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RELATIONSHIP BETWEEN HEALTH STATUS AND EXPENDITURE ON HEALTH

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ABSTRACT

In this article, it has been examined the relationship between expenditure on health and health status by using canonical correlation analysis. The study uses life expectancy at birth (years), under 5 mortality rate (per 1,000), adult mortality rate (per 1,000) and total fatality rate (per 1,000) as health status indicators. Five indicators of the expenditure on health were used: total expenditure on health as % of gross domestic product, per capita total expenditure on health at average exchange rate (US\$), per capita total expenditure on health at international dollar rate, per capita government expenditure on health at average exchange rate (US\$), per capita government expenditure on health at international dollar rate. The results of the analyses provided evidence that expenditure on health is important determinants of health status.

KEYWORDS

Health status; expenditure on health.

1. INTRODUCTION

To see the desired impact of made health expenditures on country's healthcare status, the comparison of the health expenditures with country's health status, is very important.

According to the World Health Organization, health is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." In other words, the state of being healthy is not only about having not diseases or discomfort but at the same time, it is about mental well-being. Because of health is about one person's physical and mental status, it can be defined as what to do for health services to keep individuals and society in a good state of physical, mental, and social aspect to help them to continue with their lives. As well as elimination of factors that cause diseases, eradication of diseases or illness preventive measures, considered within the scope of health services.

Health expenditures within the scope of health services ensure future cost-savings while maintaining the ability to work and reducing future health problems. Health status of the community is related to the country's socio-economic condition and rational use of resources. For example; OECD countries that make up 19% of the population of the world, take the 85% of the total health expenditures.

The average life expectancy or in other words how long time people live shows how good quality of life provided by the country to their citizens or for that matter, it is a very significant indicator in evaluating the capacity of that country. Another indicator which is very closely related to this indicator is infant-mortality and under-five child mortality rate.

In this study, the relationship between healthy life indicator and expenditure on health in some countries was examined by canonical correlation analysis method using NCSS (Number Cruncher Statistical System) packaged-software.

2. MATERIAL AND METHODS**2.1. Material**

Material of this study is 100 countries. Data were collected from 100 countries by using World Health Organization statistics. Variables divided into two sets. The first set is health status data set (X variables set) and the second set is expenditure on health set (Y variables set).

The health status includes these variables:

- c1: Total fatality rate.
- c2: Life expectancy at birth (years) (both sexes).
- c3: Under 5 mortality rate (both sexes).
- c4: Life expectancy at birth males.
- c5: Life expectancy at birth females.
- c6: Under 5 mortality rate males.
- c7: Under 5 mortality rate females.
- c8: Adult mortality rate males.
- c9: Adult mortality rate females.

The expenditure on health includes these variables:

- c10: Total expenditure on health as % of gross domestic product %.
- c11: Per capita total expenditure on health at average exchange rate (US\$).
- c12: Per capita total expenditure on health at international dollar rate.
- c13: Per capita government expenditure on health at average exchange rate (US\$).
- c14: Per capita government expenditure on health at international dollar rate.

2.2. Statistical method

The relationship between traffic-related mortality and economic development was examined by Canonical Correlation Analysis (CCA) method using NCSS (Number Cruncher Statistical System) packaged-software.

Canonical correlation is an exploratory statistical technique that examines the relationship between two sets of variables where each set contains more than one variable. It can be considered as a method of aggregating multiple associations into a few significant associations (Johnson and Wichern, 2002; Martin *et al.*, 2005).

CCA is a generalization of the ordinary Pearson correlation coefficient to multi-dimensional variables (Ridderstolpe *et al.*, 2005) and measures the association between two sets of multi-dimensional variables by assessing the correlation between the linear combinations of one set of variables with the linear combinations of a second set of variables (Johnson and Wichern, 2002; Martin *et al.*, 2005; Ridderstolpe *et al.*, 2005).

CCA can be viewed as an extension of multiple regression to situations involving more than one single response variable (Anderson, 1984; Borga, 1998; Ridderstolpe *et al.*, 2005). CCA finds the coordinate system that is optimal for correlation analysis. Canonical correlations are invariant to scaling of the variables (Ridderstolpe *et al.*, 2005).

