper brings forth the issue of farmer to market linkage with the comprehensive look at the problem of participation of village community in the peri-urban industries and tapping of unutilized potential of rural markets and resources.*

**KEYWORDS**

Empowerment, Integration, Linkages, Peri-Urban, Participation.

**INTRODUCTION**

The fate of human settlement and development has taken place either through agriculture or it is largely affected by agriculture. The farmers are the only producers providing materials for other sectors to thrive on the demand and supply of basic raw material clearly evident from backward and forward linkages. In the recent economic system too each and every activity pertaining to Agriculture and Allied Activities has close relation with market environment.

The Modern Politico-Economic System is largely divided into three tier economic administration viz. cities, peri-urban areas and rural economy in which rural economy solely is the single function of farmer-market linkage while other parts are multiple function of rural economy and other contemporary parts. In this context it is quite significant whether farmer is properly treated and associated with market and market oriented dynamics. The last decade has witnessed the transformation in the market linkages of rural economy. Value chain has emerged a significant link in the intricate relationship of farmer to the market.

The concept of value chain i.e. value addition at every stage of the product development and transition involves various stakeholders at the respective nodal points. Post harvest losses for the reference of inadequately disbursed value chain system are quite significant in developing countries such as India, Brazil, and South Africa etc. Even the assessment of post harvest losses is not fully defined, which is the function of ground conditions of the area of cultivation, distribution and marketing. The association of stakeholders across various links of value chain is considerably significant for prosperity of whole economic system. The surge in rural and urban demand can be utilized for sustainable development only if they are tracked through efficient farmer-market circle.

Recent surging Food prices could be the best example of serious repercussions of broken link of farmers and the channel members such as wholesaler, retailer and other middle men in which wholesale price index for food articles has risen 17.5% since March 2009 and pulses by a steep 41.5%. Had the linkage among farmers and other marketing networks been incidentally appropriate, price of food products should have been accommodating with the contemporary market forces.

The paper brings forth the issue of farmer to market linkage with the comprehensive look at the problem of participation of village community in the peri-urban industries and tapping of unutilized potential of rural markets and resources.

**1. FARMER TO MARKET LINKAGES (EXISTING VIEW)**

In the existing linkages between farmer and market, status of farmer is not clearly stated. Farmer is always at delivery end and has no bargaining power if perishable nature of the product and financial condition of the farmers is to be considered. On both the inside out link of farmers to the market i.e. first through processor side and other via rural business hub, farmer is given very little participation in the activity on account of his poor bargaining power. This perhaps is the big reason of failure of adequate trickle down of advantages of development and governmental policies. There are no effective local linkages of farmers and other market middleman except mandies. Moreover, regulatory power ensures just the subsistence to the farmers not the business. (Fig: 1 Gulati,09)

Farmer to Market Linkages: see figure Proposed View

The existing linkages provide opportunities for farmer's prosperity through various linkages such as Rural Business Hubs, Processors, Wholesalers and Retailers (Gulati, 09). However, it is revealed in the last few years that still the benefits of these activities are minimal comparing to the huge population engaged in agriculture. This model can be looked at with due weightage of each stakeholder. Farmer must be at maximum proportion of benefits and subsequent proportion of benefits will be distributed accordingly. Considering multiple diverging transactions at farmer's end there is need of properly developed and scientifically tested mechanism of distribution. (Proposed View)

The concept of linkages needs to be taken with vast & well elaborated manner. The three tier economic administration viz. cities, peri-urban areas and rural economy may be considered for adequate linkages between farmers and markets.

**1.1 Three tier System of Linkages****1.1.1 LINKAGES AT RURAL ECONOMY LEVEL**

At rural economy level Farmer needs to have largest profit share, which may be reach him through primary processor, retailer and institutional procurement. However, sharing of gains is not unidirectional at this level due to overlapping of the various value chain representatives in the local market. This is therefore advisable to segregate various market formats to do away the confusions and overlapping. The best example is of non-functionality of Apna Bazaar and several other market formats. (Fig: 2)

**1.1.2 LINKAGES AT PERI-URBAN LEVEL**

At this level all the Local, Regional, National and International stakeholders operate. Hence this level has emerged the most sought venue for agro-industrial and agri-economic activities. The marginal farmer seldom operates at this level. However, big and middle land holding farmers (may be capitalist farmer) participate in trade activities. This is therefore required to streamline this system by defining the involvement of each stakeholder and operator at this level. (Fig: 3)

**1.1.3 LINKAGES AT REGIONAL/NATIONAL/INTERNATIONAL LEVEL**

This level represents all the operators participating in any capacity. This is the stage where maximum returns are collected. On the complementary to the system of taxation, there is need to have profit sharing weightage for each participant at each point of value addition. In the later part of this paper income distribution system will also be suggested. The term farmer is taken by farmer at peri-urban level. (Fig: 4 Proposed View)

## 2. PARTICIPATION, PARTNERSHIP AND EMPOWERED LINKAGES:

In developing countries two-third population is finding its livelihood through rural and agricultural means. However, the socio-economic status of villagers in general and farmers in particular is considerably poor as evident from index of physical quality of life. Countries in South Africa, South East Asia and South America are characterized by poverty, hunger with poor living conditions. India and other similar countries, which have opened gates for development, are passing through transition phase in the socio-economic status of individuals. The significant reason of slow pace of development is being fixed on the dichotomy of the working and dependent population. Farmers and other working class in the villages are less informed with very insignificant participation in the economic growth activities. Market-oriented systems have definitely provided opportunities to these countries to prosper still these countries are lagging behind due to the poor pace of development in rural areas.

1. For farmers engaged in market-oriented systems such as smallholder dairy or smallholder horticulture, a market-led approach is not a serious challenge because they can effectively articulate and link their demand for technology and research outputs to increases in income. However, for the Resource-poor farmers engaged in subsistent farming, who dominate agriculture sector, a market-oriented agriculture would call for 'business unusual'. While such an orientation particularly in an increasingly global economy opens new opportunities for farmers, it invariably creates enormous challenges for them. For them to exploit the emerging opportunities, smallholder farmers will have to increase their competitiveness even in the areas they have a comparative advantage (EGDI workshop synthesis, 2006, Richard Jones, et al., 2002). It also implies greater risks for them, given their limited knowledge & resources in contrast to the knowledge intensive and high transaction costs associated with market participation. The challenge for practitioners and policy makers therefore, is how to better empower smallholder farmers to exploit emerging opportunities and to deal with the challenges of the market place. Consensus is also emerging that for the revolution to occur, deliberate paradigm shift in agricultural research, technology & information delivery processes will be required, and that agriculture growth MUST be market-led. A paradigm shift is also emerging in agricultural research in response to the above and to increasing pressure to match research outputs with client needs and with market & processing opportunities. Such a shift dictates research programmes to forge closer links with farmers' advisory service providers and private sector in ways that will increase both research efficiency and effectiveness and bring about the desired agricultural transformation (ASARECA Strategic Plan 2006). Already, some positive changes have occurred over the past decade in policy as well as organization of agricultural research and advisory service provision. These include: the decentralization of advisory services development and delivery with more inclusive and participatory involvement of farmers in the processes as well as linkages with private sector; initiatives experimenting on innovative methods and partnerships involving research, extension, NGO and private sector for moving promising technologies to farmers and for enabling them to engage in markets profitably. The paradigm of involving farmers in research is based on strong evidence that enhancing farmers technical skills and research capabilities, and involving them as decision-makers in the technology development process results in innovations that are more responsive to their priorities, needs and constraints. Linking the technology development process to market opportunities has the potential to promote links between investment in natural resources, markets, and adoption of technologies. Market orientated agriculture for reducing poverty and environmental degradation needs to centre on three related paradigms; strengthening biological processes in agriculture (to optimise nutrient cycling, minimise external inputs and maximise the efficiency of their use); building farmer's capacities (to learn and innovate focused on improving livelihoods and the management of natural resources); and developing forward and backward linkages (between natural resources, production and markets). Starting with identification of market opportunities, natural resource management (NRM) issues are often raised during the process, for example, investment in soil fertility, leading to an iterative cycle of participatory action research with communities. In a multi-stakeholder coalition, CIAT and its partners are working in Malawi, Mozambique, Tanzania and Uganda to explore and understand how market orientation leads to improved NRM at the farm level.

### 2. MARKET INTEGRATION

### 3. ISSUES OF TRANSFERRING OF GAINS UNIFORMLY AS PER WEIGHTAGE TO ALL STAKEHOLDERS

### 4. STRONG BACKWARD & FORWARD LINKAGES.

Trade dynamics reaches full circle as diversification needs support from other sectors of the economy reciprocating the same for them. Diversified agricultural practices give strength to all segments of the society and result into increase in savings, investment and consumption. This also creates dynamic equilibrium through free market type demand & supply forces to every other sector. Diversification need not be taken only for cultivation. It is more concerned with Allied Agriculture which provides commercially suitable business opportunities to lay the foundation of the development of service sector as being practiced in China & Malaysia. IT Sector can grow on the cradle of development of Agriculture, hardly need outsourcing to survive. Following business and agribusiness opportunities can be cited for instance:

- 4.1 Agro Forestry
- 4.2 Agro Processing & Food Processing
- 4.3 Allied activities such as pisciculture, apiculture etc.
- 4.4 Commercial farming
- 4.5 Trading
- 4.6 Carrying & Forwarding agents
- 4.7 Agricultural marketing
- 4.8 Information Technology Enabled Services (ITES) for agriculture & allied activities

### NOTES

"One of the earliest lessons I had learnt was that Amul existed because, barely a few hundred kilometers away, Bombay existed... Indeed there would have been no Anand if there were no Bombay" (Kurien, 2005; p.56)

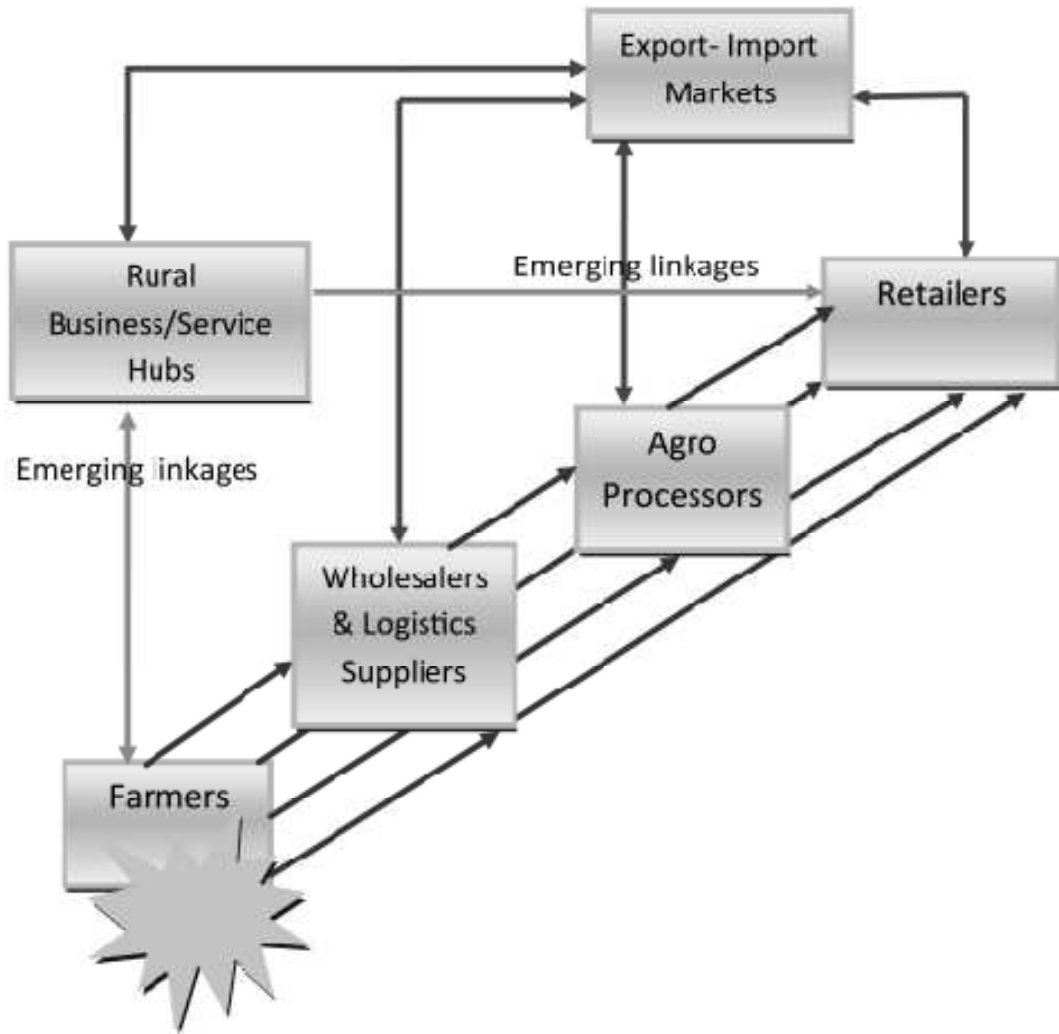
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APPENDIX

FIG. 1: (GULATI, 09)



PROPOSED VIEW

FIG. 2: LINKAGES AT RURAL ECONOMY LEVEL

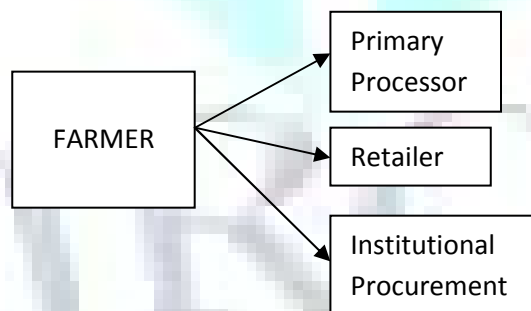


FIG. 3: LINKAGES AT PERI-URBAN LEVEL

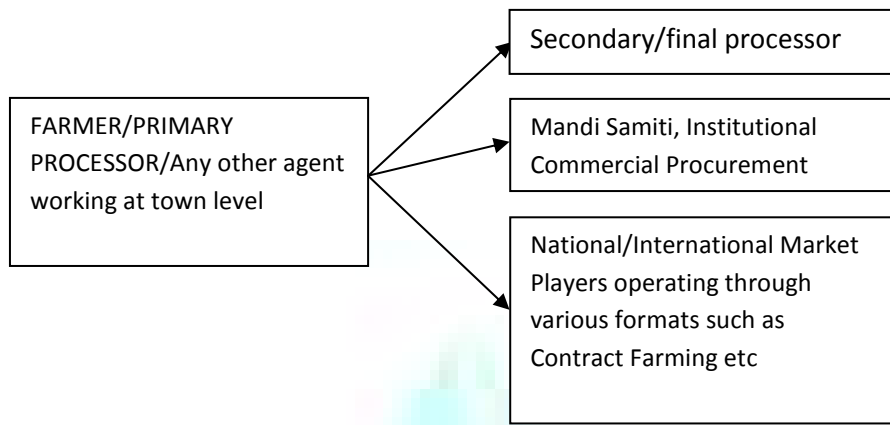
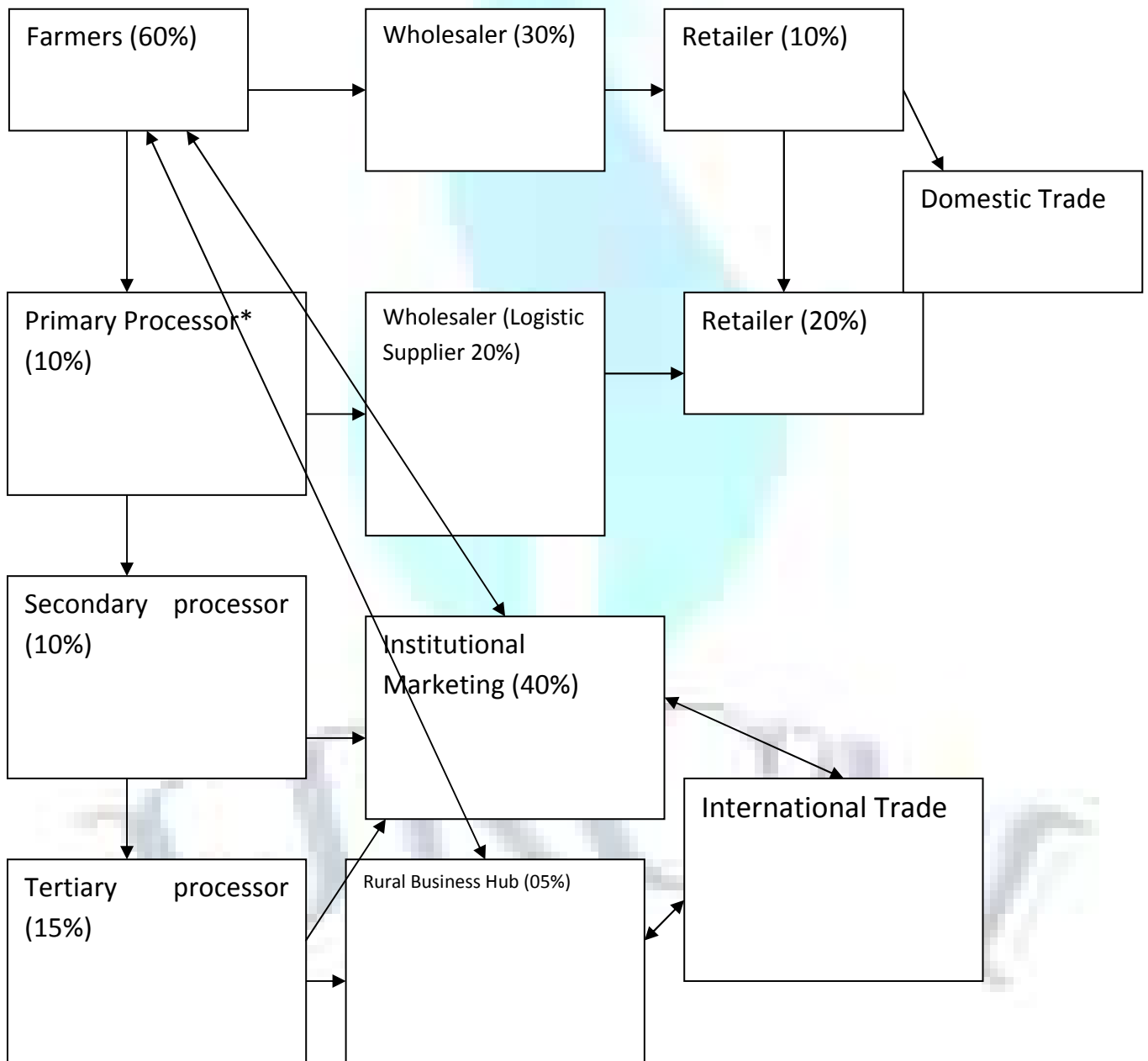


FIG. 4: LINKAGES AT REGIONAL/NATIONAL/INTERNATIONAL LEVEL



**RELATIONSHIP BETWEEN COMMERCIAL BANKS STOCK RETURNS AND MONETARY VARIABLES IN INDIA**

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**ABSTRACT**

The purpose of this study is to examine the impact of frequent changes in important monetary variables on banking stocks prices. The concern is whether or not current economic indicators, as reflected in interest rates, exchange rates and inflation, can explain banking stock returns. This study considered NSE bank nifty index as banks' stock representatives, because this bank index consists of all major banks listed in the Indian capital market. The explanatory variables in this study considered the three important monetary variables namely, foreign exchange rates, long-term interest rates and inflation rates. The econometric tools like unit root test, ordinary least squares, Johansen-Juselius (1990) Multivariate Co integration test and Vector Error Correction Model (VECM), have been applied in this study. Johansen Cointegration test proves that there is a long run relationship between bank nifty and the above-mentioned three monetary variables. Based on the results of Ordinary least squares on vector error correction equation this study found that monetary variables have significant impact on bank stock returns, but a major portion of the bank nifty movement is explained by its own innovations. Also, this study finds that positive changes in foreign exchange rates and long term interest rates are affecting the bank nifty movement negatively. But, the wholesale price index or inflation rates do not affect the bank nifty or banks' stock price movement significantly. Among the three monetary variables used in this study, foreign exchange rates have the highest influence on bank stock prices.

**KEYWORDS**

NSE Bank Nifty, Exchange rates and Interest rates.

**INTRODUCTION**

Bank stocks are among the more active stocks in our Indian capital market. After the liberalization and de regulation of interest rates the Indian banking sector is now, a more attractive venue for investors. There are many banks listed on the stock market. Fluctuations among banking stocks are very high even though they earn good profit and growth. Returns from banking stocks are not stable because of high fluctuations in stock prices and in the entire stock market. The variability in the return or changes in bank stock prices are not only because of bank's profitability, but also due to some external forces. The monetary variables like foreign exchange rates, interest rates and inflation are directly associated with banks. These monetary variables keep changing because of many national and international events or factors. Bank nifty index is one of the major sectoral stock indices in the Indian stock market. It represents stock movement of all the commercial banks in India. Based on the movement of NSE bank nifty index, we can easily judge how Indian bank stocks are performing in terms of returns from bank stocks. It represents 12 of the major banks in the Indian capital market. These 12 banks are market leaders in the banking industry in India. So, movement in this index will help the investors to take investment decisions on bank stocks.

**REVIEW OF LITERATURE**

There have been many studies conducted related to changes in economic variables and its impact on stock prices. But studies related to relationship between bank stock prices and monetary variables are very less. **Ballester, et al.** (2009) explored the exposure of the banking sector to interest rates risk. By applying a univariate GARCH model they reported that changes in interest rate and its volatility have negative and significant impact on the banking stocks return in the Spanish stock market. **Chamberlain, et al.** (1996) examined the exchange rate sensitivity among US banks and Japanese banks by using daily and monthly data. Results show one third of thirty companies observed are sensitive to exchange rate changes. But relatively only a few banking companies are affected by exchange rate changes in Japan. This difference because of number of factors like differences in the structure of ownership, in securities and derivatives laws, in supervision, in the extent of foreign ownership, or in hedging policies. **Santoni** (1986) studied the effect of inflation on commercial banks. The regression analysis of this study shows that unanticipated and anticipated changes in inflation inversely related to share prices of banks. **Benink and Wolff** (2000) empirically studied the sensitivity of bank stock returns to interest rate changes in the US stock market. They found that there was a significant negative relationship between bank stock returns and interest rate changes in the early 1980s. They concluded that interest rate sensitivity had reduced in the late 1980's and early 1990's because of availability of interest rate derivatives contracts that can be used for hedging purposes. **Boyd et al., (2001)** studied the impact of changes in inflation on financial sector performance. Study results show that there is a significant and economically important negative relationship between inflation and banking sector development. The marginal impact of inflation shows stock market development diminishes rapidly. **Murtagh and Bessler** (2003) studied the sensitivity of financial stocks and non financial stocks indices to interest rates and exchange rates in Canada, Germany, Japan, UK and US. by applying Ordinary least squares method, he found that changes in interest rate and exchange rate have more impact on financial indices especially bank stocks. **Vardar, et al., (2008)** analyzed the impact of interest rate and exchange rate on the composite and sector price indices, in the Istanbul Stock Exchange (ISE). In their studies they employed Generalized Autoregressive Conditional Heteroscedasticity (GARCH) models to investigate the volatility and return behavior of indices with respect to changes in exchange rate and interest rate. Evidence from this study shows that informational arrivals of interest and exchange rate largely affect indices in ISE. Changes in interest rates have an increasing impact on volatility of the technology sector, financial and composite indices volatility decline by the changes in this variable growth.

It might be argued that banks are special financial institutions whose operations are distinctive in financial markets and have a strong impact on an economy. The simplistic notion that the economic health of a developing country like India is vitally dependent on the financial health of its banking system is the principal motivation for this study. A review of the literature reveals that there has been no well-known study of the strength and direction of relationships between Indian banking stock returns and key monetary variables like inflation, exchange rates and interest rates.

**IMPORTANCE OF THE STUDY**

It is generally found that most of the banking company stocks are exposed to volatility in spite of having a good financial performance. This is due to changes in various external factors such as inflation, interest rate and foreign exchange rate. To find out the impact of the changes in these variables on the stock prices of banking companies, this study has been taken up. This will provide important information to investors because all the variables that are considered in this study are directly related to banks and also in the recent days news about all these variables are very often appearing in the media. If the investor knows about the behavior of these variables through this study he can take good investment decision based on the information of those variables.

**OBJECTIVES OF THE STUDY**

To find out the impact on bank nifty due to the changes in monetary variables (Long term interest rates, foreign exchange rates (USD/INR) and inflation(WPI)).  
 To identify which monetary variable have more influence on the bank index.

To find whether there is any long term relationship between monetary variables and NSE Bank nifty index or not .

**METHODOLOGY**

The main method used to analyze the time series behavior of the data involves co integration and the estimation of a Vector Error Correction Model (VECM). This is one of the most -established methodologies when testing the long run and short run relationships among variables. The first step of this process involves a test for stationarity; the order of integration of the variables is estimated. For this purpose, this study employs Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests for unit roots. Once the order of integration of each variable has been determined, the study has performed the co integration analysis to determine whether the time series of these variables display a stationary process in a linear combination. For this purpose, the Johansen (1991) method of multivariate co integration is employed. A finding of co integration implies the existence of a long term relationship between the NSE Bank index and the monetary variables. If there is at least one co integrating relationship among the variables, then the causal relationship among these variables can be determined by estimating the VECM.

The present study uses monthly data for the period January 2000 to November 2011 for India on the following monetary variables and Stock market index namely, NSE bank Nifty Index (bank nifty) , Long term interest rates (INT), wholesale price index(WPI), and exchange rate(RS/\$, Forex). The data for the monetary variables were extracted from the Handbook of Statistics on Indian Economy available on the RBI web site and the monthly closing price of NSE bank nifty is collected from the NSE's website. In the empirical analysis the variables are used in log form.

**RESULT AND DISCUSSION**

**TABLE 1: ADF AND PHILIP PERRON UNIT ROOT TEST RESULTS FOR LEVEL SERIES DATA**

Variables		ADF		PP	
		t-stat	P	t-stat	P
Bank nifty		-2.372783	0.3921	-2.440936	0.3571
INT		-1.805624	0.6970	-1.851001	0.6745
Forex		-1.791791	0.7037	-1.816104	0.6919
WPI		-2.364706	0.3964	-1.946311	0.6249
Test critical values:	1% level	-4.023975		-4.023975	
	5% level	-3.441777		-3.441777	
	10% level	-3.145474		-3.145474	

**TABLE 2: ADF AND PHILIP PERRON (PP) UNIT ROOT TEST RESULTS FOR FIRST DIFFERENCED DATA**

Variables		ADF		PP	
Bank nifty		-11.53987	0.0000	-11.54079	0.0000
INT		-11.87667	0.0000	-11.87722	0.0000
Forex		-9.199230	0.0000	-9.210960	0.0000
WPI		-7.453214	0.0000	-7.478486	0.0000
Test critical values:	1% level	-4.024452		-4.024452	
	5% level	-3.442006		-3.442006	
	10% level	-3.145608		-3.145608	

**TABLE 3: JOHENSSENS CO INTEGRATION TEST UNRESTRICTED CO INTEGRATION RANK TEST (TRACE)**

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.258826	59.11185	47.85613	0.0031
At most 1	0.061518	17.77816	29.79707	0.5825
At most 2	0.041946	9.016279	15.49471	0.3639
At most 3	0.022233	3.102827	3.841466	0.0782
Unrestricted Cointegration Rank Test (Maximum Eigen value)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigen value	Statistic	Critical Value	Prob.**
None *	0.258826	41.33369	27.58434	0.0005
At most 1	0.061518	8.761882	21.13162	0.8512
At most 2	0.041946	5.913452	14.2646	0.6243
At most 3	0.022233	3.102827	3.841466	0.0782
Max-eigen value test indicates 1 co integrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				



TABLE 4 : OLS ON VECTOR ERROR CORRECTION EQUATION

D(BANK NIFTY) = C(1)*( BANK NIFTY(-1) - 0.138787684507*INT(-1) +				
4.25643906379*FOREX(-1) - 4.27303212124*WPI(-1) -				
1.43785449454 ) + C(2)*D(BANK NIFTY(-1)) + C(3)*D(BANK NIFTY(-2))				
+ C(4)*D(INT(-1)) + C(5)*D(INT(-2)) + C(6)*D(FOREX(-1)) + C(7)				
*D(FOREX(-2)) + C(8)*D(WPI(-1)) + C(9)*D(WPI(-2)) + C(10)**				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.064683	0.043664	-1.681389	0.0219
C(2)	-0.051038	0.09064	-0.563086	0.5743
C(3)	0.019641	0.077136	0.254623	0.7994
C(4)	-0.413218	0.167828	-2.462157	0.0151
C(5)	0.360058	0.171685	2.097205	0.0379
C(6)	-2.719384	0.411235	-6.612729	0
C(7)	-0.832835	0.480516	-1.733211	0.0854
C(8)	-1.781312	1.265958	-1.407087	0.1618
C(9)	0.900274	1.280982	0.7028	0.4834
C(10)	0.023204	0.010573	2.194577	0.03
R-squared	0.367804	Mean dependent var		0.015384
Adjusted R-squared	0.324036	S.D. dependent var		0.105641
S.E. of regression	0.086855	Akaike info criterion		-1.980403
Sum squared resid	0.980694	Schwarz criterion		-1.770286
Log likelihood	148.6282	Hannan-Quinn criter.		-1.895017
F-statistic	8.403587	Durbin-Watson stat		2.044023
Prob (F-statistic)	0			

\*\*C(1) is error correction term C(2) and C(3) are bank nifty lagged in 1 and 2 respectively. C (4, 5) are Interest rates lagged in 1 and 2. C (6,7) are foreign exchange rates lagged in 1 and 2. And C(8, 9) are WPI lagged in 1 and 2. C (10) is intercept.

**FINDINGS**

The causal nexus among monetary variables has been investigated by employing multivariate co integration analysis. Co integration analysis tells us about the long-term relationship between Bank nifty movement and the set of monetary variables. Co integration tests involve two steps. In the first step, each time series is scrutinized to determine its order of integration. To meet this requirement, unit root tests designed by Dickey and Fuller (1979) and Phillips and Perron (1988) have been employed. In the second step, the time series is analyzed for co integration by using the likelihood ratio test, which includes (i) trace statistics and (ii) maximum Eigen value statistics. A financial time series is said to be integrated to order one i.e, I (1), if it becomes stationary after differencing once. If series are integrated of order one, there may exist a linear combination that is stationary without differencing, then the data streams are co integrated. First step to conduct cointegration test is, test whether the data set have unit root or not. Pre condition is that all the variables should have unit root. For this purpose, the ADF test for unit roots and Phillips-Perron unit root test has been used at level and first difference. Table-1 and 2 exhibits the results of the Dickey-Fuller (ADF test) and Phillips-Perron unit root test results. Table 1 shows ADF and Philip-Perron unit root test results for level series. And Table 2 shows ADF and Philip-Perron unit root test results for first differenced data. This clearly shows that the time series are not stationary at level but at the first differences of the logarithmic transformations of the series are stationary. Thus, the series are integrated to the order of one I (1).From the above unit root analysis we can see that it is meeting the prerequisites, to perform cointegration analysis. The maximum likelihood-based Johansen (1988, 1991) test and Johansen-Juselius (1990) procedure is used to determine the presence of co integrating equations in a set of non stationary time series. A trace statistic has been used to test the null hypothesis of cointegrating vectors against the alternative of more cointegrating vectors. Table-.3 exhibits the results of the multivariate co integration test for the entire sample period. It shows there is a cointegration between Bank nifty indices and monetary variables for the period January 2000 to November 2011 in the Indian capital market. The trace test and Max-Eigen value test indicates the presence of one co integrating equation at the 0.05 level. Therefore, the result provides evidence of a long-term relationship between Banks nifty Index and monetary variables. To find the short term correlation between monetary variables and bank nifty index this study employs vector error correction method. This method helping to identify the influence of monetary variables on bank nifty.

Table 4. Shows the regression of bank nifty and monetary variables based on the vector error correction equation. This equation is based on 2 lags. The regression of bank nifty on monetary variables based on the vector error correction method gives meaningful or non spurious regression .It is very clear that monetary variables jointly have influencing power on bank nifty R squared is 0.367804 with an F value at 8.403587 (highly significant at p = 0.0000). Coefficient of C(6,7) and coefficient of C(4) are negative , it means that changes in foreign exchange rates and long term interest rates are negatively correlated to bank nifty ,with 1% and 5 % significant level respectively. But the impact of inflation is insignificant. In addition, the DW statistic at 2.04 is higher than the adjusted R Square value. The error term C1 is negative it is validating that the long run relationship between monetary variables and bank nifty. To check the validity of this model the following tests have been adopted:-**Coefficient test –Wald Test.**

This test will help us to analyses the short run impact of changes in these monetary variables on bank nifty. The Wald test results of each variable are shown in the following tables.

TABLE 5: COEFFICIENT TEST FOR WPI: - WALD TEST: WPI

Test Statistic	Value	Df	Probability
F-statistic	1.027452	(2, 130)	0.3608
Chi-square	2.054903	2	0.3579

TABLE 6: COEFFICIENT TEST FOR FOREX; WALD TEST: FOREX

Test Statistic	Value	Df	Probability
F-statistic	25.8665	(2, 130)	0
Chi-square	51.733	2	0

TABLE .7 COEFFICIENT TEST FOR INT:- WALD TEST: INT

Test Statistic	Value	Df	Probability
F-statistic	6.046187	(2, 130)	0.0031
Chi-square	12.09237	2	0.0024

The coefficient analysis by Wald test indicates that foreign exchange rates and long term interest rates have short run impact on bank nifty. The Chi square value is much Greater than F statics and P value is less than the 5%.The result support to reject null hypothesis (According to Wald test guideline for accepting or rejecting null hypothesis is If P value is less than 5% reject null and if P value is greater than 5% accept null hypothesis). Here the null hypothesis are as follows, Forex does not cause the bank nifty, INT does not cause bank nifty and inflation does not cause bank nifty. According to Wald test the null hypothesis cannot be rejected in case of WPI. It means that in the short run inflation doesn't have any impact on bank Nifty or whole sale price index doesn't have any significant impact on Bank stocks.

**Residuals Test Results**

The following residual tests have also been applied in this study to test the validity of the study:-

- Heteroskedasticity test
- Heteroskedasticity Test: ARCH
- Histogram( to test normality of the variables)
- Breusch-Godfrey Serial Correlation LM Test:

TABLE 8: HETEROSKEDASTICITY TEST: BREUSCH-PAGAN-GODFREY

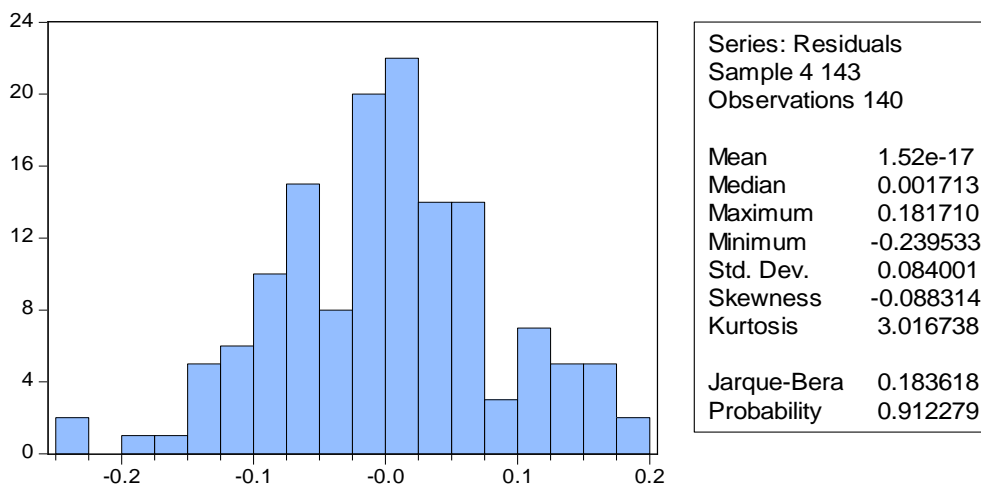
F-statistic	2.526293	Prob. F(12,127)	0.0051
Obs*R-squared	26.97872	Prob. Chi-Square(12)	0.0578
Scaled explained SS	23.45695	Prob. Chi-Square(12)	0.0241

TABLE 9: HETEROSKEDASTICITY TEST: ARCH

F-statistic	3.543628	Prob. F(1,137)	0.0419
Obs*R-squared	3.504708	Prob. Chi-Square(1)	0.0412

The probability value is higher than the 5% in Breusch-Pagan-Godfrey Heteroskedasticity (table no.8) test. So we cannot reject null hypothesis. This proves that residuals of the variables are homoschedastic. The probability value in Heteroskedasticity ARCH is 0.0412 which is less than 5% .This results prove that there is no auto regressive conditional Heteroskedasticity (ARCH) effect in this model.

FIG.1 HISTOGRAM



From the histogram (Fig. 1) Jarque-Bera statistic is 0.1836 and probability value is 0.91 which higher than 5%. This result not supporting to reject null hypothesis, i.e.; it is proved that residual in the test are normally distributed.

TABLE 10: BREUSCH-GODFREY SERIAL CORRELATION LM TEST

F-statistic	1.022504	Prob. F(2,128)	0.3626
Obs*R-squared	2.201554	Prob. Chi-Square(2)	0.3326

Based on the table.10 Breusch-Godfrey Serial Correlation LM Test it is proved that in the models residuals are not serially correlated, because the probability value of Chi-square is 0.33 which is higher than the 5%.

**CONCLUSION**

The underlying objective of this study was to investigate the relationship between NSE bank nifty and three important monetary variables namely long term interest rates, foreign exchange rates and inflation. The main motivation of this study is that banks stocks have high importance in the Indian capital market as well as it has crucial importance to financial sectors and to economies. The economic health of a country is largely dependent on the financial health of banking companies.

Applying Johansens's methodology of multivariate cointegration analysis on monthly time series data, this study examined the dynamic relationship between monetary variables and NSE bank index in India. Monetary variables such as foreign exchange rates, wholesale price index, and long term interest rates were used to represent external forces and the NSE's bank index was used to represent the commercial banks stocks returns. The main findings revealed that there is a long run equilibrium relationship between the monetary variables and bank stock returns. According to the VECM model estimated in the study, the rate of inflation, the long term interest rates and the foreign exchange rates were found to exert a significant lagged influence on the stock market index. A major proportion of the variability in the bank index was explained by its own innovations while only a minority was explained by monetary variables. This may be because the monetary variables used in this study represent only a subset of variables available in studies of developed markets. Future studies may benefit by integrating other variables such as industrial production, a broader measure of money supply and a short-term interest rate into their analyses.

The short run causal impact of the monetary variables analyzed by using Wald test applied on OLS of vector error correction model shows foreign exchange rates and long term interest rates have causal impact on bank index but whole sale price index (inflation) doesn't show any significant impact on bank nifty in the short run. Among the three variables foreign exchange rates is more influencing the bank stock returns, the reason may be because the Indian commercial banks are highly exposed with giving loans to multinational companies and also whenever the Indian rupee starts depreciating, foreign institutional investors may withdraw their holding from the Indian capital market.

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## FACTORS DETERMINING EMPOWERMENT OF GRAM PRADHANS IN BARABANKI DISTRICT OF UTTAR PRADESH

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### ABSTRACT

*In India, women constitute nearly half of the population and also contribute substantially in all walks of life. Majority of rural women suffer from economic as well as social problem. The analysis of data collected from the Gram Pradhans in selected blocks of Barabanki district indicates that in real term the empowerment of women is not very encouraging. Majority of elected women representative still lack awareness about various rural development programmes and their active participation in the decision making process and implementation of these programmes are very poor. Implementation of Panchayati Raj Act has helped the women in attaining economic and political empowerment to a large extent. Most of the women Gram Pradhans contested and won the election mainly with the support of husband and they were too much dependent on their husband for taking decisions. A very few of them earlier experience of any political activities are association with any political parties. The grass root realities indicate that still more have to be done and empowering the women through decentralization governance require active government support. However, it was found that a few of the experienced and educated women representatives played effective role in the development activities of villages.*

### KEYWORDS

Women empowerment, Decentralisation, Elected representatives.