The optimization criterion is to maximize the association between two groups of variables rather than to maximize the amount of multivariate variation (Martin *et al.*, 2005). CCA is not an indicator of causality (Khattree and Naik, 2000), but a common spatial structure of canonical variables pairs is evidence of the spatial association between these groups of variables (Johnson *et al.*, 2002; Wu *et al.*, 2002; Martin *et al.*, 2005).

CCA gives the maximum correlations between two sets of variables, and at the same time it gives the optimal explanation of variability within the subgroup of variables. Canonical correlation is the most appropriate and powerful multivariate technique if there are multiple dependent and independent variables, It has

been used in many fields and represents a useful tool for multivariate analysis. Canonical correlation represents the only technique available for examining the relationship with multiple dependent variables. Canonical correlation derives the variates to maximize their correlation. This is another unique feature of canonical correlation (Hair *et al.*, 1998).

CCA is used to investigate the relationship between a linear combination of the set of X variables with a linear combination of a set of Y variables. Consider two groups of variables (X and Y) such that one has p variables (X_1, X_2, \dots, X_p), and the other has q variables (Y_1, Y_2, \dots, Y_q). Linear combinations of the original variables can be defined as canonical variates (W_m and V_m) as follows:

$$W_m = a_{m1}X_1 + a_{m2}X_2 + \dots + a_{mp}X_p \quad (1)$$

$$V_m = b_{m1}Y_1 + b_{m2}Y_2 + \dots + b_{mq}Y_q \quad (2)$$

The two resulting linear combinations, one of x-variables and one of y-variables are called the first canonical variables or the first pair of canonical variables (Ridderstolpe *et al.*, 2005).

The correlation between W_m and V_m can be called canonical correlation (C_m). Squared canonical correlation (canonical roots or eigenvalues) represents the amount of variance in one canonical variate accounted for by the other canonical variate (Hair *et al.*, 1998).

The linear combination of the components of X and the components of Y would be $W=a'X$ and $V=b'Y$, respectively. Variances and (co)variances of canonical variates as follows:

$$\text{Var}(W) = a' \text{Cov}(X) a = a' \Sigma_{11} a \quad (3)$$

$$\text{Var}(V) = b' \text{Cov}(Y) b = b' \Sigma_{22} b \quad (4)$$

$$\text{Cov}(W, V) = a' \text{Cov}(X, Y) b = a' \Sigma_{12} b \quad (5)$$

Then the correlation coefficient between W and V canonical variates is

$$r(V, W) = \frac{a' \Sigma_{12} b}{[(a' \Sigma_{11} a)^{1/2} (b' \Sigma_{22} b)]} \quad (6)$$

The null hypotheses is that

$$H_0 : r_1 = r_2 = \dots = r_m = 0 \quad (7)$$

and alternative hypotheses is that

$$H_1 : \text{not all } r\text{'s are equal.} \quad (8)$$

For testing the above hypothesis, the most widely used test statistic Wilks' lambda is defined as follows:

$$\Lambda = \prod_{i=1}^m (1 - r_i^2) \quad (9)$$

It is used Wilks' lambda statistic to develop an approximate chi-square test with pq degrees of freedom:

$$\chi^2 = -[n - 0.5(p + q + 1)] \ln \Lambda \quad (10)$$

In formula (10) n is the number of cases, ln states the natural logarithm function, p is the number of variables in one set and q is the number of variables in the other set.

The statistical significance of χ^2 test is compared with $\alpha = 0.05, 0.01, 0.001$ critical value of chi-square statistic with pq degrees of freedom.

Matrix scores on canonical variates of V_i and W_i are calculated by using values in original data. The sum of canonical scores for each variate is equal to zero. Correlation coefficients between canonical scores (V_i and W_i) and observed values (X_i, Y_i) are called as canonical weights or canonical structure and calculated as follows:

$$CV_i X_i = \text{corr}(V_i, X_i) \quad (11)$$

$$CV_i Y_i = \text{corr}(V_i, Y_i) \quad (12)$$

Canonical weights are used to determine which variables effect markedly to which one of the canonical variates. The canonical weights allow the user to understand how each variable in each set uniquely contributes to the respective weighted sum of canonical variate.