### INTRODUCTION

Women play an important role in the rural life and good governance through women's empowerment at the local level is expected to help in socioeconomic transformation of rural areas. But, the traditional Indian mentalities assume that the place of women is mainly concentrated to the household activities like kitchen work and upbringing of the children. They have not been given due status in the society because still the gender-sensitization has not percolated to the grass root level even after more than sixty years of independence. Still women are one of the most powerless and marginalized sections of Indian society. There is too much discrimination against rural women as they do not have secure rights to productive resources, specifically land while most of them are actively engaged in agriculture. But, it has been observed that still there is lack of adequate involvement of people at the grass root level and there is no transparency and leakages of funds provided for development. Empowerment is a political process and can be achieved through democratic decentralization and good governance (Ahmed et al. 1982; Collier Paul 1998). Women's empowerment can be measured by factors contributing to their personal, economic, familial, and political empowerment. Household and interfamilial relations are the central locus of women's disempowerment in India. Hence, women's empowerment measures should include women's participation in systemic transformation by engaging in political action (Batiwala 1994; Bisnath and Elson 1999; Kabeer 2001; Narasimhan, 1999; and Sen and Grown 1987; Amin, Becker and Bayes (1998).

The concept of women's empowerment can be split into three components each measured separately such as (1) Inter-spouse consultation index, which seeks to represent the extent to which husbands consult their wives in household affairs; (2) Individual autonomy indexes which represents women's self-reported autonomy of physical movement outside the house and in matters of spending money; and the Authority index, which reports on actual decision-making power (which is traditionally in the hands of the patriarch of the family). These indices are similar to those of used by Balk in her 1994 study. Comparable components of empowerment are included in the eight indicators by Hashemi (1996). These are mobility, economic security, ability to make small purchases, ability to make larger purchases, involvement in major decisions, relative freedom from domination by the family, political and legal awareness, and involvement in political campaigning and protests. For women in India, this suggests that empowerment in several realms: personal, familial, economic and political (Kabeer, 2001; Narayan Deepa (ed) 2002).

The effect of empowerment of women creates a powerful influence on the norms, values and finally the laws that govern these communities (Page and Czuba, 1999; George Abraham 2001). Individuals with low self-efficacy regarding their behavior limit their participation when making difficult behavior changes and are more likely to give up when faced with obstacles. Their efficacy beliefs about themselves serve as barriers to change, and in this case, their own empowerment (Hackett and Betz 1981). Furthermore, self-efficacy is not necessarily an in-born trait and can be acquired and nurtured. Bandura (1986) identifies four ways in which self-efficacy and self-efficacy expectations are acquired: *performance accomplishments*, *vicarious learning*, *verbal persuasion* and *physical/affective status*. *Performance accomplishments* are beliefs that stem from the reactions with which individual accomplishments are greeted. Bandura (1986) and Pajares (1996), indicate that a triadic relationship is necessary for change as there is a reciprocal relationship between 'personal factors', 'behavior' and 'environmental factors', which result in social change. Changes in personal factors (such as self efficacy) can affect an individuals' behavior (willingness to take risks), which can impact on environmental factors (family and society). A number of studies have shown that women may be empowered in one area of life while not in others (Malhotra and Mather 1997; Kishor 1995 and 2000b; Hashemi et al. 1996; Beegle et al. 1998).

### OBJECTIVES

In this paper, an attempt has been made to examine the perception of rural women related to economic and political empowerment due to implementation of Panchayati Raj Act in Barabanki district of one of the largest state of India i.e. Uttar Pradesh.

### RESEARCH METHOD

Analysis of data is based on the sample of 100 Gram Pradhans (comprising of 50 men and 50 women Gram Pradhans) out of 318 Gram Pradhans in five selected blocks of Barabanki district of Uttar Pradesh. Details of selected men and women Gram Pradhans are given in Table 1. It is evident from Table 1 that out of total 318 Gram Pradhans in five Blocks, men Pradhan accounts for about 53 percent while women Gram Pradhan accounts for 47 percent. This shows that women Gram Pradhans are more or the less are equal number. Hence, equal number of Men and Women Gram Pradhans were selected for the study (Table 1).



TABLE 1: NUMBER OF SELECTED GRAM PRADHANS IN SELECTED BLOCKS OF BARABANKI DISTRICT OF U.P.

Particular	Selected blocks					
	Sidhaur	Masuali	Banki	Ramnagar	Haidergarh	Total
<b>Number of Gram Pradhans</b>						
Women	34	25	44	41	24	168
Men	41	23	18	28	40	150
Total	75	48	62	69	64	318
<b>Number of selected Gram Pradhans</b>						
Women	12	7	11	12	8	50
Men	15	7	7	9	12	50
Total	27	14	18	21	20	100

### LEVEL OF FIRST CONTEST OF PRI ELECTION

More than 90 percent of women first contested the election of Gram Pradhan at village level while only 10 percent of them contested election at relatively higher level (Block level/tehsil level). In contrast, 75 percent men contested election of Gram Pradhan for the first time at the village level while 25 percent contested at the higher level i.e. Block or tehsil level. Response to question that what compelled them to seek election was quite different from different elected representatives. Most of the answers concentrate on the role of husband, women quota and villagers. Most of the elected members clarified that their husbands persuaded them to contest election and villagers backed it later on. However, there were different scenarios, in one case, the defeated Sarapanch candidate contested election after getting assurance from a political party that she with her husband will be paid daily wages, the day they will spend in the electoral activity. While another woman Sarpanch of the Panchayat narrated a different story. She indicated that 'Educated women should not sit idle at home' and this was the logic for her to contest election. For some, party has also some kind of influence behind their entry into politics (Tale 2).

TABLE 2: LEVEL AT WHICH THE FIRST CONTESTED PRI ELECTION

Particular	Male Gram Pradhan	Female Gram Pradhan	Both
Gram panchayat (village level)	75	90	83
Panchayat Samiti (block/ taluka level)	25	10	17
Zilla Parishad (district level)	-	-	-
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

Figures in parentheses are percentage to total

### AGE OF START OF POLITICAL CAREER

It was found that most of the women Gram Pradhan were never associated in campaigning/ electioneering/ politics/ issues of public concern. While a few of the men Gram Pradhan had earlier experience or partly associated with one or other political party for campaigning. However, the experience of actively participating in politics was not much. It was observed that more than 90 percent of women never actively participated in any electioneering or campaigning for any political party but a few of them (about 5 percent did participate at the age of 21 to 40 years). In contrast, about 20 percent of men Gram Pradhans and members of Panchayats started campaigning and participating in political activities in a limited way at the early age of less than 20 years. While a few (30%) of the men Gram Pradhans started participation in political activities at the age of 21 and rest 20 percent started at the age of 30 years. None of the men Gram Pradhans were active in political activities after the age of 60 years. In fact, very few men Gram Pradhans were of such age as they were more interested in assuming higher responsibilities above the village and district level (Table 3).

TABLE 3: AGE AT WHICH GRAM PRADHAN STARTED POLITICAL CAREER

Age group (Years)	Male Gram Pradhan	Female Gram Pradhan	Both
Not at all	30	90	60
Less than 20	20	-	10
21-30	30	5	18
31-40	10	5	17
41-50	10	-	5
50 and above	-	-	-
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

### AGE OF CONTESTING OF PRI ELECTION

It was found that very few (less than 10 percent) men Gram Pradhans contested for Gram Pradhan at the age of less than 25 years. Most of the men and women Gram Pradhans contested election for the first time for the position of Gram Pradhan at the age of 26 to 45 years. This shows that most of Gram Pradhans were young and this is a welcome change that younger people have started taking the role of strengthening grass root democracy. A very few men contested the election of Gram Pradhan for the first time at the age of more than 50 years. In case of women it was nil as many of the women Gram Pradhans were daughter-in-laws or other family members of influential people who were playing greater role in politics at higher level (Table 4).

TABLE 4: AGE OF CONTESTING OF PRI ELECTION

Age group (Years)	Male Gram Pradhan	Female Gram Pradhan	Both
Less than 25	10	-	5
26-35	25	40	32
36-45	40	45	43
46-50	20	15	18
50-55	5	-	2
55 and above	-	-	-
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

### FIRST TIME CONSTRAINTS

It was observed from Table 5 that a large number of both men and women Gram Pradhans faced resistance from caste and religion related problems while first time contesting the election of Gram Pradhan. This shows that dominance of caste and religion played a very important constraint in election of Gram Pradhans. However, a few (8% and 5%) of the men Gram Pradhans faced resistance from husbands/wife or other family members respectively. In contrast, more women (16% and 8%) faced resistance from husband and other family members respectively.

TABLE 5: MAJOR CONSTRAINTS FACED FIRST TIME WHILE CONTESTING PRI ELECTION

Particular	Male Gram Pradhan	Female Gram Pradhan	Both
Resistance from spouse/father	8	16	12
Resistance from other family members	5	8	7
Social taboo associated with female candidates	-	12	6
Prevailing <i>Parida</i> system	-	12	6
Constraints related to religion	20	16	18
Caste related resistance	25	28	27
Low education level	10	5	7
Political rivalry within same political group	12		6
Political rivalry from other political group	8		4
Lack of finance resources	12	3	7
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

Figures in parentheses are percentage to total

Social taboos and Purdah system is also a major constraint in case of women while contesting election for the first time. Education was not a major constraint for election of Gram Pradhans. About 20 percent of the men faced political rivalry within and also from other political parties. However, since women were in general not associated with any political party they did not face such problems. About 12 percent of the men faced financial problems while contesting election for the first time while only 3 percent faced this problem as most of them were supported by their husbands or family members (Table 5).

### OVERCOME OF CONSTRAINTS

Nearly half of the men Gram Pradhans and about 38 percent of women Gram Pradhans could overcome such constraints by convincing the husband or household members while contesting the election for the first time. Besides, 32 percent of women Gram Pradhans took help from women organisations for such facility. In contrast, about 16 percent of men Gram Pradhans took the help of local NGOs and could mobilize finances from friends and relatives. In case of women Gram Pradhans also 12 to 14 percent took the help of Self Help Groups (SHGs) and community based organisations (CBOs) to overcome such constraints (Table 6).

TABLE 6: OVERCOMING THE CONSTRAINTS WHILE CONTESTING ELECTION FOR THE FIRST TIME

Particular	Male Gram Pradhan	Female Gram Pradhan	Both
Convinced household members	52	38	45
Took help of women organization	-	32	16
Took help of Non Governmental Organisation (NGOs)	16	-	8
Took help of Self Help Groups (SHGs)	6	14	10
Took help of Community Based Organisations (CBOs)	8	12	10
Mobilized financial resources through relatives/friends/community	16	4	10
Convinced community members	2	-	1
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

Figures in parentheses are percentage to total

### MOTIVATION FOR PRI ELECTION

As regards the motivation to contest Gram Pradhan election is concerned, it was observed that more than one-fourth men Gram Pradhans were motivated on their own to contest election compared to only 12 percent women. In contrast, 25 percent of women Gram Pradhans were motivated/convinced/persuaded/forced to contest election of Gram Pradhan by their husbands and family members. Moreover, large number of parents and other family members motivated for contesting election of Gram Pradhan, especially in case of men (22%) compared to only 12 percent in case of women. In case of women about 22 percent were motivated by the government official as there was reservation for women. NGOs also played a major role in convincing both the men and women Pradhans to contest election of Pradhan. Other factors were not very important but they did play role in motivating the men and women for contesting elections of Panchayati Raj institutions (Table 7).

About the dependency of women Pradhans on husband, it was observed that in almost all cases the respective husbands had to be brought in even when there was a need for a member to sign papers. Response to question that whom do they give credit for winning election, it was again husband. This clearly shows that women Gram Pradhans and elected representatives were too much dependent on husband and therefore often the term 'Pradhan pati' is used for women Gram Pradhans. It was interesting to note that during visit to a few of villages when women Gram Pradhans were asked about Pradhan of the village, they indicated that he had gone to market or district headquarter while she herself was Pradhan. After reminding them seeing the name plate of Pradhan in the village she was ready to meet and discuss about her awareness about Panchayat and their role as well as participation in Panchayati Raj activities.

TABLE 7: MOTIVATION RECEIVED FROM VARIOUS SOURCES FOR CONTESTING PRI ELECTION

Particular	Male Gram Pradhan	Female Gram Pradhan	Both
Self motivated	26	12	19
Spouse	6	25	15
Parents/in-laws	22	12	18
Children	6	5	5
Other related family member	4	-	2
Friends	6	-	3
NGO/SHG	12	16	14
Government officials	8	22	15
Political party members	10	8	9
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

Figures in parentheses are percentage to total

As relates to the previous political experience, 86% of Pradhans indicated that they had no previous political experience while 14% of the Pradhans said that they did have certain political experience (like one nominee addressed a political rally at district head quarter and two had some kind of organizational linkages). Moreover, it was also found that more than three-fourth of elected representatives felt satisfied with their respective Panchayat roles while about 60% expressed their readiness to contest next Panchayati Raj election. However, nearly 45% declined to stand for next Panchayati Raj election. The main cause of departing Panchayati Raj institution was not because of lack of their capacity but for factors beyond their immediate control. About 45 percent women gram Pradhans expressed the apathy of other male colleagues while 12 percent felt fear of public criticism (Table 7).

**TYPE OF MOTIVATION**

It was found that more than half (55%) the women gram Pradhans got motivated because of enforcement of reservation of women in the Panchayati Raj system while 16 percent of the women gram Pradhans also got motivated because there was reservation of weaker sections. Similarly, about 36 percent of men Gram Pradhans were motivated to contest election due to enforcement of reservation for weaker sections. About 16 percent of men gram Pradhans contested election due to social reasons while 18 percent were encouraged by various groups and committee members. About 10 percent of men Pradhans were influenced by the political affiliation of the family. In case of women Pradhans other factors were not very important. About 85 percent of the elected women leaders stated that they contested election due to pressure from their husband while a few of them indicated that they came in election fray on their own and claimed that they even would like to contest election even if there will be no quota system. Secondly, the villagers/husbands finalized the candidatures of many women gram Pradhans even during the absence of their wives. The ruling political party also finalized name of various defeated candidates for the post of the Sarpanch after assuring her that she would be compensated with daily wages during the campaign period. Moreover, a few of the candidates contested the election of Gram Pradhans got elected unopposed. This also indicates that a few women Gram Pradhans entered politics due to the compulsion of policy of reservation (Table 8).

**TABLE 8: TYPE OF MOTIVATION FOR CONTESTING PRI ELECTION**

Particular	Male Gram Pradhan	Female Gram Pradhan	Both
Incidence related to social cause	16	7	12
Incidence related to economic issue	8	6	7
Incidence related to law and order	12	8	10
Enforcement of women reservation	-	55	28
Enforcement of reservation for weaker section	36	16	26
Encouraged by group/committee members	18	3	10
Political affiliation of the family	10	5	7
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

Figures in parentheses are percentage to total

**MEMBERSHIP OF COMMUNITY**

As regards the members of community organisation is concerned, more than 75 percent of men Gram Pradhans were members of some community organisation while only 54 percent of the women Gram Pradhans were members of any other community organisation. About 36 percent of male Gram Pradhans were members of Youth Club while 38 percent of women Gram Pradhans were member of Mahila Mandal. About 16 to 18 percent of men and women Gram Pradhans were members of cooperatives and education committee. Nearly one-fourth (26%) of men Gram Pradhans were members of Health committee while only 18 percent of women Gram Pradhans were members of such committees. But, about 10 percent of women Gram Pradhans were members of other committees while it was only 4 percent in case of men Gram Pradhans. This shows that women Gram Pradhans actively participated in village development committees (Table 9).

**TABLE 9: MEMBERSHIP OF COMMUNITY ORGANISATIONS**

Member of community	Male Gram Pradhan	Female Gram Pradhan	Both
Yes	76	54	65
No	24	46	35
<b>Type of Membership</b>			
Youth club	36	-	18
Mahila mandal	-	38	19
Cooperative society	18	16	17
Village education committee	16	18	17
Health committee	26	18	22
Any other committee	4	10	7
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

Figures in parentheses are percentage to total

**CONTEST OF OTHER PRI ELECTION**

It was found that about 90 percent of men and women Gram Pradhans did not contest any other Panchayati Raj election such as Block level (Nyaya Panchayat level) or district level than Gram Panchayat. It is to be noted that there was often change in the reservation of seats for weaker sections of the society and for women. Hence, most of the existing Gram Pradhans did not get chance to contest for the Gram Pradhan in the same village. During their political career 61 to 72 percent of men and women Gram Pradhans contested election of Gram Panchayat for the first time respectively. While about 28 and 34 percent of the men and women Gram Pradhans did contest PRI election twice during their political career. However, there were 5 percent male Gram Pradhans who did contest election of Gram panchayat for three times. Here, it is to be noted that most of selected men and women Gram Pradhans were of younger age and had no chance of contesting election for many times. It was also found that 58 and 76 percent of male and female Gram Pradhans did not contest Gram Panchayat election last time while 42 percent male and 26 percent female Gram Pradhans did contest last election of Gram panchayat but lost (Table 10).

**TABLE 10: FREQUENCY OF CONTESTING PRI ELECTION**

Particular	Male Gram Pradhan	Female Gram Pradhan	Both
<b>Did they contest any other PRI Election ( Block , District )</b>			
Yes	12	5	9
No	88	95	91
<b>How many times did they contest GP election in their political career?</b>			
One	61	72	67
Two	34	28	33
Three	5	-	2
Four	-	-	
<b>Did they contest the last GP election</b>			
Yes, but lost the election	42	24	33
Not contested	58	76	67
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

Figures in parentheses are percentage to total

**HELP FROM ASSOCIATION**

It was found that as expected membership of a association did not help much in contesting of election of Gram Pradhans. More than 85 to 86 percent of men and women Pradhans mentioned the same thing to the question whether membership of any association helped them in election of PRI or not. Only a small number of Gram Pradhans (15 %) indicated that becoming member of any association did help them in election of Gram Pradhan. A few of the important factors that helped them was increasing the interaction with local people, government officials and banks as well as increased mobility out side the household activity. However, interaction with Associations did increase their awareness about Panchayat's activity and helped them in developing leadership qualities (Table 11).

**TABLE 11: HELP FROM ASSOCIATION IN ELECTION OF GRAM PRADHAN**

Particular	Male Gram Pradhan	Female Gram Pradhan	Both
Helped	15	14	15
Did not help	85	86	85
Total Gram Pradhan	50 (100)	50 (100)	100 (100)

Figures in parentheses are percentage to total

**REASONS FOR DEFEAT**

There were many reasons for defeat in the last election and gram Pradhans who lost the election did mention multiple responses. In this case the total of percentage might not add to 100. About 43 percent of male Gram Pradhans mentioned that since seat was not reserved they could not contest election because there was conflict with other dominant caste/ religion groups and there was less acceptability across different social groups. A few (15%) indicated that there was no proper campaigning and in previous tenure they had some allegations and were involved in some scandals. Moreover, a few of them mentioned that during their last tenure they took some unpleasant decisions and had very less interaction with people. Also, they did not take up many development works. About 8 percent indicated that they did not have any political affiliation and also there was lot of rivalry between other political parties than within the political party (Table 12).

**TABLE 12: MAJOR REASONS FOR DEFEAT IN ELECTION CONTESTED LAST TIME**

Reason for defeat	Male Gram Pradhan	Female Gram Pradhan
Inadequate financial resource	25	34
Seat was not reserved	43	26
Unacceptability across different social category	25	46
Asked to contest from a different ward	13	10
Conflict with dominant caste/religion	23	11
No proper campaigning	15	14
Involved in scandals/allegations	12	5
Development work in last tenure was not sufficient	16	4
Less interaction with local people	26	12
Unpopular decisions taken during last tenure	12	4
No political affiliation	8	-
Political rivalry within same political group	9	-
Political rivalry from other political group	26	-
Total Gram Pradhan	50 (100)	50 (100)

Figures in parentheses are percentage to total

In case of women Gram Pradhans, major reasons stated for defeat (stated by 46%) was unacceptability by various social groups while 34 percent indicated that they did not have adequate financial resources to contest election. About one-fourth (26%) indicated that they did lost because seat was not reserved. However, about 10 percent of female Gram Pradhans indicated that they were asked to contest from other wards where they did not have enough support as 14 percent felt that there was no proper campaigning. However, it was interesting to note that there were only 5 percent women Gram Pradhans who faced some charges of scandals or allegations compared to 12 percent in case of men Gram Pradhans. Also, during the tenure of women Gram Pradhans more development work was done compared to tenure of men Gram Pradhans and very few of them took unpopular decisions. This shows that women Gram Pradhans were more efficient than men Gram Pradhans (Table 12).