Explained variance is the sum of the squared canonical weights divided by the number of variables in the set and defines how much variance each canonical variate explains.

$$\text{Explained Variance (X)} = \sum_{i=1}^k c^2 v_i x_i / p \quad (13)$$

$$\text{Explained Variance (Y)} = \sum_{i=1}^k c^2 w_i y_i / q \quad (14)$$

The high number of explained variance can clarify whether or not eigenvalues of solution matrix are acceptable level to state correlation between observed two sets by canonical correlation of the sets.

3. RESULTS

Descriptive statistics (the mean values and standard deviation) of each variable considered in both sets are presented in Table 1.

TABLE 1: DESCRIPTIVE STATISTICS SECTION

Type	Variable	Mean	StandardDeviation
Y	C1	2,324	1,096101
Y	C2	71,7	8,182884
Y	C3	28,76	35,05958
Y	C4	68,96	7,85078
Y	C5	74,41	8,519846
Y	C6	30,68	36,62336
Y	C7	26,7	33,61532
Y	C8	210,45	123,7263
Y	C9	131,15	111,0964
X	C10	6,765	2,437227
X	C11	934,56	1342,915
X	C12	1061,53	1162,864
X	C13	669,69	993,1007
X	C14	736,41	856,3143

The Pearson's correlations between variables of health status and variables of expenditure on health are shown in Table 2.

TABLE 2: CORRELATION SECTION

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14
C1	1,00	-0,73	0,79	-0,66	-0,78	0,78	0,79	0,53	0,72	-0,30	-0,35	-0,42	-0,34	-0,41
C2	-0,73	1,00	-0,90	0,99	0,99	-0,90	-0,89	-0,93	-0,93	0,42	0,57	0,62	0,57	0,62
C3	0,79	-0,90	1,00	-0,86	-0,91	1,00	1,00	0,72	0,82	-0,40	-0,43	-0,49	-0,42	-0,49
C4	-0,66	0,99	-0,86	1,00	0,95	-0,87	-0,85	-0,96	-0,91	0,41	0,58	0,62	0,58	0,62
C5	-0,78	0,99	-0,91	0,95	1,00	-0,91	-0,91	-0,87	-0,95	0,42	0,54	0,59	0,54	0,60
C6	0,78	-0,90	1,00	-0,87	-0,91	1,00	0,99	0,73	0,82	-0,40	-0,43	-0,49	-0,43	-0,49
C7	0,79	-0,89	1,00	-0,85	-0,91	0,99	1,00	0,71	0,81	-0,39	-0,42	-0,48	-0,42	-0,48
C8	0,53	-0,93	0,72	-0,96	-0,87	0,73	0,71	1,00	0,90	-0,29	-0,49	-0,51	-0,49	-0,52
C9	0,72	-0,93	0,82	-0,91	-0,95	0,82	0,81	0,90	1,00	-0,26	-0,40	-0,44	-0,40	-0,45
C10	-0,30	0,42	-0,40	0,41	0,42	-0,40	-0,39	-0,29	-0,26	1,00	0,66	0,71	0,61	0,65
C11	-0,35	0,57	-0,43	0,58	0,54	-0,43	-0,42	-0,49	-0,40	0,66	1,00	0,98	0,97	0,96
C12	-0,42	0,62	-0,49	0,62	0,59	-0,49	-0,48	-0,51	-0,44	0,71	0,98	1,00	0,94	0,96
C13	-0,34	0,57	-0,42	0,58	0,54	-0,43	-0,42	-0,49	-0,40	0,61	0,97	0,94	1,00	0,98
C14	-0,41	0,62	-0,49	0,62	0,60	-0,49	-0,48	-0,52	-0,45	0,65	0,96	0,96	0,98	1,00

These correlations show that fatality and mortality rates are negatively correlated to variables of the expenditure on health, life expectancy at birth is positively correlated to the expenditure on health.

Through canonical correlation analysis, a composite (also called as canonical function) of the health status accounts that correlate with a composite of the expenditure on health accounts is derived. The canonical correlation analysis procedure provides as many pairs as there are accounts in the smaller set, which is five in this study.

The test statistics for the canonical correlation analysis are presented in Table 3. The canonical correlations between the first (0,836) were found to be significant ($p < 0,01$) from the likelihood ratio test. The remaining canonical correlation is not statistically significant ($p > 0,05$).

By construing the first canonical variate it is possible to find relationship between the health status and the expenditure on health as rate of 69,93 %.

TABLE 3: CANONICAL CORRELATIONS SECTION

Variate Number	Canonical Correlation	R-Squared	F-Value	Num DF	Den DF	Prob Level	Wilks' Lambda
1	0,836241	0,699299	3,48	45	388	0	0,21898
2	0,433391	0,187828	0,9	32	322	0,619277	0,728232
3	0,279369	0,078047	0,47	21	253	0,979194	0,896648
4	0,154806	0,023965	0,21	12	178	0,997989	0,972553
5	0,05973	0,003568	0,06	5	90	0,997105	0,996432
F-value tests whether this canonical correlation and those following are zero.							

For the first canonical variate suggests that about 31,3% of the variation in Y variables is explained by the X variables and about 57,3% of the variation in X variables is explained by the Y variables (Table 4). These values indicate that health status and expenditure on health interdependencies were strong.

TABLE 4: VARIATION EXPLAINED SECTION

Canonical Variate Number	Variation in these Variables	Explained by these Variates	Individual Percent Explained	Cumulative Percent Explained	Canonical Correlation Squared
1	Y	Y	44,7	44,7	0,6993
1	Y	X	31,3	31,3	0,6993
1	X	Y	57,3	57,3	0,6993
1	X	X	81,9	81,9	0,6993

Standardized canonical coefficients for the first X,Y variate are given in Table 5. Standardized canonical coefficients shows variation (kind of standard deviation) in canonical variate in parallel with 1 standard deviation increase in original variables. In other words these coefficients represent relative contributions of original variables to the related variate.

Equations of Y1 and X1 canonical variate are as follows:

$$Y1 = -0,137c1 + 4,107c2 + 17,237c3 - 0,749c4 + 0,228c5 - 8,979c6 - 7,269c7 + 0,698c8 + 1,456c9$$

$$X1 = 0,0007c10 - 0,845c11 + 1,006c12 - 0,084c13 + 0,903c14$$

TABLE 5: STANDARDIZED CANONICAL COEFFICIENTS SECTION

Y1	Standardized Y Canonical Coefficients Section								
	c1	c2	c3	c4	c5	c6	c7	c8	c9
	-0,13709	4,107394	17,23734	-0,74893	0,227503	-8,97919	-7,26907	0,697967	1,455561
X1	Standardized X Canonical Coefficients Section								
	C10	C11	C12	C13	C14				
	0,00074	-0,84543	1,006209	-0,08429	0,903134				

Since the canonical coefficients can be unstable due to small sample size or presence of multicollinearity in the data, the loadings were also considered to provide substantive meaning of each variable for the canonical variate (Akbas and Takma, 2005).

To evaluate the important accounts of the significant canonical function, canonical loadings were used in this study. Canonical loadings greater than $\pm 0,30$ were considered important (Hair et al., 1998).

The variable-variate correlations (canonical loadings and canonical cross loadings) of the first canonical variate are presented in Table 6 and Table 7.

TABLE 6: VARIABLE - VARIATE CORRELATIONS (CANONICAL LOADINGS)

Y variable set								
Y1	c1	c2	c3	c4	c5	c6	c7	c8
	-0,56002	0,780714	-0,6369	0,764696	0,75918	-0,64529	-0,62885	-0,6314
	c9							
	-0,57002							
X variable set								
X1	c10	c11	c12	c13	c14			
	0,697345	0,926215	0,970824	0,922554	0,978197			

TABLE 7: VARIABLE - VARIATE CORRELATIONS (CANONICAL CROSS LOADINGS)

Y variable set								
X1	c1	c2	c3	c4	c5	c6	c7	c8
	-0,46831	0,652865	-0,5326	0,63947	0,634857	-0,53962	-0,52587	-0,528
	c9							
	-0,47667							
X variable set								
Y1	c10	c11	c12	c13	c14			
	0,583148	0,774539	0,811843	0,771478	0,818008			

Canonical cross loadings of variables with variate are almost the same as canonical loadings.

4. DISCUSSION

The results of the analyses provided evidence that there is significant positive relationship between expenditure on health and health status. This conforms to findings of other studies that health expenditure is an important factor of health status (Anyanwu and Erhijakpor, 2007; Akinkugbe and Afeikhen, 2006; Berger and Messer, 2002; Baldacci et al., 2002; Bokhari et al., 2006; Issa and Ouattara, 2005; Baldacci et al., 2004).