**CONCLUSION**

The results of study show that active participation in politics of the women Gram Pradhan and most of the candidates for Gram Pradhan started their career early at the age of 25 to 40 years. More than three-fourth Gram Pradhan contested the election for the first time and many of them could not win the election second time mainly because during their tenure they took some unpleasant decisions and their constituency was changed and no adequate campaigning was made. However, a few of them could not win the election as they were not affiliated to any political party and could not get adequate financial as well as public support. Social taboos and Purdah system were a major constraint in case of women while contesting election for the first time. However, education was not a major constraint for election of Gram Pradhans. Nearly one-fourth men Gram Pradhans were motivated on their own to contest election while most of the female Gram Pradhans were motivated/ convinced/ persuaded/ pressurized to contest election by their husbands and family members. Government official as well as NGOs also played a major role in convincing female candidates, especially where the seat was reserved for them. Moreover, in almost all the cases the dependency of elected women Gram Pradhans was too much on their husbands. More than half of the women Gram Pradhans were motivated because of enforcement of reservation of women in the Panchayati Raj system while most of the men Gram Pradhans were motivated mainly because of social reasons, political affiliation of the family and encouraged by various groups and committee members. Majority of the male contestants faced financial problems while contesting election for the first time but a very few women candidates faced such problem as they were supported by their husbands or family members. Moreover, a few of the first time contestants could get financial support from Self Help Groups (SHGs) and community based organisations (CBOs). Majority of the Gram Pradhans were members of some community organizations but as expected membership of such associations did not help much in contesting of election of Gram Pradhans. Most of selected men and women Gram Pradhans were of younger age and had no chance of contesting election for many times. Majority of female Gram Pradhans did not contest Gram Panchayat election last time while nearly one fourth female Gram Pradhans did contest last election of Gram Panchayat but lost. The main reason for defeat was conflict with other dominant caste/ religion groups, less acceptability across different social groups, lack of proper campaigning, less interaction, rivalries between other political parties, unpleasant decisions, and some allegations due to involvement in scandals, etc. during their last tenure.

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**ASEAN AND NORTHEAST INDIA: FODDER INDUSTRY IS A NOVEL PARADIGM SHIFT****DHANANJOY DATTA****RESEARCH SCHOLAR, HUMANITIES & SOCIAL SCIENCE DEPT., NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA  
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KAMALGHAT****ABSTRACT**

*In every nation's agricultural sector, fodder and livestock are two core sub sector which contributes hugely in the particular countries national economy. Fodder is an agricultural term for animal feed and fodder crops are those plants that are raised to feed livestock. Basically, fodders are of two categories: Green fodder and Dry fodder as natural produce has its own significance for the livestock nurturing peoples. At present, the country faces a net deficit of 61.1% green fodder, 21.9% dry crop residues and 64% concentrate feeds. Now a day's fodder and livestock sub sector are recognized as vital part of peri urban economy because of increasing peri urban livestock farming and rising fodder marketplaces are pointers of quick shifting economic situation in livestock and fodder sub-sector. So, in this context the study is an attempt to know the opportunities exist for fodder trade and development in North East India and its extension to the South and East Asian countries in the preview of the agreement happened between India and ASEAN. For this, an assessment and comparative study have been done between North East India fodder market operations and South and East Asian countries. This study contains the reviews of information from the government officials of north-east state of India and information from the South and East Asian countries which will include various sources like: book published, journals, report on fodder etc. with regard to production, demand and importation of animal feed products. This will help to understand the researchers, policy maker, exporters, importers, Government officials about the opportunities, ground of cooperation need to be focused and gap exist for trade and development in the fodder sub-sector which is prerequisite for sustainable socio-economic development of concerned regions.*

**KEYWORDS**

Fodder Industry, Indian Economy, North East India, South and East Asia, Sustainability.

**INTRODUCTION**

The North East of India consist of the eight states of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim, is a pool of prosperous normal resources and a gorgeous incorporation of diverse populace and civilizations. It definitely is an area waiting to take place. Blessed with huge biodiversity, hydro-energy prospective ness, oil and gas, coal, limestone, forest wealth, fruits and vegetables, flowers, herbs and aromatic plants, uncommon and wealthy flora and fauna, North East India has all the possibility to change into a marketable center and tourist glory. The provinces contribute to boundaries with China in the north, Bangladesh in the South-West, Bhutan in the North-West and Myanmar in the East. This formulates the North-East as a potential hub for development of international trade and commerce.

On the other side, India's commitment with the Association of South East Asian Nations (ASEAN) started with its "Look East Policy" in the year 1991. ASEAN has an association of ten countries namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. India turns out to be a Sect oral conversation associate of ASEAN in 1992 and complete discussion collaborator in 1996. In November 2001, the ASEAN-India affiliation was promoted to the meeting stage. The 1st ASEAN Economic Ministers (AEM) – India conference were held on 15th September 2002 in Brunei Darussalam where the Ministers, after discussing the Joint Study Report determined to set up an ASEAN-India Economic Linkages Task Force (AIELTF). The AIELTF was solicited to organize outline frame conformity to improve the ASEAN-India trade and economic collaboration earlier than the 2nd AEM – India consultations. North-East India is habitually portrayed as the Gateway to South-East Asia. India's 'Look East' Policy aspires at changing the North-East into a active hub of a flourishing and amalgamated economic breathing space, connecting the two high-prospective areas with a system of highways, railways, pipelines, and communication lines crisscrossing the province. The enormous complementarily occurring out of India's 'Look East' Policy and our South-East Asia focal point and the 'Look West' Policy of South-East Asian countries like Thailand, confers increase to massive opening for India and ASEAN nations to enlarge their trade and investment relationships, by means of the North-East as a most important crucial point. However, as point out formerly, in spite of these immense advantages, the North-East has not full-grown at equivalence with the rest of the nation, and the area's prospective ness has not been penetrated appropriately. Whereas the important proposals in use by the Indian Government to endorse economic growth, tourism and development in the North-East region can be principally welcomed, though, the main concern to be focused to the development of roads in the North-East province is glowing replicated in the Union Government's aim to spend almost Rs.50, 000/- crores on the roads sector in the North-East India during the Eleventh Plan phase. The East-West passageway venture, which will join Silchar in Assam to Porbandar in Gujarat and this, will go an extended method in humanizing connectivity and changing the area into an exciting trade and industry region.

**LITERATURE REVIEW**

In order to build up an appropriate perception of the research problem recognition and to expand a theoretical structure to carry out the assessment of existing opportunities of trade and development for fodder in North East India and ASEAN, the following literature has been reviewed.

Ridzwan A. Halim in 1996 concludes that increasing demand for meat and milk as a result of population growth and rising incomes makes it imperative that ruminant and fodder production be expanded in the Southeast Asia.

F.Y.Chin in 2002 summing up that fodder is not considered of widespread importance in the Southeast Asia region, as most ruminants are still under smallholder farmers who practise a traditional village system of rearing.

In a seminar hosted by ICAR Research Complex for North-Eastern Hill region, Umiam, November 1999, National Academy of Agricultural Sciences in collaboration with Indian Society of Hills Farming deliberated on the theme "Strategies for Agricultural Research in the North-East" and concludes that Feed and fodder resource enhancement should receive urgent attention to avoid fodder scarcity in north east region followed by research in the related area are very essential.

**MOTIVATION AND PRACTICAL UTILITY OF THE STUDY**

The main rational of the study is to ascertain the Opportunities of Trade and Development for fodder in North East India and with ASEAN so that collaborative efforts can be develop to improve the fodder production, trade and developmental efforts can be taken to meet the fodder deficit and research related co-operation, co-ordination can be initiated. Research related resources; consultancy can be exchanged among various parts North East India and ASEAN. These attempts may help in developing strategic advantage and prerequisite for sustainable socio-economic development of concerned regions.

**OBJECTIVE**

The main objective of this study is to assess the fodder as Opportunities of Trade and Development in North East India and in the South-East Asian nations. Specifically, brief review of fodder report published by different researchers, Government officials like IGFR and policy makers in India with special focus on

North-East India and highlights on the some important fodder report from the South-East Asian nations with their status. Finally, about the opportunities, ground of cooperation need to be focused and gap exist for trade and development in the fodder sub-sector.

## METHODOLOGY

This study is mainly based on the secondary data collected from the various sources like Published report of Govt. of India, North East India, Govt. of Tripura, South-East Asian nations, Web Articles, Journals and research report etc. Brief study for this research have been done through the assessment of existing research report, articles related to production, demand and importation of animal feed of the concerned region. Specifically, brief review of Fodder report published by different researchers, Government officials like IGfRI and policy makers in India with special focus on North-East India and highlights on the some important fodder report from the South-East Asian nations with their status. Finally, about the opportunities, ground of cooperation need to be focused and gap exist for trade and development in the fodder sub-sector from the literature available with the help of research jury.

## OUTLINE OF THE PROJECTED LIVESTOCK POPULATION ESTIMATION IN INDIA

The below mentioned projected livestock population estimation in India are based on 10 & 11th five year plan document, Government of India which shows the increasing rate of livestock population. So it is important to maintain the sustainability in livestock feed and fodder but presently the nation facing the shortfalls of livestock feed and fodder.

**TABLE 1: PROJECTED LIVESTOCK POPULATION ESTIMATES (MILLION ADULT CATTLE UNITS) (In million tonnes)**

Year	Cattle	Buffalo	Sheep	Goat	Equine	Camel	Total
1995	180.5	82.8	4.0	9.2	0.5	0.9	278.0
2000	187.1	87.7	4.1	9.9	0.4	1.0	290.0
2005	192.2	92.6	4.2	10.5	0.3	1.0	301.0
2010	197.3	97.5	4.3	11.2	0.3	1.0	312.0
2015	202.3	102.4	4.4	11.8	0.1	1.1	322.0
2020	207.4	107.3	4.5	12.5	0.1	1.1	333.0
2025	212.5	112.2	4.6	13.2	0.1	1.1	344.0
2030	217.7	117.3	4.7	13.9	0.1	1.1	354.8

Source: Based on 10 & 11th five year plan document, Government of India.

## OUTLINE OF THE CONTEMPORARY INDIAN FODDER OPERATIONS STATUS (FORAGE AND FEED-DEMAND AND SUPPLY SCENARIO IN INDIA)

Fodder pedestal cheaper forage and feed techniques are requisite to diminish the charge of superiority livestock produce as the fodder only comprises 70% of the milk creation rate. Presently, there is marvelous stress of animals fodder on accessible sum of forage and feed, as cultivated land obtainable for fodder cultivation has been declining. Approximately, India currently is facing a mesh shortfall of 64% feeds, 61.1% green fodder and 21.9% dry crop residues. Supply and demand situation of feed and fodder are mentioned in Table 2. From the Table 2 it appears that if India wants to meet up the existing stage of fodder produce and wants to meet up the prerequisites of the increasing rate of livestock population which will meet the requirements of growing human population, tremendous and serious efforts are required. To make a proper balance India has to fulfill the fodder deficit from all corners of fodder including dry crop residues and feed after utilizing uncultivated land, unexploited feed reserves and increasing fodder productivity in mass scale.

**TABLE 2: SUPPLY AND DEMAND SCENARIO OF FORAGE AND ROUGHAGE TILL 2030 (In million tonnes)**

Year	Supply		Demand		Deficit as % of demand	
	Green	Dry	Green	Dry	Green	Dry
1995	379.3	421	947	526	59.95(568)	19.95 (105)
2000	384.5	428	988	549	61.10(604)	21.93(121)
2005	389.9	443	1025	569	61.96(635)	22.08(126)
2010	395.2	451	1061	589	62.76(666)	23.46(138)
2015	400.6	466	1097	609	63.50(696)	23.56(143)
2020	405.9	473	1134	630	64.21(728)	24.81(157)
2025	411.3	488	1170	650	64.87(759)	24.92(162)
2030	416.7	503.4	1207.1	670.6	65.45(790)	24.90(167)

Figure in parenthesis indicates actual deficit.

Source: <http://www.igfri.ernet.in/pdf/Vision-2030.pdf>. Based on 10 & 11<sup>th</sup> five year plan document Vision 2030, Government of India.

**TABLE 3: STATE WISE DRY & GREEN FODDER PRODUCTION IN NORTH EAST INDIA (000 TONNES)**

States	2000-01			2001-02			2002-03		
	Dry Fodder	Green Fodder	Total Fodder	Dry Fodder	Green Fodder	Total Fodder	Dry Fodder	Green Fodder	Total Fodder
Arunachal Pradesh	471	7731	8202	478	7731	8209	518	7731	8249
Assam	6146	3372	9518	5962	3372	9334	5745	3372	9117
Manipur	547	903	1450	549	903	1452	539	903	1442
Meghalaya	333	1400	1733	347	1400	1746	343	1399	1742
Mizoram	200	2615	2815	207	2692	2899	208	2771	2979
Nagaland	649	1311	1960	726	1314	2039	903	1316	2219
Sikkim	274	437	711	259	437	696	267	437	704
Tripura	705	909	1614	803	909	1712	751	909	1660

### Note:

- Green fodder production is estimated assuming an average yield per hectare of 1.5 tonnes from the forest areas, 0.75 tonnes from permanent pastures and grazing lands and 40 tonnes from cultivated areas.
- For dry fodder, productions of various crops are projected using growth trends and crop residue production is estimated using standard conversion ratios for cereals, pulses and oilseeds.
- Total fodder is the sum of dry and green fodder production.
- Areas under Forests, Fodder crops and Permanent pastures etc. for these years have been projected based on past data.

Source: <http://kashvet.uni.cc>

**OUTLOOK OF SOUTHEAST ASIA FODDER MARKET**

The Regional Working Group (RWG) on Grazing and Feed Resources for Southeast Asia was created in 1989 at a summit in Serdang, Malaysia. Since then usual gatherings have been organized at Los Banos in Philippines (1991), Khon Kaen, Thailand (1993), Nha Trang, Vietnam (1995) and Vientiane, Lao P.D.R. in January 1996. But these kinds of efforts are not sufficient for the ASEAN countries because if we go through the country specific fodder history, it reveals that every nations depends on the imports of fodder. For these two case study are given and import figure of the different ASEAN countries are also given to understand the fodder scenario.

**MALAYSIA DOMESTIC FODDER MARKET**

Malaysia utilizes over 3 million tonnes of fodder substances every year. It is predicted that 82% of the fodder comes from corn produces, 12% from foodstuff dispensation squander, 3% from additional cereals, 2% from milk and 1% from starchy origins. Industry sources consider the Malaysia's local and domestic fodder produce are not sufficient to assemble the requirements of its livestock sub-sector. Therefore, there is high demand of fodder substances to meet the requirements of fodder and an import of fodder in huge quantity is the only way. ('Characteristics of Malaysia's Animal Feed Market, Agriculture and Agri-Food Canada, <http://www.ats.agr.gc.ca/ase/5231-eng.htm>). The major kinds of fodder imported by Malaysia are prepared animal feeds (202,000 tonnes in 2007) and soybean meal (851,000 tonnes imported in 2007). Wheat and corn are the major imported grains to Malaysia.

**OVERVIEW OF INDONESIA DOMESTIC FODDER MARKET**

The livestock sub-sector in Indonesia consists of huge figure of tiny ranches. Out of them some are organized just about co-operatives. There are also existences of small number of commercial farms. Livestock sub-sector fodder supply is covered by domestic produce. But there is huge demand for fodder imports from big livestock farms and fodder market operation have very vital role. In 2007 Indonesia imported A\$1,283 million tonnes of fodder produce and it was A\$916 million tonnes in 2003. Approximately 80% of all fodder subsistence is require for the poultry sub-sector. Most popular feed types are Corn and soybean. Indonesia imports fodder from USA, Australia and New Zealand. In 2007 Indonesia imported 532,000 tonnes from USA, 152,000 tonnes from Australia and 92,000 tonnes from New Zealand.

**TABLE 4: ANIMAL FEED IMPORTS FROM WESTERN AUSTRALIA BY THE FEW ASIAN MEMBER COUNTRIES IN 2008-09**

Country	Tonnes	\$'000
Brunei	161	131
Indonesia	31	18
Malaysia	2,415	1,625
Philippines	557	372
Singapore	98	55
Thailand	207	141
Vietnam	205	162

Source: Western Australian Animal Fodder Export Market Report, March 2010.

**TABLE 5: WESTERN AUSTRALIA EXPORTS OF CEREAL HAY AND CHAFF BY DESTINATION COUNTRY, 2002-03 TO 2008-09 ('000 tonnes)**

Country	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Japan	241,466	244,683	266,092	316,292	263,211	154,019	280,906
South Korea	6,620	18,580	30,717	18,239	25,763	45,100	81,509
Taiwan	5,334	5,692	9,800	8,092	8,304	12,972	19,731
Malaysia	11,657	16,464	1,894	1,820	1,340	1,578	1,378
Hong Kong	979	816	741	574	112	310	849
UAE	961	508	369	208	170		293
Bahrain							280
Singapore	417	15,662	165	268	129	66	98
Brunei	108	37	43	57	58	83	91
Jordan							77
Mauritius		27	45	24	39	26	26
United Kingdom							21
Macau					15		17
Indonesia	30	620	130	154	183	5	6
Thailand	82				2	7	3
Cocos Island			7	22	3		
Kuwait			5,100				
Oman	160						
Philippines		425	100				
Qatar				15	19		
Russian Federation						120	
Saudi Arabia	875						
USA	110						
Total	268,799	303,513	315,203	345,764	299,348	314,286	385,285

Source: Western Australian Animal Fodder Export Market Report, March 2010.



TABLE 6: INDIA'S TARIFF REDUCTION SCENARIO IN MAJOR AGRICULTURAL SECTORS WITH ASEAN

Chapter Description	2007 Average MFN (%)	Drop in Tariff by 2010 (% Point)	Average Preferential Tariff in 2013 (%)
Meat and edible meat offal	30.0	5.0	0.0
Products of animal origin, nesoi	28.7	4.8	0.0
Edible fruit, nuts, peel of citrus fruit, melons	27.4	4.5	0.0
Coffee, tea, mate and spices	30.0	5.0	0.0
Lac, gums, resins, vegetable saps and extracts, nesoi	27.0	4.5	0.0
Vegetable plaiting materials, vegetable products, nesoi	30.0	5.0	0.0
Animal, vegetable fats and oils, cleavage products, etc	31.0	6.3	0.0
Miscellaneous edible preparations	30.0	5.0	0.0
<b>Residues, wastes of food industry, animal fodder</b>	<b>29.1</b>	<b>5.0</b>	<b>0.0</b>
Average for the above nine agricultural sectors	29.2	5.0	0.0

These are sectors in which India's imports from any of the ASEAN-5 countries constituted at least a 5% share in total imports from the world in 2007. Nesoi = Not elsewhere specified or included.

Source: Author's calculation based on India's AFTA tariff reduction schedule to ASEAN-5 and CLMV.

### ROAD AHEAD, OPPORTUNITIES AND GAPS EXIST FOR TRADE AND DEVELOPMENT IN THE FODDER SUB-SECTOR:

From the above discussion it reveals that Indian fodder marketing operations are require huge assistance and support on various grounds. If we compare the Southeast Asia marketing operations and Indian market scenario, both are lagging behind. Australia fodder markets are export oriented and other countries such as Japan, South Korea, Taiwan, Malaysia, Indonesia, China and middle-east fodder sub-sector are import oriented. Presently, India import various fodder seeds from Australia but can exclusively follow in the Western Australia fodder market Table no 4 and 5. Focus on prioritized area of forage research with commensuration allocation of manpower and material resources have been a main problem. Apart from this there are several gaps have been mentioned, this is from the India perspective. Taking into consideration the prerequisite to fodder assortment for a huge quantity of yearly and recurrent fodder produces, Grassland or silvi pasture exploration did not include characteristics of soil damp protection and irrigate cropping which could have improved entire biomass output diverse beneath rainfall feed location. Conventional grazing land studies with fruitful series of grasslands. Lake of understanding of grazing land and farm animal connections in entire efficiency framework etc. Above all the biggest finding is the Indian fodder deficit which is a serious shortcoming of fodder sub-sector. In ASEAN-India Free Trade Agreement fodder need an immediate and urgent attention because tariff reduction will not help the two regions. Gaps and shortcoming of Indian fodder market are innumerable. Here fodder regulation bodies and departments are need to more proactive to bring the effectiveness and efficiency in the fodder market operation.