Or (2001) investigated the factor of differences in mortality rates across 21 OECD countries between 1970 and 1995 and found a weak statistically significant relationship between per capita expenditure on health and health outcomes.

Anyanwu and Erhijakpor (2007) examined the relationship between health expenditures and two health outcomes: under-five mortality and infant mortality using data from 47 African countries between 1999 and 2004. They found that 10% increase per capita total health expenditure results in 21% decrease in under-five mortality and 22% decrease in infant mortality (Anyanwu and Erhijakpor, 2007). The results show that health expenditures have a statistically significant effect on under-five mortality and infant mortality rate.

Akinkugbe and Afeikhen (2006) also suggest that health care expenditure as a ratio of GDP positively and significantly effects life expectancy, under-five mortality and infant mortality in SSA, Middle East and North Africa.

Some studies proved that health expenditures have very strong effect on life expectancy at birth (Lichtenberg, 2002; Tüylüoğlu ve Tekin, 2009).

Wang (2002) studied the agents of health outcomes in low-income countries and found that at the national level public health expenditure significantly decreases child mortality.

Novignon et al. (2012) used panel data covering 44 countries in sub-Saharan Africa in a regression models study. They found that health expenditures have a statistically significant effect on health status by increasing life expectancy at birth, reducing death and infant mortality rates.

Day and Tousignant (2005) examined the relationship between health outcomes and health expenditure in Canada for the periods 1926-1999, 1950-1997 and 1960-1997. They concluded that relationships between the health status real per capita health expenditures were statistically significant and not very strong.

Tüylüoğlu ve Tekin (2009) concluded that health expenditure reduces infant mortality rates. Gupta, Tiongson and Verhoeven (1999) also found the same results by using data from 50 developing and transition countries observed in 1994.

Nixon and Ulmann (2006) examined relationship between health care inputs and health outcomes using data for 15 EU countries over the period 1980-1995. They also concluded that health expenditure has a significant effect on infant mortality.

Issa and Ouattara (2005) also proved a strong negative relation between health expenditure and infant mortality rates in their study by using a panel data on 160 countries.

The effect of health expenditure on life expectancy and infant mortality is more than income (Tüylüoğlu ve Tekin, 2009).

On the contrary, some studies have suggested that the link between expenditure on health and health status is either small or statistically insignificant (Musgrove, 1996; Filmer D, Pritchett, 1997; Kim and Moody, 1992; Thornton, 2002; Filmer et al., 1998). Burnside and Dollar (1998) has also found no significant relationship between health expenditure and infant mortality in low-income countries.

Also in a cross-sectional data covering 117 countries for the year 1993, Zakir and Wunnava (1999) found that government expenditure on health as a percentage of GNP has not main effect on infant mortality rates. Similarly, a World Bank report (2004), by using a panel of data for the Indian states during 1980-99, found no effect of health expenditure on mortality rates.

Riman and Akpan (2004) analyzed annual statistical reports of Central Bank of Nigeria in the period from 1980 to 2004 and they did not find a significant long run relationship between expenditure on health and life expectancy.

5. CONCLUSIONS

Indicator of health status in a country is not only from the expenditures on health but also education, poverty, adequate nutrition and improvements in other important factors that are closely related to health status indicators should be also considered. But it is still important to know that there is a positive relation between health indicators and health expenditures. For basic improvement in health indicator, sources must be separated as the same amount as increasing investment in health-care.