### GROUND OF COOPERATION NEED TO BE FOCUSED

Feed and fodder resource development should be given urgent concentration and consideration. Research may be called for: (i) on farming of indigenous grasses, fodder trees for feed and fodder (ii) dietary necessities of different kind of animals, including cross-breds and (iii) protection of feed and fodder for the bend phase. These stepladders are desirable for development in animal nutrition. Management arrangement on research and animal produce processing and marketing research are other areas, which require concentration. To elevate yield of accessible crops, rigorous research efforts are necessary to (i) identification and categorization of appropriate varieties of existing crops, (ii) utilize newer technologies to speed up crop improvement, (iii) evolve suitable agro-techniques (iv) develop an integrated pest and nutrient management system and (v) expand suitable soil and water managing techniques. Grassland development system must be introduced in the summit agenda and should be on focused for the region to become economical.

### CONCLUSION

Future Priorities between the two regions can be intended to support to training activities organized by the IGFR in India and The Regional Working Group (RWG) on Grazing and Feed Resources for Southeast Asia for this purpose some discussions should be on priorities. Support for small activities between the two regions can be enhanced and Preference will be given to those projects that deal directly with transfer of fodder material and technology to farmers. Strong commitment on continue to support and exchange of information among two regions. Research Program areas should be identified but may be expanded as deemed necessary. These need to be implemented very carefully. Necessary fund allocation and timely release of the fund will help success of the research results. It is hoped that successful implementation of the research programs will help to achieve the animal food production and improve the nutritional standard of the population, improve the income of the farmers, increase employment opportunities and reduce poverty status of the concerned country. Though the situations of Livestock research are very much effective and structured but there should be collaborative efforts to improve the Livestock and related areas in both the country. India may take strategic advantage of collaborative efforts and can do the optimum utilization of existing resources. It will enhance the inclusive growth and livelihood in the region.

### ACKNOWLEDGEMENT

I am very much thankful and express my gratitude to the each and every individual whose valuable contribution, guidance and consultancy involved in the preparation of various reports on fodder which makes me aware about the fodder trade in North-East India including Tripura and Southeast Asia fodder market report used in the study.

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**CONTENTMENT ON DISCIPLINARY PRACTICES AMONG UNIVERSITY EDUCATORS: A CASE STUDY**

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**ABSTRACT**

*The term 'discipline' can be understood as an act as per per-determined code or regulations behaving on the basis of requirement criteria of an establishment; industrial or educational and thereby executing the necessitated responsibilities within the stipulated limit zone for the fulfillment of expected outcomes that match with personal and organizational contentment. There are several cases involving the academic community violating disciplinary codes or regulations of the institution, although such group of people is said to be in the noblest and the most respected profession. The objectives of the investigation were to study the impact of disciplinary practices upon students' performance, find out the level of satisfaction with respect to disciplinary procedures, grievance redressal mechanism and corrective actions and To examine educators' disciplinary correctional measures. The academics of a renowned higher education institution were contacted for primary data collection through questionnaires. The findings revealed that majority of the respondents expressed satisfaction with regard to disciplinary procedures and grievance redressal mechanism of the institution.*

**KEYWORDS**

Academics, Discipline Management, Grievance Redressal Mechanism, Higher Education Institution and Satisfaction.

**INTRODUCTION**

One of the significant critical elements among the functions of human resource management is the employee discipline and grievance administration. Today, there exist numerous cases pertaining to employee dissatisfaction over management essentially due to improper, ineffective and lethargic address of their grievances and discipline control mechanism. Many organizations even do not possess a grievance redressal and discipline management mechanism in their organizations. This is a careless attitude on the part of both the management and the working members of organizations. These kinds of organizations do not even bother to address some of the genuine cases of grievance or complaints from the employees' quarter and neither do institute proper discipline. A discipline related problem arises when an educator proceeds or deviates out of the programmed and stipulated do's and don'ts rule of the institution.

Higher education institutions are no exception to be serious on effective implementation of discipline management and create standing rules on discipline to the academic community including researchers and scientists, non-academic staff and the students. The primary and also the most important role played in any kind of educational institutions is the role played by the academic community. Fundamentally, there are teaching staff, researchers, scientists, non-teaching staff and the students who make up the general working stakeholder component in higher learning institutions such as universities and colleges. The academic function is carried out by the teaching staff. The non-academic function is often called the administrative function which is played by the non-academic or non-teaching staff. Discipline among the academic staff in such higher education institutions is a matter of concern now-a-days. The present study is restricted to analyze disciplinary practices among the academic community or teaching staff in a prestigious higher learning institution located in Southern India.

The term 'discipline' can be understood as an act as per per-determined code or regulations if existing or behaving on the basis of requirement criteria of an establishment; industrial or educational and thereby executing the necessitated responsibilities within the stipulated limit zone for the fulfillment of expected outcomes that match with personal and organizational contentment. Professor Mc Gregor's Hot Stove Rule has the following characteristics for a good disciplinary system in every organization: (a) Advance Warning (b) Impartiality (c) Consistency and (d) Impersonality. (**Mc Gregor's Hot Stove Rule**).

There are several cases involving the academic community violating disciplinary codes or regulations of the institution, although such group of people is said to be in the noblest and the most respected profession. Basically, any educator or teacher has to incorporate a greater amount of discipline so that the same can be preached to learning members of the institution and also the society to a greater extent. A lot number of indiscipline or disorderly behavior among them may perhaps find implications in higher absenteeism rate (both authorized and unauthorized), unaccounted leave or absence, negative attendance in stipulated course classes to teach, carrying out personal assignments during office hours, spending time in unwanted or unauthorized discussions (chatting or gossiping) in and off the class rooms or departments with students and fellow faculty members or sometimes even with administrative personnel, using office properties for personal needs and private applications, consumption of alcohol during office or working times, conspirator of criminal activities in the society, joining hands with criminal and unjust group, and so on and so forth.

The acts of misconduct include willful insubordination, unauthorized striking work, theft and fraudulent acts in the office, dishonesty, bribery charges, information disclosure for financial benefits, late attendance, private acts in the working environment, breach of violation, negligence of duty and others (**Ahuja 1986**). It is in this context an attempt has been made to investigate the behavioral pattern of the so-called academic personnel in terms of their discipline through the extraction of opinion and perception and to provide workable suggestions with the help of information emanating from this study. In addition to the discipline component, the study also takes into consideration of the grievance redressal mechanism and educators' satisfaction with respect to the same.

**CORRECTIONAL PRACTICES**

Academic discipline can either be managed internally or be imposed by external agencies. Internal disciplinary administration pertains to institutional standing orders, regulations and bye laws emphasizing the requirement of discipline among faculty members and administrative personnel. In addition to that the higher education departments and councils could play a very important role in propagating disciplinary practices and can impose regulations with that of penalties and punitive actions if the norms are violated by educators. Mild punitive or correctional actions include oral warning, written warning and severe 'slap on the wrist' for mild or non-so-severe unruly acts on the part of educators.

On the other hand, severe punishments include withholding pay, perquisites, severe reprimand, severe written warning, issuance of correctional memos, and issuance of show cause notice, suspension, withholding increment and discharge or dismissal from the institution. Severe punitive actions are inflicted only in case of severe or heinous disorderly acts of academic personnel. However, counseling holds as an effective method to intercept indiscipline acts of staff. Counseling is said to be an action initiated by the superior or supervisor and administer when a performance related problem is identified. Counseling could be in the form of oral and written and also includes an explanation of the performance deficiency and the definition of the expected performance. The counselor can declare that any sort of correctional action shall be initiated if an employee fails to correct his performance (**Arizona Department of Corrections, 2010**). Oftentimes, this method is adopted in higher education institutions either formally or informally wherein, the person who is responsible for such mild disorderly act is summoned by the departmental head or sometimes the dean and senior academics for the purpose of counseling. Counseling can also be done by immediate superior of the department in which the faculty member holds assignment.



## UNIVERSITY GOVERNANCE AND MANAGEMENT IN INDIA

The higher education institutional mechanism in India comprises of universities, institutions of national importance, colleges and research institutions. Most of the policies in general functioning, governance, funding structure and patterns, administration procedures, human resource management (HRM) and development (HRD) are promulgated by the University Grants Commission (UGC), the apex and highly acclaimed constitutional and statutory body of the Government of India, the Union Ministry of Human Resource Development and other statutory councils. The UGC works closely with the Planning Commission of India and the Ministry of Human Resource Development in formulating policies and regulations in higher education management in the country (**Government of India, UGC 11<sup>th</sup> Plan Document**).

The establishment of UGC in the year 1945 by the Government of India which was based on the recommendations of '*Sergeant Committee Report*', paved the way forward for a revolutionary assignment towards effective governance and implementation of quality standards in higher education functioning. Among other important functions, the duties of the Commission are to monitor the performance of universities, to see that the quality of teaching and research improves, to fund the higher education system as and when necessary based on the discretion and decision of the Commission and to discharge other constitutional duties. The UGC works with India's Planning Commission in formulating plans and policies in higher education institutions (**Piyush Prakash, 2010**).

The other important stakeholders in the higher education management include various Ministries and Departments of the Government of India, Statutory / Professional Councils of the Government of India such as All India Council for Technical Education (AICTE), National Assessment and Accreditation Council (NAAC), National Council for Teacher Education (NCTE), Dental Council of India (DCI), National Board of Accreditation (NBA), etc. Advisories, directions and recommendations are also provided by the honorable Supreme Court of India and High Courts of states to the stakeholders on various policy matters including policies regarding human resource management and development.

### OBJECTIVES OF THE STUDY

The following are the objectives of this study:

1. To study the impact of disciplinary practices upon students' performance
2. To find out the level of satisfaction with respect to disciplinary procedures, grievance redressal mechanism and corrective actions
3. To examine educators' disciplinary correctional measures

### HYPOTHESES OF THE STUDY

The following hypotheses are framed based on the research objectives:

#### HYPOTHESIS 1

**RESEARCH HYPOTHESIS (H1):** There is a significant relationship between designation and opinion on impact of teacher disciplinary trials upon students' performance

#### HYPOTHESIS 2

**RESEARCH HYPOTHESIS (H1):** There is a significant relationship between designation and level of satisfaction in respect of disciplinary procedures adopted by the institutional authorities

#### HYPOTHESIS 3

**RESEARCH HYPOTHESIS (H1):** There is a significant relationship between designation and level of satisfaction with respect to correctional actions against the disorderly educators

### INSTITUTIONAL PROFILE

This empirical investigation was carried out in a higher education institution functioning in the status of '*Deemed University*'. The university is under the administrative command and control of the Government of India and is fully regulated, funded and governed by UGC and its regulations. The regulations of statutory councils of the Government of India are also applicable in the governance of the institution. The university comprises of approximately 25 departments which are fully involved in teaching, research and extension functions and there are approximately 150 academic (teaching) staff and 250 non-teaching staff. The institution has been awarded 'A' Grade Certification and status (*Equivalent to Five Stars Status*) by National Assessment and Accreditation Council (NAAC), Government of India, Bangalore.

By and large, the teaching staff is highly qualified with most of them possessing PhD or have cleared the mandatory National Eligibility Test (NET) for '*Lectureship*' for holding Assistant Professorship. Most of the faculty members also possess vast experience in teaching, research and industry. With abundant teaching and research expertise, the faculty members in this institution are considered think-tanks and profoundly recognized by NAAC. The institution was primarily set up for uplifting rural populace in the country. In a historical breakthrough the institution was conferred the status of '*deemed university*' by the UGC and Government of India as early as during 1976. The institution was one of the earliest deemed universities funded and fully under the governance of UGC and being a central deemed university, it also receives grants from other Departments and Councils of the Government of India and state governments.

### RESEARCH METHODOLOGY

This empirical research is based on survey method. More than 50 percent of the teaching staff of a central deemed university of repute in southern India; governed and funded by the Government of India were taken into confidence for the purpose of the study. There are 25 departments in the university; many of them are rural development based. Academic personnel in the rank and cadre of '*Professor*', '*Associate Professor*' and '*Assistant Professor*' in all the departments of the institution were taken into account representing one person in each cadre / rank. Simple random sampling method is adopted to select the teaching staff in each of the ranks for the study. Simple questionnaires were administered to the selected respondents containing 15 questions in all regarding discipline and grievance management policies and practices adopted in the institution. The questionnaires contained multiple kinds of questions such as open ended, closed ended, adoption of Likert scale based questions and rank based questions.

Both primary and secondary data were relied for the study. Secondary sources include among others, the reports of UGC, higher education councils of the Government of India, Planning Commission documents relating to higher education and management, reports of the Ministry of Human Resource Development (MHRD) and articles. The secondary sources were relied mainly for the purpose of extracting policy information regarding discipline and grievance administration regulations for higher education institutions including universities in Indian context.

Simple statistical tools were applied such as percentage method and chi-square analysis to satisfy the investigation objectives and to test the set hypotheses. As the respondents were occupying high level academic positions in the university they were contacted personally for required information based on the objectives of the study. The questionnaires were furnished to the respondents and got back in about a month of time. The total number of respondents comprised 75, which includes 25 Professors, 25 Associate Professors and 25 Assistant Professors selected at random in all the departments. As far as the department is concerned, census method was adopted; wherein all the departments were considered for the study. However, the respondents were selected for distributing questionnaires and eliciting answers and their perception using simple random sampling method equally distributing the sample size of 75 to educators in the rank and cadre of Assistant professor, Associate Professor and Professor.

### ANALYSIS AND INTERPRETATION

Based on the principal data given by the respondents, analysis has been done for supporting and fulfilling the requirements of objectives and hypotheses of the study. The statistical tools for analysis include simple percentage calculation for the purpose of eliciting general information and chi-square test for testing of the hypotheses based on research objectives.



**TABLE 1: IMPACT OF EDUCATORS' DISCIPLINARY PRACTICES UPON STUDENTS' BEHAVIOR**

Sl.No	Level of Agreement	Cadre – Wise Number of Respondents			Row Total	Overall Percentage
		Professor	Associate Professor	Assistant Professor		
1	Strongly Agree	25 (100)	23 (92)	20 (80)	68	90.7
2	Agree	-	02 (8)	05 (20)	07	9.3
3	Undecided	-	-	-	-	-
4	Disagree	-	-	-	-	-
5	Strongly Disagree	-	-	-	-	-
	Column Total	25 (100)	25 (100)	25 (100)	75	100

(Parenthesis refers to percentage of the respective numbers)

Source: Primary Data Collected for Investigation

**Inference:** The table reveals that over 90 percent of the respondent – educators strongly agree and believe to the proposition that educators' disciplinary practices will have a lasting impact upon students' behavior. It is significant to note that all the educators in the rank of 'Professor' (100 percent) have strongly agreed on the issue. However, none has undecided and disagreed on the issue.

**TABLE 2: IMPACT OF TEACHER DISCIPLINARY TRIALS UPON STUDENTS' PERFORMANCE**

Sl.No	Level of Impact	Cadre – Wise Number of Respondents			Row Total	Overall Percentage
		Professor	Associate Professor	Assistant Professor		
1	Absolute Effect	19 (76)	17 (68)	15 (60)	51	68
2	Mild Effect	06 (24)	08 (32)	03 (12)	17	22.7
3	Undecided	-	-	01 (4)	01	1.3
4	No Effect	-	-	04 (16)	04	5.3
5	Absolutely No Effect	-	-	02 (8)	02	2.7
	Column Total	25 (100)	25 (100)	25 (100)	75	100

(Parenthesis refers to percentage of respective numbers)

Source: Primary Data Collected for Investigation

It can be inferred that a majority (68 percent) of the respondent – educators accepted that there would be an absolute effect of teacher disciplinary trails upon students' performance. Among the respondents, educators in the rank of 'Professor' possessed the maximum percentage of acceptance rate (76 percent). The negative response (teacher disciplinary trials will have no impact upon students' performance) emerged from only 8 percent of the respondents. 32 percent of educators in the rank of 'Associate Professor' opined that the impact on students will be mild. 24 percent of educators in the rank of 'Assistant Professor' advocated for the 'no impact' criterion.

**TABLE 3 LEVEL OF SATISFACTION WITH RESPECT TO DISCIPLINARY PROCEDURES ADOPTED BY THE INSTITUTIONAL AUTHORITIES**

Sl.No	Level of Satisfaction	Cadre – Wise Number of Respondents			Row Total	Overall Percentage
		Professors	Associate Professors	Assistant Professors		
1	Highly Satisfied	20 (80)	19 (76)	21 (84)	60	80
2	Satisfied	05 (20)	02 (8)	04 (16)	11	14.7
3	Undecided	-	-	-	-	-
4	Dissatisfied	-	04 (16)	-	04	5.3
5	Highly Dissatisfied	-	-	-	-	-
	Column Total	25 (100)	25 (100)	25 (100)	75	100

(Parenthesis refers to percentage of the respective numbers)

Source: Primary Data Collected for Investigation

Among the respondent – 'Professors', a whopping 80 percent were highly satisfied with respect to disciplinary procedures adopted by the institutional authorities. Among the 'Associate Professors', it was 76 percent and 84 percent in the case of 'Assistant Professors'. Overall, 80 percent of the respondent – educators expressed their higher satisfaction level in respect of the issue. However, 16 percent of the respondents in the cadre of 'Associate Professor' were dissatisfied with the disciplinary procedures; which was about 5.3 percent of all respondent – educators in general.

**TABLE 4: LEVEL OF SATISFACTION WITH RESPECT TO GRIEVANCE REDRESSAL MECHANISM OF THE INSTITUTION**

Sl.No	Level of Satisfaction	Cadre – Wise Number of Respondents			Row Total	Overall Percentage
		Professor	Associate Professor	Assistant Professor		
1	Highly Satisfied	19 (76)	15 (60)	17 (68)	51	68
2	Satisfied	06 (24)	07 (28)	05 (20)	18	24
3	Undecided	-	01 (4)	-	01	1.3
4	Dissatisfied	-	02 (8)	03 (12)	05	6.7
5	Highly Dissatisfied	-	-	-	-	-
	Column Total	25 (100)	25 (100)	25 (100)	75	100

(Parenthesis refers to percentage of the respective numbers)

Source: Primary Data Collected for Investigation

It is self evident from the table that a majority (68 percent) of the academic community of the select institution expressed high level of satisfaction with respect to the grievance redressal mechanism adopted by the institution. The negative answer emerged from about 7 percent of the respondents showing dissatisfaction over the issue. All the Professors (100 percent), Associate Professors (88 percent) and Assistant Professors (88 percent) expressed satisfaction related to grievance redressal mechanism adopted by the institution. The largest numbers of respondent – educators were in the rank of 'Assistant Professor' (12 percent) who expressed total dissatisfaction over the issue.

**TABLE 5: LEVEL OF SATISFACTION WITH RESPECT TO CORRECTIONAL ACTIONS AGAINST THE DISORDERLY EDUCATORS BY THE INSTITUTIONAL AUTHORITIES**

Sl.No	Level of Satisfaction	Cadre – Wise Number of Respondents			Row Total	Overall Percentage
		Professor	Associate Professor	Assistant Professor		
1	Highly Satisfied	22 (88)	20 (80)	21 (84)	63	84
2	Satisfied	03 (12)	-	-	03	04
3	Undecided	-	-	02 (8)	02	2.7
4	Dissatisfied	-	05 (20)	02 (8)	07	9.3
5	Highly Dissatisfied	-	-	-	-	-
	Column Total	25 (100)	25 (100)	25 (100)	75	100

(Parenthesis refers to percentage of respective numbers)

Source: Primary Data Collected for Investigation

84 percent of the respondent - educators (Combination of all Cadres) expressed their higher satisfaction level in respect of correctional actions by the institutional authorities against the indiscipline teachers. No one respondent has been highly dissatisfied on the issue. About 3 percent of the respondents possessed no knowledge on the issue and so remained undecided. However, about 9 percent of the educators remained dissatisfied in respect of corrective actions against indiscipline members of academics.

TABLE 6: EDUCATORS AS ROLE MODELS FOR STUDENTS AND SOCIETY

Sl.No	Level of Impact	Cadre-Wise Number of Respondents			Row Total	Overall Percentage
		Professor	Associate Professor	Assistant Professor		
1	Strongly Agree	21 (84)	19 (76)	14 (56)	54	72
2	Agree	04 (16)	06 (24)	07 (28)	17	22.7
3	Undecided	-	-	01 (4)	01	1.4
4	Disagree	-	-	03 (12)	03	4
5	Strongly Disagree	-	-	-	-	-
	Column Total	25 (100)	25 (100)	25 (100)	75	100

(Parenthesis refers to percentage of respective numbers)

Source: Primary Data Collected for Investigation

It is inferred that 72 percent of the educators strongly agreed and favored to the proposition that educators are role models for students and the society. Among the respondents, the highest percentage agreeing to the proposition emerged from 'Professors' (100 percent) and the lowest emerged from 'Assistant Professors' comprising 84 percent. All the respondents who have disagreed were in the rank of 'Assistant Professor', wherein they believed that the role models for the students and society can be other than academics such as actors, agriculturists, businessmen, executives, attorneys, bureaucrats, policemen, politicians and even military officers. Only one respondent in the rank of 'Assistant Professor' remained undecided over the issue.

**HYPOTHESIS 1**

**H1:** There is a significant relationship between designation and opinion on impact of teacher disciplinary trials upon students' performance

TABLE 7: DESIGNATION AND IMPACT OF TEACHER DISCIPLINARY TRIALS UPON STUDENTS' PERFORMANCE

Sl.No	Level of Impact	Cadre – Wise Number of Respondents			Row Total	Overall Percentage
		Professor	Associate Professor	Assistant Professor		
1	Absolute Effect	19 (17)	17 (17)	15 (17)	51	68
2	Mild Effect	06 (5.6)	08 (5.6)	03 (5.6)	17	22.7
3	Undecided	- (0.3)	- (0.3)	01 (0.3)	01	1.3
4	No Effect	- (1.3)	- (1.3)	04 (1.3)	04	5.3
5	Absolutely No Effect	- (0.6)	- (0.6)	02 (0.6)	02	2.7
	Column Total	25	25	25	75	100

(Figures in brackets are Expected Frequencies fe)

Formula to calculate Chi-Square  $(X^2) = \sum (fo-fe)^2/fe$

Where fo = Observed Frequency and fe = Expected Frequency in terms of Null Hypothesis

$$X^2 = (19-17)^2 / 17 + (17-17)^2 / 17 + (15-17)^2 / 17 + (6-5.6)^2 / 5.6 + (8-5.6)^2 / 5.6 + (3-5.6)^2 / 5.6 + (0-0.3)^2 / 0.3 + (0-0.3)^2 / 0.3 + (1-0.3)^2 / 0.3 + (0-1.3)^2 / 1.3 + (0-1.3)^2 / 1.3 + (4-1.3)^2 / 1.3 + (0-0.6)^2 / 0.6 + (0-0.6)^2 / 0.6 + (2-0.6)^2 / 0.6$$

$$= 0.235 + 0 + 0.235 + 0.028 + 1.028 + 1.207 + 0.3 + 0.3 + 1.63 + 1.3 + 1.3 + 5.607 + 0.6 + 0.6 + 3.267 = 18.937$$

Degrees of freedom of the X<sup>2</sup> distribution = df = (r-1) (c-1) = 8

With 8 degrees of freedom and at 0.01 level of significance the table value of X<sup>2</sup> is 20.09 which is larger than the observed value of X<sup>2</sup> = 18.937. Hence the null hypothesis is accepted and research hypothesis rejected. Thus, there is no significant relationship between designation and opinion on impact of teacher disciplinary trials upon students' performance

**HYPOTHESIS 2**

**H1:** There is a significant relationship between designation and level of satisfaction in respect of disciplinary procedures adopted by the institutional authorities

TABLE 8: DESIGNATION AND LEVEL OF SATISFACTION WITH RESPECT TO DISCIPLINARY PROCEDURES

Sl. No	Level of Satisfaction	Cadre – Wise Number of Respondents			Row Total	Overall Percentage
		Professors	Associate Professors	Assistant Professors		
1	Highly Satisfied	20 (20)	19 (20)	21 (20)	60	80
2	Satisfied	05 (3.7)	02 (3.7)	04 (3.7)	11	14.7
3	Undecided	-	-	-	-	-
4	Dissatisfied	- (1.3)	04 (1.3)	- (1.3)	04	5.3
5	Highly Dissatisfied	-	-	-	-	-
	Column Total	25	25	25	75	100

(Figures in bracket are Expected Frequencies fe)

$$Chi - Square (X^2) = (20-20)^2 / 20 + (19-20)^2 / 20 + (21-20)^2 / 20 + (0.5-3.7)^2 / 3.7 + (2-3.7)^2 / 3.7 + (4-3.7)^2 / 3.7 + (0-1.3)^2 / 1.3 + (4-1.3)^2 / 1.3 + (0-1.3)^2 / 1.3 = 0.05 + 0.05 + 0.456 + 0.781 + 0.024 + 1.3 + 5.607 + 1.3 = 9.568$$

Degrees of freedom of the X<sup>2</sup> distribution (df) = 8

With 8 degrees of freedom and at 0.01 level of significance the table value of X<sup>2</sup> is 20.09 which is much larger than the observed value of X<sup>2</sup> = 9.568. Hence the null hypothesis is accepted and the research hypothesis rejected. Thus, there is no significant relationship between designation and level of satisfaction with respect to disciplinary procedures adopted by the institutional authorities.

**HYPOTHESIS 3**

**H1:** There is a significant relationship between designation and level of satisfaction with respect to correctional actions against the disorderly educators

TABLE 9: DESIGNATION AND LEVEL OF SATISFACTION WITH RESPECT TO CORRECTIONAL ACTIONS

Sl. No	Level of Satisfaction	Cadre – Wise Number of Respondents			Row Total	Overall Percentage
		Professor	Associate Professor	Assistant Professor		
1	Highly Satisfied	22 (21)	20 (21)	21 (21)	63	84
2	Satisfied	03 (1)	- (1)	- (1)	03	04
3	Undecided	- (0.6)	- (0.6)	02 (0.6)	02	2.7
4	Dissatisfied	- (2.3)	05 (2.3)	02 (2.3)	07	9.3
5	Highly Dissatisfied	-	-	-	-	-
	Column Total	25	25	25	75	100

(Figures in brackets are Expected Frequencies fe)

Chi – Square ( $X^2$ ) =  $(22-21)^2 / 21 + (20-21)^2 / 21 + (21-21)^2 / 21 + (3-1)^2 / 1 + (0-1)^2 / 1 + (0-1)^2 / 1 + (0-0.6)^2 / 0.6 + (0-0.6)^2 / 0.6 + (2-0.6)^2 / 0.6 + (0-2.3)^2 / 2.3 + (5-2.3)^2 / 2.3 + (2-2.3)^2 / 2.3$

= 0.0476 + 0.0476 + 4 + 1 + 1 + 0.6 + 0.6 + 3.27 + 2.3 + 3.169 + 0.0391 = **16.0733**

With 8 degrees of freedom and at 0.01 significance level the table value of  $X^2$  is **20.09** which is larger than the observed value **16.0733**. Therefore, the **null hypothesis is accepted and the research hypothesis rejected**. Thus, **there is no significant relationship between designation and level of satisfaction with respect to correctional actions against disorderly educators of the institution**

TABLE 10: CORRECTIONAL ACTIONS AGAINST INDISCIPLINE ACADEMIC STAFF

Sl. No	Educators – Cadre / Rank	General Suggestions
1	Professors	Warning, Reprimanding and Counseling
2	Associate Professors	Written Warning, Issuing Memo, Oral Reprimand, Counseling and Withholding Increments
3	Assistant Professors	Reprimand after thorough Enquiry and Counseling

Source: Primary Data Collected for Investigation

## RESULTS AND DISCUSSION

The following are the findings of the study:

- All the educators in the rank of 'Professor' (100 percent) expressed affirmative answers (agreement) on the proposition that discipline habits of the educators will have a definite impact upon the students behavior
- Respondent – Educators in the rank of 'Professor' also expressed affirmative response (76 percent) on the proposition that the trials of disorderly educators will have a definite impact upon students' performance. However, 24 percent of educators in the rank of 'Assistant Professor' advocated for the proposition that there would be no impact of trials or enquiry on disorderly academics upon the students' performance. This clearly shows that there were perception variations among and within the academics themselves. Nevertheless, it should be comprehended that disciplinary trials will definitely impact students' regular activities and performance as 68 percent (majority) of the respondent – educators perceived in the same direction.
- With respect to disciplinary procedures adopted by the institutional authorities, 84 percent of 'Assistant Professors' were satisfied. The overall satisfaction level was 80 percent on the proposition. This shows that the institution is in the process of adopting good procedures in discipline management. However, 16 percent of the respondents in the cadre of 'Associate Professor' were dissatisfied with the disciplinary procedures; which was about 5.3 percent of all respondent - educators. It is necessary that the dissatisfied educators' grievances are to be addressed properly.
- Approximately, 70 percent of educators were highly satisfied in respect of grievance redressal mechanism of the institution. It is astonishing to note that all the educators in the cadre of 'Professor' (100 percent) expressed satisfaction in respect of grievance redressal mechanism. Therefore, the investigation makes clear that the institutional grievance redressal mechanism stands effective to the level expected by the stakeholders especially, the academics.
- Nearly, 85 percent of the respondent – educators expressed their satisfaction in respect of correctional actions initiated against the wrongdoing academic staff of the institution. Here again, the institution reveals its reputation being strict and regulations oriented while handling disciplinary issues among the academic personnel. Through this study, it is surprising to note that not even one respondent was dissatisfied over the issues related to corrective actions against the irregular and disorderly academic staff.
- 72 percent (majority) of the educators strongly agreed and favored to the proposition that educators are role models for students and the society. Among the respondents, the highest percentage agreeing to the proposition emerged from 'Professors' (100 percent) and the lowest emerged from 'Assistant Professors' comprising 84 percent. All the respondents who have disagreed were in the rank of 'Assistant Professor', wherein they believed that the role models for the students and society can be other than academics such as *actors, agriculturists, attorneys, policemen, politicians, businessmen, executives, bureaucrats and even military officers*. Only one respondent in the rank of 'Assistant Professor' remained undecided over the issue.

## SUGGESTIONS

The following suggestions might be helpful in efficient and effective discipline management practices to the educators and administrators of the institution:

- The entry – level 'Assistant Professors' and 'Lecturers' are to be informed on disciplinary standing orders of the institution regularly by way of arranging special meetings and holding discussions.
- 360 degree performance appraisal and discipline assessment shall be performed and suspension or even dismissal shall be adopted as the last resort and should only be decided on the basis of a three member enquiry committee to be constituted by the Registrar or the Vice-Chancellor of the institution on discipline conditions and regulations assessment of academic and non-academic staff based on existing disciplinary regulations and laws of UGC.
- Dismissal or discharge shall be instituted only where the staff committed a grave disorderly act in the institution.
- By and large, circulars on disciplinary regulations and affairs shall be circulated to all the departments and proper standing orders on discipline and grievance management properly installed.
- Increments shall be withheld for a major discipline code violation on the part of educators. However, any decision should be taken based on the reports of the special enquiry committee constituted for the purpose.
- The Registrar or the Vice-Chancellor shall collect feedback on performance of the educators from senior and subordinate academics including scientists and researchers of the institution, administrative officers, and the students to assess their regular discipline practices and provide necessary advice whenever necessary.
- A university court of inquisition (UCI) shall be formulated if not a separate committee / panel against the unruly educators. It is very important that thorough enquiry should be carried out by senior academicians above the rank and cadre of 'Associate Professors' of the institution, where there exists violation of disciplinary codes among junior or entry level educators.
- Another method shall be that senior educators might continuously monitor the activities of the junior staff and send their report on performance and discipline to the head of the university on regular basis. Regulations pertaining to the same shall be incorporated and enacted by the institutional head.
- It is essential that counseling should be provided to the entry level 'Lecturers' or 'Assistant Professors' by senior academics on various issues of the institution including disciplinary rules and regulations.
- In addition to this, general awareness shall be instituted on performance appraisal and disciplinary regulations through organizing workshops and seminars.

## CONCLUSION

The management of discipline in institutions of higher learning has become an important issue since; these institutions are not only growing by reputation but also in sizes. There has to be an effective and efficient discipline management system not only to discipline the academic staff including educators, scientists, research staff and researchers but also the non-teaching staff and the students.

Without stressing on discipline, the purpose of education will be of no use and applicability. This case study has highlighted and elicited perception based answers only from the academic people and has thus revealed the original state of affairs in the management and practice of discipline. Universities, being knowledge powerhouses should strive to achieve and correlate discipline based education in order to make help the country and its people proud. Thus, universities have to shoulder greater responsibilities in the creation of better and qualified citizens, who in turn might teach the younger generation to adhere to disciplinary practices in all their endeavors to succeed and to make others succeed too. In this context, the regulations of UGC and the Government of India

should be strictly adhered in letter and spirit in all higher educational institutions in order to check and encounter the problem related to indiscipline, corruption and malpractices by various stakeholders including the academicians.

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**MEASURING FACTOR CONTENT OF INDIAN TRADE IN THE PRE AND POST LIBERALISATION PERIODS**

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**ABSTRACT**

*A large number of empirical studies related to the measurement of factor content of Indian trade are found in the literature. We observe quite a few exercises of the above kind for India also. This paper tries to improve the robustness of the results related to the above by using domestic Input-Output matrix for projection on the one hand and using 'Value Added per Employee' as a measure of relative capital intensity on the other. The advantage of using 'Value Added per Employee' as a measure of relative capital intensity is that we indirectly are able to incorporate the contribution of human capital (in addition to physical capital) in the value added per employee figures. The results obtained suggest that India exports relatively more labour intensive commodities and imports capital intensive commodities, both in the pre liberalization and post liberalization periods and Heckscher Ohlin theorem holds for the Indian economy.*

**KEYWORDS**

Domestic Input Output Matrix, Factor Intensity, Value Added per Employee.

**INTRODUCTION**

Since July 1991, the Indian economy has witnessed a series of economic reforms encompassing all major sectors of the economy. It has marked a steady break from the past policy regime. The import substituting development strategy of the past has been given up in favour of an export linked open economy strategy. As a measure of import liberalization, all types of quantitative restrictions on imports were being gradually withdrawn. Import duty has been reduced to a significant number of commodities. Non-tariff barriers on imports have been withdrawn to a large extent. Exports and imports have now been freed from almost all restrictions. Naturally our concern has been very much to understand the impact of the above on the factor endowment position and trade pattern of the Indian economy. Resorting to Input-Output model, in this paper we have made an intertemporal study to look into the process of changes of trade pattern in relation to factor endowment position over a range of periods. More specifically our study period relates to the period 1989-90 – 2006-07. The year 1989-90 belongs to pre-liberalization phase for the Indian Economy. The years 1993-94, 1998-99, 2003-04 and 2006-07 relate to the post liberalization phase. We take 1993-94 as the year in which liberalization process already started, but was yet to make perceptible impact on the economy. By the years 1998-99 and 2003-04 the impact was already recognizable, and by 2006-07 the liberalization progressed sufficiently so as to make substantial impact on the economy.

**REVIEW OF LITERATURE**

The basic Heckscher-Ohlin Theorem asserts that varying factor endowments in different countries is the most important single factor in determining comparative cost differences leading to International Trade. This coupled with the fact of different commodities using different factor proportions will lead to a pattern of trade where 'each country tends to export commodities which use relatively large amounts of abundant factors'.

Based on certain assumptions, the Heckscher-Ohlin theorem has been put to empirical verification by quite a few researchers including Leontief himself in various countries in fifties, sixties and also a few in recent decades. So far, the most controversial of such attempts is that of Leontief (1953) himself who aimed to analyze the structural basis of American Foreign Trade. Leontief put to test with the help of Input-Output model the commonly held notion that U.S possesses a comparative advantage in the production of commodities which require large quantities of capital and relatively small amount of labour for their manufacture as suggested by Heckscher Ohlin Model.

The factual finding of Leontief caused a great deal of puzzle as it implied some notion contrary to general expectation that the U.S exports goods which require relatively more labour than those required by her competitive import replacements. The later studies of Leontief (1953, 1956) related to the pattern of trade between the Rest of the World and Japan, U.S, West Germany and Canada also did not support the theorem.

But the studies by Totemoto and Ichumura (1959) related to Japan, Stolper, Roskamp (1961) related to East Germany and Bharadwaj (1962), Sengupta (1989) related to India supported the theorem. These observations, certainly, stimulated some more studies incorporating some new approaches towards measuring capital intensity in determining the precise factor content of a country's trade.

Leontief's results apparently contradicting with that of Heckscher-Ohlin theorem induced quite a few researchers to examine the above conflict from various angles. Leontief himself suggested that though there is some scope of substitutability of capital for labour in America, the productivity of American labour is still higher than that of other countries due to the fact that American labour is possibly endowed with richer human capital. Leontief (1956) observed and later Bharadwaj & Bhagabati (1968) subscribed to the same observation that U.S seemed labour abundant because the U.S labour was on the average three times as efficient as foreign labour and so Heckscher-Ohlin theorem seems valid for U.S also.

In the noted exercise of Bharadwaj and Bhagwati (1968), we see a very stimulating attempt to split capital intensity of various Indian industries into physical and human capital components and the apparent contradiction between the Heckscher-Ohlin Theorem and Leontief's original empirical studies can be resolved if these results are adjusted by accommodating human capital in the capital intensity calculation and the Heckscher-Ohlin Theorem seems to survive comfortably. The first exercise of Bharadwaj (1962) on factor content of Indian trade was carried out on unadjusted data (human capital was not taken into consideration). The actual pattern of Indian trade observed in this study seemed to support the Heckscher-Ohlin theorem. The second exercise of Bharadwaj jointly with Bhagawati (1968) was carried out with an intention to test the validity of Heckscher-Ohlin Theorem in the context of Indian economy incorporating revised notion of capital (adjusted for human capital). It was suggested that the skilled labour be separated from unskilled labour and the differential wage rates are to be treated as returns to human capital. Their results despite the adjustment for human capital did support the Heckscher-Ohlin theorem.

The analytically interesting explanation for this contradictions perhaps is the one that runs in terms of the concept of Factor Intensity Reversal introduced by Minhas (1963) and suitably linked with Heckscher-Ohlin theorem. Minhas in his outstanding exercise (1963) tried to show that the strong factor intensity assumption implicit in the Heckscher-Ohlin theorem does not hold if factor intensities are reversible empirically within the observable price range. The CES production function fitted by him to international data showed elasticities of substitution both significantly different from unity and zero and also from one another. This implies that factor intensity reversals took place within observable price ratios. However, serious doubts have been raised on the validity of these observations on both statistical and analytical grounds.

Now, let us look at the history of empirical studies on validity of Heckscher-Ohlin Theorem for Indian trade pattern. As far as the main data base for these kinds of studies are concerned, undoubtedly a sufficiently elaborated Input-Output tables would provide the main input data.

In this connection it should be mentioned that the earlier works for India, by and large, are based on the Input-Output tables prepared by the planning commission. Unfortunately Planning Commission's tables are mostly derived from projection from previous tables (not based on actual survey). In the empirical work of Bharadwaj and Bhagawati (1968), in the absence of any availability of imported input matrix, factor requirements have been calculated on the basis of total input matrix only (Domestic + Import). So, to this extent, imported inputs are proxied by domestic inputs. Hence, factor requirement calculation is to some extent erroneous because calculation of domestic factor requirement needs to be based on domestic input-output matrix only. It needs to be noted that no

exercise published till date relating to testify the Hechsher-Ohlin theorem based on domestic matrix. Most probably it is the first attempt to study the trade pattern of India in relation to its factor endowment pattern by using domestic Input-Output matrix for projection on the one hand and using 'Value Added per Employee' as a measure of relative capital intensity on the other.

**OBJECTIVES**

First, to utilize the domestic input output matrices for India for the years 1989-90, 1993-94, 1998-99, 2003-04 and 2006-07 made available by CSO for getting a more correct projection of domestic output requirement and hence the capital and labour requirement for a certain export and import vector as a component of final demand. So by the above we may expect some improvement in the quality of projection of the consequences of liberalisation of import compared to projection obtained in the exercises done by others.

Second, as the data base of our study incorporates information related to more recent periods, it has been possible to capture the impact of liberalization in the truer sense as it is expected that as more and more time passes consequences of relaxation of controls will be manifested in greater and greater degrees. In this respect, results of our study possibly appear more robust.