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THE ANALYSIS OF THE SERVICE QUALITY IN HOTEL INDUSTRY

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ABSTRACT

The quality of service in hotel industry is an important factor of successful business. Service quality is a way to manage business processes in order to ensure total satisfaction to the customer on all levels. Today the quality is the result of growing of diverse needs of the consumers, along with market globalization, increasing competition and the development of modern technology. If we consider the last years, there is an increasing tendency to improve the tourist facilities and to attract the tourist market which is interested for activities in open nature and relax in fresh and pure air. SERVQUAL model is very important for managers of hotels. They do not know the expectations of their guests, the dimensions of service quality they consider most important, do not match those that are most important for clients. Since there is a connection between the quality of service and the satisfaction of clients in hotel industry, it is important for the hotel to spot a gap in the quality of service. This paper gives a better recognition of critical success factors of quality management implementation in hotels which have some advantages to provide better service to customers. The benefits of offer higher service quality have influence on both hotel sector and customers. Data was gathered from designed questionnaire and statistically analyzed. The development of tourism is very important for the region, because it is a branch which improves the incomes of the community. The aims of the paper were to evaluate perceptions of hotel guests and to test using of the SERVQUAL model in hotel industry and to evaluate perceptions of tourist for attributes of the destination. This analysis will help in the adaption of needs of tourists with hotel product.

KEYWORDS

hotel industry; service quality; SERVQUAL model; tourist destination.

1. INTRODUCTION

 Quality is considered to be of very great importance in the **hospitality industry**. Mill (1986) identifies the aim of service quality as being able to ensure a satisfied customer. However, the focus of quality initiatives has been primarily on selection and training of front line staff (for example, Gober & Tannehill, 1984; Mill, 1986; Cathcart 1988). The issues of measurement and process improvement have been largely neglected.

How is service **industry** different? According to Enrick (1986) "Modern methods of quality control were developed and matured in manufacturing **industries**. These involve the processing and fabrication of materials into finished durable and nondurable goods". Service, however, is a relatively distinct non-manufacturing activity. Work is performed for someone else.

The major distinctions between service and manufacturing organizations are that the product:

- ✓ is intangible and ephemeral;
- ✓ is perishable;
- ✓ frequently involves the customer in the delivery of the product;
- ✓ is not perceived as a product by employees.

In manufacturing **industries** the product is highly visible and therefore identifiable whereas in service organizations the 'product' is frequently 'invisible' and the customer cannot easily be identified. Often a person in a service **industry** has no perception of their work being a product and that the way in which his job is performed has an impact on the success of the organization as a whole.

How do these differences impact on the implementation of TQM in a service organization? Looking again at the Quality Triangle, it is clear that the 'Focus on the Customer' is very much a part of the provision of a service. The further development of identifying internal customers and building the concepts of 'Teamwork' is less immediate. The intangible nature of the product may make it harder for each individual to see that they are contributing to a common goal: Whereas a person making a physical object can usually readily identify the next step in the process, and identify their contribution to the final product and its quality, a clerk in the accounts receivable section of a hospital may find it difficult to identify their customers and see how the quality of their work will affect the final product. However, the difference is one of degree and simply requires, as in manufacturing, that each person be made aware of the value of their role in producing a quality product and be allowed to contribute to continuous improvement in the product.

Service quality is a way to manage business processes in order to ensure total satisfaction to the customer on all levels. The management's perceptions of the consumer's expectations is the guiding principle when deciding on the specifications of the quality of service that the company should follow in providing service. (J. Grznic, 2007). It is important for the company to spot a gap in the quality of service, because there is a direct connection between the quality of service and the satisfaction of clients in hotel industry.

The SERVQUAL model offers a suitable conceptual frame for the research and service quality measurement in the service sector. The model is based on the definition of quality as a comparison of the expected and the obtained as well as a consideration of gaps in the process of service provision.

In the original SERVQUAL, Parasuraman et al, (1985) define service quality through ten dimensions which they sum up in five in 1988: reliability; assurance; tangibles; empathy; responsiveness. But there is some theoretical criticism about his model: (J. Grznic, 2007)

- ✓ *Pattern objections*: SERVQUAL is based rather on an affirmation pattern than on the pattern of understanding
- ✓ *Gap model*: there is little evidence that the consumer evaluates service quality in the sense of perception-expectation gaps
- ✓ *Dimensionality*: the five dimensions of SERVQUAL are not universal; the number of dimensions that encompass service quality is connected to the context.

The most important criticism of SERVQUAL was the usage of gap analysis results (difference between expectation and perception of the received service) in measuring service quality (Cronin and Taylor, 1994).

The quality is one type of measurement that has been viewed by hospitality organizations in terms of product and service efficiency. In 1980s, many of the hospitality organizations were forced to move away from idea of the efficiency and put more importance on customer needs.