Third, 'Value Added Per Employee' as a measure of capital intensity proposed by Lary (1968) is used here to calculate the factor content of Indian Trade. The concept of 'Value Added Per Employee' as a measure of capital intensity has some unique advantages which would be discussed later on.

Fourth, to carry out the comparison of indirect factor content implicit in the composite export and that in the composite import replacements in somewhat unconventional fashion, the total factor content of Indian export in a hypothetical pre trade situation would be compared with the total factor content of the same bill of goods in the actual post trade situation. The indirect factor content of an average unit of export in the actual post trade situation will have to accommodate for intermediate imported inputs. Here the hypothetical pre trade situation is considered as proxy for a situation of import substitution and the post trade situation is generally considered as a situation of import leakage. Then the comparison of factor content of an average unit of export in the pre trade and the post trade situation can be taken as equivalent to the comparison of factor content of export and import replacements.

**THE METHODOLOGICAL FRAMEWORK**

Leontief open static input-output model appears undoubtedly the most useful basic tool for analyzing the factor content of Indian trade. Total output from each industry equals total inter-industrial demand plus the final demand. So, we have the balance relations as follows:

$$X_i = \sum_{j=1}^m X_{ij} + D_i \dots\dots\dots(1)$$

where  $X_i$  = Output of the  $i^{th}$  sector (in value terms),  $D_i$  = Final Demand in the  $i^{th}$  sector (in value terms) and  $X_{ij}$  = input flow from  $i^{th}$  sector to  $j^{th}$  sector.

Assuming a production function with fixed coefficients, we can write

$$X_{ij} = a_{ij} \cdot X_j \dots\dots\dots(2)$$

where  $a_{ij} = X_{ij}/X_j$

By substituting (2) in (1), gross output or sales of sector  $i$  can be expressed as :

$$X_i = \sum_{j=1}^m a_{ij} \cdot X_j + D_i \dots\dots\dots(3)$$

Therefore,  $X = AX + D$  where  $X = (X_i)$ ,  $A = (a_{ij})$  and  $D = (D_i)$

$$\text{Or, } D = X - AX = IX - AX = (I - A)X$$

$$\text{Or, } X = (I - A)^{-1}D \dots\dots\dots(4)$$

In the equation (4) if  $D$  is prescribed from outside, the required gross output levels  $X$ 's get determined. For our present purpose it is not the entire Final Demand but the export and import part of the final demand that are relevant

Now, if  $X_{ij}(m)$  = Imported input of  $i^{th}$  sector to  $j^{th}$  sector and if  $X_{ij}(t)$  = total supply of input of  $i^{th}$  sector to  $j^{th}$  sector and  $X_{ij}(d)$  = domestically produced input of  $i^{th}$  sector to  $j^{th}$  sector, we may obtain the total (direct and indirect) domestic output requirement  $X_E$  to meet the export basket,  $E$  which can be expressed as  $X_E = (I - A_d)^{-1} E$  where  $A_d = (a_{ij}(d))$ . Similarly,  $X_M = (I - A_d)^{-1} M$  where  $X_M$  = Gross output requirement (direct plus induced) to meet the import replacement (domestically) vector  $M$ .

We, now, discuss the methodology related to the determination of factor content of export.

a) Using the criterion of 'Value Added Per Employee', as proposed by Lary(1968) and as already referred to, direct factor content of export is given by the scalar  $V^E = V \cdot E \dots\dots\dots(5)$  where  $E$  is a column vector of sectoral export proportions representing an average unit of export and  $V$  is a row vector of value added per employee.  $V^E$  is then simply a weighted mean of value added per employee, the weights being the sectoral export proportions. Similarly, the factor content of competitive imports is given by  $V^M = V \cdot M \dots\dots\dots(6)$  Where  $M$  is a vector of import proportions. Here we can consider two possible situations.

**SITUATION-1 :  $V^E > V^M$**

The above situation may be characterized as a situation when an average unit of a country's export is relatively more capital intensive than an average unit of import replacements.

**SITUATION-2 :  $V^E < V^M$**

This situation can be interpreted as a situation where an average unit of a country's export is relatively less capital intensive than an average unit of import replacements.

Now, the procedure for calculation of total factor content is as follows:

Considering 'A' as the current Technical Matrix (combining the domestic and the imported input) in case of no trade and consequent absence of any intermediate imports, it may be taken to approximate to the domestic 'pre-trade' technical matrix as it is assumed that domestic inputs are substitutes for imported inputs. So vector  $X = (I - A)^{-1}E$  indicates the direct and indirect output requirement induced by a unitary increase in export in sector  $i$ . Hence total capital content of an average unit of exports as suggested by Lary can be calculated by pre-multiplying the normalized  $X$  by the vector of value added per employee as follows:

$$T_k = V^* \cdot \bar{X} \dots\dots\dots(7)$$

Where  $T_k$  = Total capital content of an average unit of exports

$V^*$  = Row vector of value added per employee

$\bar{X}$  = Normalised  $X$  (The elements of this vector  $\bar{X}$  is obtained by dividing corresponding element of  $X$  by the sum of the elements of the vector  $X$ ).

Similarly, we define  $X^* = (I - A_d)^{-1} E$  as the vector of sectoral outputs to satisfy an average unit of exports in the situation when opening up of trade allows import leakage in the intermediate inputs.  $E$  = Column vector of Sectoral export proportions.

So,  $T_k^* = V^* \cdot \bar{X}^* \dots\dots\dots(8)$  will indicate total capital content of an average unit of export when opening up of trade allows import leakage in the intermediate inputs. Here,  $\bar{X}^*$  = Vector of normalized  $X^*$ .

Now, we are in a position to compare the relative capital intensity of exports vis-à-vis capital intensity of imports substituted for the intermediate inputs and in this context we make the crucial assumption that the country concerned is relatively labour abundant and capital scarce.

We may have the two possible situations as follows:

**SITUATION 1**

If it happens that  $T_k > T_k^*$ , then it would mean that an average unit of the concerned country's export is relatively less capital intensive. In this case, the country concerned imports capital intensive goods and skilled labour from Rest of the World and exports labour intensive goods and the Hecksher-Ohlin proposition holds good.

**SITUATION 2**

But if the result shows that  $T_k < T_k^*$ , it will mean that an average unit of the concerned country's export is relatively more capital intensive. In this case, the country concerned imports labour intensive goods and exports capital intensive goods and the Hecksher-Ohlin proposition seems not valid.

**DATA BASE OF THE EMPIRICAL STUDY**

For our empirical study of relative factor content of Indian trade (capital and labour requirements of exports and import replacements), Input-Output tables (Total inter-industry Transaction matrix) prepared and circulated by CSO for the years 1989-90, 1993-94, 1998-99, 2003-04 and 2006-07 provide major part of the information required for our purpose. The import matrices for the said years are also prepared by CSO but these are not circulated by them. We have collected the import matrices (not published or circulated) from C.S.O's desk informally. The matrices (Transaction and Import) as obtained from CSO for the years 1989-90, 1993-94 and 1998-99 are of order 115\*115 where as the Transaction and Import matrix for the year 2003-04 and 2006-07 are of order 130\*130. All the matrices (115\*115 and 130\*130) are aggregated into 18\*18 matrices by clubbing the sectors by adopting a suitable aggregation scheme.

The employment data and capital stock data for the Non-manufacturing sectors have been taken from the Economic Survey-2006-07 published by Govt. of India and National Accounts Statistics of India-(1950-51 to 2002-03), Linked series with 1993-94 as the base year, published by EPW Research Foundation respectively. It is to be mentioned here that as far as capital data are concerned, net fixed capital stock have been used here. Annual Survey of Industries (ASI) Reports published by C.S.O, Govt. of India, gives information in respect of number of employees and fixed capital for the manufacturing sector. The Manufacturing groups covered in our study are as per the two digit commodity classification of NIC (National Industrial Classification) of the year 1987 and 1988.

**RESULTS OF THE STUDY****THE FACTOR CONTENT OF INDIAN EXPORTS AND IMPORTS**

On the assumption that 'Value Added per Employee' may be taken as a reasonably reliable index of relative capital intensity, estimates of the factor content of Indian exports and imports replacements are obtained as shown in Table-1.

**TABLE-1: DIRECT FACTOR CONTENT OF INDIAN EXPORTS AND IMPORTS REPLACEMENTS**

	Value Added per Employee (Rs. Lakhs)				
	1989-90	1993-94	1998-99	2003-04	2006-07
Export( $V^E$ )	.6809	.1880	.3083	2.1230	2.1430
Import Replacements( $V^M$ )	1.3260	.6428	1.5221	7.0501	6.5432

Source: Author's own calculation based on the equation no - 5 and 6

On the basis of the results shown in table-1, we may conclude that an average unit of Indian exports is relatively less capital intensive than a unit of import replacement. Not only for the pre-liberalization period, 1989-90, the result is confirmed by repetition of the exercise of the calculation for the post liberalization years -1993-94, 1998-99, 2003-04 and 2006-07. It has been found that relative capital intensity of export further decrease in the years 1993-94, 1998-99, 2003-04 and 2006-07.

Now, we incorporate the implication of induced factor requirement in the calculation of capital intensity through Value Added per Employee.

**TABLE-2: DIRECT AND INDIRECT CAPITAL CONTENT OF AN AVERAGE UNIT OF EXPORT (RS. LAKHS)**

	1989-90	1993-94	1998-99	2003-04	2006-07
Without import leakage( $T_k$ )	0.7955	0.3095	0.5892	0.7259	0.7843
With import leakage( $T_k^*$ )	0.7869	0.3012	0.5727	0.6435	0.6523

Source: Author's own calculation based on the equation no - 7 and 8

Table-2 shows that the estimated values of  $T_k$  and  $T_k^*$  for the year 1989-90 are 0.7955 and 0.7869 respectively. The corresponding values for the years 1993-94, 1998-99, 2003-04 and 2006-07 are 0.3095 and .3012, .5892 and .5727, .7259 and .6435 and .7843 and .6523 respectively. The results for the years suggest that opportunity of trade reduces the domestic capital intensity of an average unit of exports. This is in agreement with the hypothesis that India imports capital intensive inputs from the rest of the world and exports relatively labour intensive commodities. When the measurement of factor inputs based on direct plus induced input requirement is considered, an average unit of exports is found less capital intensive than what is suggested by a measure based on direct factor inputs only.

The results of 2003-04 and 2006-07 (table-1), in respect of value added per employee, seem little bit large as compared to those of previous years like 1989-90, 1993-94 and 1998-99. So, one may question the sensibility of the above results. But we feel that the observations of value added per employee themselves do not seem to suggest any direct implication. Rather, we should be more concerned with the comparative values of value added per employee for export and import replacements to obtain any conclusion relevant for testing Hecksher-Ohlin theorem. Though we have taken value added per employee as our guideline for determining relative capital intensity, we should note that the increase in the absolute value added per employee may result from various other factors like technological changes etc. So, too high value of value added per employee in 2003-04 and 2006-07 may be partly result of significantly improved technology and so on.

**CONCLUSION**

India is a labour abundant and capital scarce country and our results show that India exports relatively more labour intensive commodities and imports capital intensive commodities, both in the pre liberalization and post liberalization periods. So, Hecksher Ohlin theorem holds for the Indian economy.

Three important points need be noted here.

One is that the orthodox measure of total factor intensity developed by Leontief assumes that all intermediate inputs are domestically produced. No distinction has been made between the imported input and the domestic inputs as regards the direct factor requirement calculation for the inputs. As a result, the applicability of the total factor intensity so computed is required to be dependent on the validity of the implicit assumption that in respect of direct factor intensity imported intermediate inputs are equivalent to domestic inputs. This assumption seems, to some extent, unrealistic.

Another point is that the labour has been used here in its unadjusted form. Human capital component requires to be properly accounted for. This requires that while calculating labour requirement, we should separate out the skilled labour component (ie differentiation between skilled and unskilled) from the total labour requirements and be clubbed with the physical capital requirement while calculating capital intensity. In this connection, it should be mentioned that when value added per employee method is used to calculate capital intensity, one may expect that along with physical capital 'human capital' component is automatically captured in the estimation process.

The third point is that we should be careful to note that in the calculation of total factor requirement when we consider the post trade situation by incorporating the possibility of imported inputs our procedure of calculation does not take into consideration import in final demands. So when we talk of import replacement we restrict the meaning of 'import' to import in intermediate inputs only. Further our method of analysis does not have any room for considering the factor

content in non competitive imports. Though for US it may be true that large changes in domestic factor prices would not lead to goods classified as non competitive imports being substituted by domestic production, it is doubtful whether the same borderline in the classification of non competitive and competing imports can be applicable for India.

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## ANNEXURE

### ADVANTAGES OF USING 'VALUE ADDED PER EMPLOYEE' AS A MEASURE OF RELATIVE CAPITAL INTENSITY

According to 'Value Added per Employee' as a measure of relative capital intensity, industries with a high value added per employee are regarded as relatively capital intensive and industries with a low value added per employee are regarded as relatively labour intensive. While this measure of capital intensity has its own limitations, Lary's tests on US data suggest that value added per employee is a reasonably good measure of relative capital intensity.

If we assume that wage value is highly correlated with labour skills, value added per employee may be taken to reflect inputs of human as well as physical capital. The usual reliance on more infrequent and sometimes unreliable statistics of stocks of physical capital not of good quality as a measure of capital intensity may be avoided by using this alternative notion of factor intensity. It is worthy of mention that Lary has tested the validity of this approach by breaking down the value added per employee into its wage component and the rest and significant correlations have been found across industries between the first component and measures of skill and between the second and stocks of physical capital. Value added per employee being a flow concept rather than a stock figure, it fits better with the notion of factor inputs into production. Apart from this, the problems associated with the conventional measurement of physical capital are due to the fact that the available data on capital assets include equipments and buildings acquired at various times in the past and evaluated at different price levels, varying depreciation practices and changing tax laws.



**SUPPORTIVE MEASURES OF TOURISM PRACTICES: A STUDY OF JAMMU AND KASHMIR**

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**ABSTRACT**

*Tourism is a dynamic and competitive industry that requires the ability to constantly adapt to customers' changing needs and desires, as the customer satisfaction, safety and enjoyment are particularly the focus of tourism business. Tourism industry is a preliminary service industry of J&K because it does not produce goods but extends services to various classes of people. It plays an effective role in integrating the entire universe. It also opens up a new window for resources, both investments and generation, leading to employment generation as well as socio-economic development of the local population at large. The J&K State Government has emphasis to improve the tourism industry by providing different incentives, infrastructure, marketing & promotion which help to improve the social, economic as well as culture heritage. The paper is conceptual in nature and basic focus of this paper is to draw attention towards the different supportive measures for the stakeholders of the tourism industry, i.e., hotelier, tour & travel agency, transport and guiding services. The literature also suggest that growing number of players are showing heightened interest in tourism, but the current promotional measures are now spreading too thinly. The stakeholders must be grouped together (public and private player) to increase impact of J&K's tourism industry on the world.*

**KEYWORDS**

stakeholders, government policies, culture heritage etc.

**INTRODUCTION**

**T**ourism is a social, cultural and economic phenomenon related to the movement of people to places outside their usual place of residence, pleasure being the usual motivation.

Tourism is concerned with pleasure, holidays, travel and going or arriving somewhere. This is the motivation that makes the people to leave their normal place of work and residence for short term visits to other places. Tourism is concerned with consuming goods and services example, mode of transport, some form of accommodation to stay and so on. However the only reason for the consumption of such services and goods is that we have a pleasurable experience or that we enjoy over selves. A part of that enjoyment is in fact that these goods and services are different from what we typically consume everyday.

The unprecedented growth in the tourism industry during the last fifty years has created major challenges in tourism marketing. As more and more areas of the world are developed for tourism, the destination choices available to consumers continue to expand. The world tourism organization defines tourists as people who "travel to and stay in places outside their usual environment for more than twenty-four hours and not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited (WIKIPEDIA). Tourism in India and especially in Kashmir valley is making tremendous growth [19]. According to Indian Tourism Industry Forecast (2007-2011) by RNCOS [16] Tourism influx to India is booming. The report further bares the information that India is likely to witness an influx of 10 Million international visitors by the year 2010, compared to just 5.42 Million tourists in the year 2007. The World Travel and Tourism Council (WTTC) [10] has also reported that Indian tourism industry will remain one of the fastest growing through the next 10-15 years and expects Indian tourism to generate \$89.9 Billion revenue by the year 2014. The state of Jammu and Kashmir with its varied topography, climate, landscape, and rich cultural variety is unquestionably the most ideal tourist destination in the world, with the valley of Kashmir often described as the "Eden of the East" and "Paradise on Earth". Ladakh, on both sides, represents the stark beauty of the challenging mountain destinations. Jammu, in the foothills of the Himalayas, is a repository of the composite culture of the state and houses the world-famous school of miniature paintings. In addition to some of the highest mountain peaks in world, the area is also home to the multiple cultures of the hardy mountain people. The shrines in Kashmir, temples in Jammu, and monasteries in Ladakh are major attractions in the area of pilgrimage tourism. In brief, J&K holds tremendous, albeit unexplored potential for the development of tourism. Tourism is one of the State's major industries. It has played an important role for developing the economy, particularly in the region of the Valley and Ladakh. The industry has given jobs to a very large number of people, particularly of the younger generation and generated economic activities in the primary, secondary and tertiary sectors in the State, which owes dependence to a large extent to this industry.

**REVIEW OF LITERATURE**

Socio-economic changes in the more developed countries such as higher incomes, better income distribution, longer paid holidays, improvements in transportation technology and a decline in travel costs, provided the means for people to travel in numbers never before realized (Berno & Bricker, 2001)

As early as 1973, the potential negative impacts of tourism were being considered (Young, 1973). These early critiques of tourism as a development tool focused primarily on the negative socio-cultural impacts (deKadt, 1979), but as international tourism continued to grow exponentially, it became apparent that negative impacts were affected on the environment and economies of state as well. The initial response to these negative impacts involved a series of initiatives undertaken by public sector bodies to attempt to manage tourism through visitor management techniques. These initiatives were designed to remodel the worst of the impacts in the short-term. Overall, these were small-scale, localized initiatives that did not attempt to change the nature of tourism as a whole (Swarbrooke, 1999). They were however, the precursors of consideration of sustainable tourism development. Jamal and Getz (1995) apply the theoretical

constructs of collaboration to tourism destinations, offering insight into inter organizational collaboration ( i.e., public and private) for planning and development of local, community-based tourism destinations. Beer, Maude and Pritchard (2003) examined that the tourism can also be a catalyst for diversifying regional economies, as new tourism infrastructure development may in turn help in the establishment of other industries. Go and Williams (1993) point out that tourism organizations specifically have to learn how to share knowledge required to create and provide products and processes better and at a lower cost and risk. This paper view to move towards the application of the network concept as a crucial means to bring about collaboration, which, in turn, is a necessary condition for (tour) packaging, partnership, and interactive marketing, resulting in value-creation of the tourism industry of J&K. This paper also tries to suggest the compassionate (pity & Concern) actions for the different stakeholders of the tourism industry of Jammu and Kashmir

## **HOTELIER AND TOURISM INDUSTRY**

According to the results framework document for ministry of tourism Govt. of India 2010-11 the Government has emphasized to: i) Positioning and maintaining tourism development as a national priority activity; ii) Enhancing and maintaining the competitiveness of India as a tourism destination; iii) Improving India's existing tourism products and expanding these to meet new market requirements; iv) Creation of world class infrastructure; and v) Improving the visibility and attraction of India's tourism sector to expand the potential market; vi) Augmenting human resource base in Hospitality and Tourism Sector. This report also emphasized the improvement and development of the infrastructure in the country including niche products and weighted 27% for the other stakeholders. Government of J&K gives the incentives package to develop hotel accommodation of requisite standards in the state to meet the growing demand and weighted it as 10% of the total budget. The basic focus of this report is improve the customer satisfaction and continuous improvement. Customer focus and satisfaction is the significant driving force to establish the quality goals which basically originates from customer's needs. It is the important component of quality movement because organisation can outsource their competitors by effectively addressing customer's needs and demands. Generally speaking, customer needs identify the operational goals for firms to meet. Oakland (2005) mentioned that quality starts with the understanding of customer' needs and ends when those needs are satisfied. Continuous improvement refers to improving the quality of products and services to achieve customer satisfaction, costs reduction and effective performance. Milakovich (1995) noted that the overall performance of the tourism industry will increase through effective implementation of quality management programmes. The continuous improvement in all activities of the tourism industry will help to achieve the global standards that in turn will enhance the performance.

## **TOUR & TRAVEL AND TOURISM INDUSTRY**

Tour & Travel operators (i.e., public and private) try to make their brochures and websites as attractive, informative and understandable as possible; this information should be easily available to the tourist who comes to the J&K. The information provided must include basic terminology which will most frequently find in brochures, fliers, and on websites. These terminologies are as under:

### **ACCOMMODATIONS**

The information about the rooms available in the state .i.e., Single Room: A room with one bed for one person; Twin Room: A room with two beds for two people; Double Room: A room for two persons with a double bed; Triple Room: A room for three persons; usually consisting of twin beds (or double beds, plus a rollaway bed); lake Front: A room directly facing the lake, Hill View: A room from which it is possible to view the hills, whether the room is on the first floor, the 12th floor, or on a hillside. Service Charges/Taxes: Service charges are a fixed percentage automatically added to room and meal charges. The city, state or federal government sets taxes.

### **CONDITIONS**

The condition of the Force Majeure: An event or effect that cannot be reasonably anticipated or controlled (such as storms or war). Consular Information Sheets: Governments issue Consular Information Sheets for every country of the world. They include such information as location of the government offices or consulate in the subject country, unusual immigration practices, health conditions, minor political disturbances, unusual currency and entry regulations, crime and security information, and drug penalties. If an unstable condition exists in a state that is not severe enough to warrant a Travel Warning, a description of the condition(s) may be included under an optional section entitled Safety/Security.

### **PACKAGE TRAVEL**

Like group tours, packages tend to have fixed itineraries, with ground transportation and hotels booked in advance. But like independent travel, there's no organized group; clients are on their own, free to do as they please at each destination, but they still have the convenience and reliability that come with booking through a tour operator. Vacation Packages: Vacation packages are designed for those traveling independently. They include a combination of two or more travel services (e.g. hotel accommodations, car rental, air transportation) that are offered at a package price. Many vacation packages offer a choice of components and options, thereby enabling you to customize the package to your tastes, interests.

## **TRANSPORT & GUIDING SERVICE AND TOURISM INDUSTRY**

The survival of tourism industry mainly depends upon the quality associated with its products/ services. Similarly, in order to succeed in hospitality service sector, there is a need to develop a culture where quality management is given priority, and so the transport and guiding service is also involved in quality enhancement process. The terminologies that should be more care about are as under:

### **AIR TRANSPORTATION**

The information about the Add-on Fare .i.e., The cost of air travel from a domestic city to another domestic city from which the tour/vacation package originates and vice versa. Baggage Allowance: The weight or volume of baggage that may be carried by a passenger without additional charge. Connecting Flight: A segment of an ongoing trip, which requires a change of aircraft, but necessarily a change of airline. Direct Flight: A flight on which passengers do not have to change planes, but may involve one more stops enroute. Non-stop Flight: Service between two points with no scheduled stop enroute.

### **CAR RENTAL**

The information about the Drop-off Charge: Fee charged by a car rental company to defray the cost of returning the vehicle to its original location. Value Added Tax (VAT): Tax imposed by governmental authority.

### **INDEPENDENT TRAVEL**

There's no group on these trips, no guide and no fixed itinerary, unless the client wants one. The sole difference between this and fully independent travel is that by booking through a tour operator from its available inventory, tourists get the advantage of group buying power, without the group.

### **ESCORTED TOURS**

The most traditional tour product is also the most misunderstood. The options are so varied that it's easiest to identify the few elements they share: Group travel, usually by motor coach but sometimes by ship, or train; a set itinerary, with lodging, activities, and most meals included and a tour director to coordinate, guide, and manage the trip. Traveling on an escorted tour provides a measure of security and peace of mind. And today, more tour operators build in free time on group tours, giving travelers the best of both worlds.

## **CONCLUSION AND SUGGESTIONS**

Above all study suggest that that the J&K tourism Industry is already projecting a vibrant, colourful image of it's diversity in terms of customs, lifestyle, heritage sites etc. through its campaigns. It is time now for a committed effort by the governmental authorities with a co-ordination among various entities related to tourism along with participation of private players is of prime importance if India has to become a top priority for tourists and the tourism industry of J&K get boost if an Effective deployment of 'Human Resources' takes place. Although, some private players have opened their own academies to develop talent, but it is not possible either for the private sector or for the public sector, to cater to the growing demand single-handedly. So, the 'Private-Public Partnership' for

development of world class academic, training and development infrastructure can be a remedy and can enable the industry to take advantage of this most valuable and most widely available resource in the country. J&K tourism industry terribly lacking in international standard infrastructure in accommodation, food, and transport. Tourism industry enough facilities available for budgeted and middle level tourists but are absolutely low on high end tourism. In spite of being in the tourism business for over half a century, They are now framing a tourism policy and a vision document with a perspective plan. Government should encourage infrastructure development in this area as well with a long term vision. It is very simple that adding more airlines and hotels would not lead to anywhere if there are not enough people to work for them and high training costs and recruiting from abroad will push the already high operating costs further. Tourism Policy also needs to be developed for the state to be able to attract more tourists both domestic as well as foreign. India is already projecting a vibrant, colourful image of its diversity in terms of customs, lifestyle, heritage sites etc. through its campaigns. It is time now for a committed effort by the governmental authorities with a co-ordination among various entities related to tourism along with participation of private players is of prime importance if India has to become a top priority for tourists.

### LIMITATIONS AND FUTURE RESEARCH

Tourism Industry is a very dynamic industry and so are its challenges and strategies, therefore a learning approach towards 'best-practices' would yield better results in enhancing competitiveness of this industry. Also, the need for sound perspective in planning and "private-public-community" participation is imperative for this purpose. This paper was an attempt to illuminate the area through simple yet effective examples and cases collected from around the world, based on their contribution in making their respective Tourism Industry more competitive. It leaves a background for further research, as assessing the implications of using the above mentioned 'best-practices' in Indian Tourism Industry can be another rewarding study.

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**CHANGING SCENARIO OF PUBLIC EXPENDITURE ON EDUCATION: REVIEWING THE EXPERIENCE OF INDIA**

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**ABSTRACT**

*Education is the milestone of accelerating the growth of the nation. The role of education in facilitating social and economic progress is well recognized. It opens the opportunities leading to both individual and group entitlements. Education, in its broadest sense of development of youth, is the most crucial input for empowering people with skills and knowledge and giving them access to productive employment in future. Improvements in education are not only expected to enhance efficiency but also augment the overall quality of life. This paper analyses major trends in financing education in India, including expenditures by the central government, state governments which can be judged in terms of adequacy, equity and efficiency. It also examines the level and composition of public expenditure on education and the mechanisms of resource sharing, allocation and utilization, in aggregate as well as separately for the centre and the states. It finds that while expenditure in real terms increased during the 1990s it has stagnated since then.*

**KEYWORDS**

Education, Finance, Investment, Public Expenditure, State Government.

**I. INTRODUCTION**

Economic growth of a nation is mainly determined by social and economic factors. It has been determined when a nation find itself self-sufficient and developed sufficiently. Education is recognized as an engine of social and economic development. Thus investment in education enhances labour productivity, income generation, poverty reduction, human resource development etc. Financing of education has been a matter of great concern and major policy challenge across all the countries. A country's education sector competes for public resources with all other sectors and has been a competition for resources within various sub-sectors of education. There was a time when the educational development of a nation occurred exclusively with the availability of public resources and the private participation was not considered that much necessary and a good practice. The governments were having sound budgets and providing sufficient resources to the education sector, at least, up to the elementary and secondary levels.

India is in the forefront among the developing nations and its major challenges are unemployment, inequality and poverty. All these obstacles are largely due to low level of public expenditure on education in India. These can be reduced with the help of providing better education facilities. Against this background, this paper has made an effort to examine the variations in the trend of public expenditure on education.

**II. REVIEW OF LITERATURE**

Education sector helps in the building of human capital in productive way. So, an attention from the government is essential for these phenomena. Various literatures highlight about the contribution of public expenditure in education sector which accelerates the growth of the nation. Anbalagan (2011) made an effort to examine the trend of public expenditure on education in the post-liberalization period in India. He also expressed his view regarding the importance of public expenditure in education in order to accelerate employment generation, labour productivity, as well as reduce the level of poverty in a developing economy. De and Endow (2008) in their article both of them expressed their opinion about the level and composition of public expenditure on education in India and the allocation of resource in aggregate separately for the centre and the states. They also made strong emphasis upon the Education Policies related to Financing of Education in India which plays a significant role in maximizing the productivity and efficiency of an economy. Tilak, Jandhyala (2003) explains in his article about growth in public expenditure on education in India during the post independence period. His article focuses on inter-sectoral allocation of resources, centre-state relation in financing education and regarding the public expenditure on education.

**III. OBJECTIVE OF THE STUDY**

The role of public expenditure in education is playing a majestic role in transforming all the human beings into the productive human capital. The present paper focuses on the education system of India and the changing pattern of public expenditure on education. By taking both these themes this study has the following objectives:

- To examine the trend of public expenditure in educational sector and its contribution to GDP.
- To examine various expenditure status during the five-year plan periods.
- To analysis the trend and growth of central and state government expenditure to bring improvement in education sector.

**IV. DATA COLLECTION**

For the purpose of this study, data are obtained mainly from Reserve Bank of India (RBI) Data Base, Various issues of Economic Survey, Government of India Ministry of Human Resources Development (MHRD), Five Year Plan documents and from various research articles.

**V. EDUCATION AND ECONOMIC DEVELOPMENT**

Now-a-days the role of education is considered to be the single most important means for individuals to improve personal endowments, build capability levels to be creative which will accelerate the progress of a developing economy like India. In this regard the emergence of education explores the available set of opportunities and makes a way for a sustained improvement in wellbeing. It also promotes economic growth, national productivity and innovation, and values of democracy and social cohesion.

Economic development generally refers to the sustained, concerted actions of policymakers and communities that promote the standard of living and economic health of a specific area that involve multiple areas including development of human capital, infrastructure, regional competitiveness, environmental sustainability, social inclusion, health, improving literacy, and other initiatives. More importantly, it is a critical invasive instrument for bringing about social, economic and political inclusion and a durable integration of people, particularly those 'excluded', from the mainstream of any society. Considering all factors following are the major benefits of education to the economy of a nation.

- Education plays a major catalyst in reducing the economic inequalities among the individual of a nation. By enabling larger numbers to share in the growth process, education can be the powerful force that lifts all barriers towards maintaining the status of economic development.
- An educated and skilled workforce is one of the pillars of the knowledge-based economy. Better educated man power in a nation contributes to improved productivity which leads to higher income; improved economic stability and it provide the inner intensity to compete with developed economy.
- Education also reduces crime: poor school environments lead to deficient academic performance, absenteeism, and drop out—precursors of delinquent and violent behaviour.

- Now-a-days in the ongoing process of industrialization the role of environment is a major concern. Education provides the knowledge to manage the environment in various ways. It can enhance natural resource management and national capacity for disaster prevention and adoption of new, environmentally friendly technologies.
- Education brings about a rapid change in lowering infant rate and child mortality rates in a developing nation like India. Women with some formal education are more likely to seek medical care, ensure their children are immunized, be better informed about their children's nutritional requirements, and adopt improved sanitation practices. As a result, their infants and children have higher survival rates and tend to be healthier and better nourished.

**VI. PUBLIC EXPENDITURE AND EDUCATION IN INDIA**

Economic development of any country can be reflected by its enriched economic resources and human resources. Thus, with the development of economic resources human development is also vital for prosperity of a nation. A basic component of human development is education. It captures capability of acquiring knowledge, communication and participation in community life. According to Human Development Report (1993), literacy is a person's first step in learning and knowledge building and as a result literacy indicators are essential for any measurement of human development. Education holds the key to progress for any inclusionary society and the government, acting as an instrument in providing education bears an important responsibility. The concept of the national system of education implies that up to a given level, all students irrespective of caste, sex or location, have access to education of a comparable quality. There are many educational indicators: literacy rate, enrolment rate, drop-out rate etc. by which the quantity and quality of education can be determined. Ever since the commencement of economic planning in 1951-52, the education sector has remained the priority sector of the central as well as the state governments. In the first plan, top priority was given to elementary education, keeping the secondary education at the back burner, the situation changed during the second and third five year plan, when the higher education and technical education got prominence, the pattern of public expenditure remained almost same during IV, V, VI and VII Five Year Plan. The primary education again came into prominence during VIII, IX and X Five Year Plan because of high spending on programmes like the mid-day meal scheme. At these plan periods expenditures have made hugely and efficiently for the progress of elementary education throughout the country.

It is a matter of common knowledge that primary education acts as a resource for secondary education, which in turn acts as a resource for higher and technical education. Thus, all the three sectors along with the technical education create the final demand for and output of education for the country as a whole.

**VII. TRENDS AND GROWTH OF PUBLIC EXPENDITURE ON EDUCATION**

The expenditure of Central government assumes significance in view of mobilizing state governments to initiate new programmes by providing matching grants, thus providing the required impetus. The Union Government Education budget increased considerable during last decade. Expenditure of union government on education is increasing throughout the years i.e., from 2000 to 2010. In the year 2000-01 the expenditure was 7925.2crores which shows an increasing trend in next years. In 2009-10 it also increases to 42000 crores. Similarly, the percent of GDP also rises from 0.37 to 0.74 from year 2000-01 to 2009-10. Due to the increase in expenditure the percent of total budget also shows an accelerating trend. (Table 1)

**TABLE 1: EXPENDITURE ON EDUCATION BY UNION GOVERNMENT**

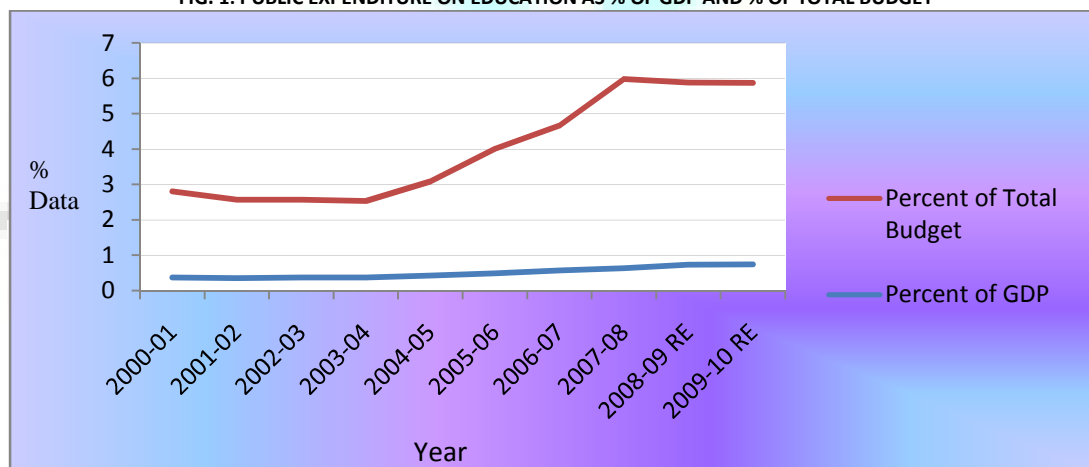
Year	Expenditure('crores)	Percent of GDP	Percent of Total Budget
2000-01	7925.2	0.37	2.43
2001-02	8037.0	0.35	2.22
2002-03	9089.3	0.37	2.20
2003-04	10,177.5	0.37	2.16
2004-05	13,228.7	0.42	2.66
2005-06	17,809.6	0.49	3.52
2006-07	23,809.6	0.57	4.09
2007-08	29,588.7	0.63	5.35
2008-09 RE	38,702.9	0.73	5.15
2009-10 RE	42,000.0	0.74	5.13

RE: Revised Estimates

Source: Based on Union Budget 2008-09 and related budget documents of previous years and Economic Survey 2007-08 and earlier years.

The graphical representation of percent of GDP and percent of total budget (from table 1) gives a clear picture of increasing impact of public expenditure on the education. (Figure 1)

**FIG. 1: PUBLIC EXPENDITURE ON EDUCATION AS % OF GDP AND % OF TOTAL BUDGET**



As we know that every nation's growth and prosperity depends on the human development of the country which is only possible by educating the mass, the government should give attention for the expenditure part of the education. In the context of India, compare to secondary and higher education the role of elementary education makes a significant position in order to shape a new outlook in the process of economic development of a nation. Thus the government of India made a sincere effort to provide huge investment to implement the objective of elementary education. Expenditure on elementary education by central and state government is highlighted in the table 2.

TABLE 2: EXPENDITURE ON ELEMENTARY EDUCATION (Rs. 0,000,000)

Year	Central Government					State Governments	
	Total Allocation on Education	Allocation on Elementary Education (EE)	% Allocation on EE	% Increase EE	% allocation on Mid-Day meal to total EE allocation	% Budget to Education	% Budget to EE
2000-01	4858.8	3117.4	64.2		42	20.1	9.8
2001-02	5560.1	3569.2	64.2	15	29	18.2	9.7
2002-03	6380.0	4257.6	66.7	19	24	18.0	9.7
2003-04	7371.1	5201.0	70.6	22	26	16.3	9.6
2004-05	10133.2	7710.2	76.1	48	21	16.4	9.5
2005-06	14552.5	11749.3	80.7	52	27	17.0	10.2
2006-07	20213.8	16560.0	81.9	41	32	17.1	10.3
2007-08	25452.4	20304	79.8	23	37	17.4	10.4
2008-09	34393.5	21795	63.4	7	37	17.6	10.4
2009-10	42000	25000	59.2	15	35	17.8	10.3

Source: Union Budget 2008-09: Expenditure Budget Vol II, Financial Statistics of Education during the 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> Five-Year Plans. MHRD Budget statistics 2000-09

Table 2 provides data regarding the central government's total allocation on education as well as on elementary education. Similarly this table puts light on the % allocation on elementary education as well as its % increase. Percentage allocation on mid-day meal to total elementary education allocation is also a part of the table. State government's percentage budget to education and elementary education is also shown in the given table. The central government's allocation on education and elementary education is increased from 4858.8 to 42000 and 3117.4 to 25000 from 2000-01 to 2009-10 respectively. The given data in the table shows that the government is also very much attentive towards the growth of education by which the nation can also grow rapidly. During the plan periods the government has also made expenditure on the education sector. Table 3 categorically shows expenditure as percentage of total social sector expenditure. The total five-year plan period expenditure is given in the table 3.

TABLE 3: EXPENDITURE ON SOCIAL SECTOR AND EDUCATION DURING FIVE-YEAR PLANS IN INDIA

Plan	Expenditure on higher education as % of social sector expenditure	Expenditure on elementary education as % of total	Expenditure on secondary education as % of total	Expenditure on higher education as % of total
1951-56	36.52	56	13	31
1956-61	35.52	35	19	46
1961-66	47.21	34	18	48
1966-69	37.77	24	16	60
1969-74	32.57	30	18	52
1974-79	25.03	35	17	48
1979-80	14.02	NA	NA	NA
1980-85	18.70	30	25	45
1985-90	21.98	34	22	44
1990-92	24.69	37	22	41
1992-97	24.32	47	18	35
1997-02	26.03	66	11	23
2002-07	23.22	66	10	24
2007-12	31.51	50	20	30

Sources: (i) Five-Year Plan documents. (ii) Economic Survey (various issues)

This table has data regarding plan wise expenditure on elementary education, secondary education, and also on higher education. In the 1<sup>st</sup> five year plan expenditure on elementary education was 56% of total sector. It has achieved its peak at the plan period of 1997-02 and 2002-07. Similarly, secondary education has maximum expenditure in 1980-85 i.e., 25% of total social sector.

## VIII. CONCLUSION

Development of a nation is no doubt depends on its man power. For enriched man power it is necessary to educate the mass of the society which is impossible without proper educational system. Educational system, like all modern organisations, runs on money. It is widely felt that essentially constraint by resources, many educational plan and reform either failed or did not take off in several developing countries including India. though huge amount of investment are made in education they are not adequate enough to meet the quality of education. For the improvement of quality of education it requires a specific and huge amount of investment which will result in a significant change in educational technology and that fosters the growth a nation. Summarizing all it can be said that education is long term investments which contribute to socio-economic development quite significantly and ends itself in human resource development.

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In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

### *Our Other Journals*