(O. Stromgren, 2007)

A well-known philosophy, which gives total overview on quality, is Total Quality Management (TQM). Many researches have been done about service quality, but the hospitality industry has only been receiving modest attention (Harrington & Akehurst, 1996)

Different authors have given various definitions of TQM (M, Shahbazipour, 2007). So, Kanji (1990) defined it as: A way of life of an organization committed to customer satisfaction through continuous improvement. This way varies from organization to organization and from one country to another but has certain principles which can be implemented to secure market share, increase profits and reduce costs.

Berry (1991) defined the TQM process as a total corporate focus on meeting and exceeding customers' expectations and significantly reducing costs resulting from poor quality by adopting a new management system and corporate culture. Kanji shows the concept of TQM: quality-to satisfy customers' requirements continuously; total quality- to achieve quality at a low costs; total quality management: to obtain total quality by involving everyone's daily commitment.

Managers within the hospitality industry make frequent reference to TQM principles. The extent to which these principles are applied effectively within the human resource management area of hospitality however remains under-researched.

There are some TQM models, but there are several elements common to them:

- ✓ the final goal of quality management is customer satisfaction
- ✓ quality management must be systematic
- ✓ -a belief for continuous improvement.

Determining customers' needs is the start; translating these needs in the organization and satisfying them is a major challenge.

General Principles of TQM

Many hotels have subsequently attempted to apply TQM requirements to their operations, with particular emphasis on its application within and through the human resource management function (Boella, 1986; Umbreit, 1987; Redman & Mathews, 1995; Roberts, 1995; Go, Monachello & Baum, 1996; Soriano, 1999). In practice, relatively few properties have become what might be described as "TQM hotels" (Lyons, 1993; Quality Australia, 1993; Breiter, Tyink & Tuckwell, 1995; Carter, 1996; Partlow, 1996; Breiter & Bloomquist, 1998). O. Stromgren, 2007 shows that critical success factors for implementation are:

- *Customer focus* is when in an organization embracing the principles of TQM, both actions and functions are designed and performed with the aim of meeting the needs of customers, who also determine their value.

- *Customer satisfaction* is the degree to which customers of an organization's products are pleased with those products or services. This is a fundamental aim of TQM, to continually increase the customer satisfaction.

- *Employee training* is an important factor of TQM.

- *Top management and leadership* must direct the entire Total Quality process

- *Teamwork* is another aspect for the organization to be committed to learning and to the changes produced by quality improvement.

- *Employee involvement* regards the involvement of the employees and is considered as the bottom line in TQM processes. Employees assume responsibilities to achieve quality in accomplishing their tasks and actively take part in the process of continuous improvement.

- *Continuous improvement and innovation* is the one of the concepts of TQM.

- *Quality information and performance measurement* concerns the means of gathering data to co-ordinate and support the process of making decisions and taking actions throughout the organization.

2. BRIEF OVERVIEW OF TOURISM IN ALBANIA AND AUTHENTIC ALBANIA QUALITY MARK

Albania is a country with ancient cultural tradition and a brilliant history. Albania is an important connecting bridge of Mediterranean Countries and as such a country, it has favorable conditions for the development of tourism. 457 km of the total 1094 km national border line is a wonderful coastline. The nature has reserved a favorable climate to Albania, 120 sunny days, virgin and unexploited lands which inspire curiosity, a perfect nature and diversified relief forms. International experts have uttered that Albania contains the necessary potentials to be a unique centre of European ecological tourism (www.albanian-guide.com). Due to its favorable geographic position, Albania has been called "the Balkan's Gate". It has some particular characteristics where are intertwined the geographical and geological features, the landscapes and relief.

According to the 2011 Travel and Tourism Economic Impact for Albania prepared by World Travel and Tourism Council, the future of the Albanian tourism sector is positive. Key indicators of growth are as follow:

The total contribution of Travel & Tourism to GDP, including its wider economic impacts, is forecasted to rise by 5.4% from ALL 344.2 bn (26.3% of GDP) in 2011 to ALL 582.7 bn (29%) by 2021.

While figures on tourist arrivals are growing year after year in Albania, the country has remained highly dependent on Balkan region tourist.

The Ministry's Tourism Development National Strategy 2007-2013 replaces the 2002 Tourism Strategy. It presents the following vision statement (Vision 2013):

"Albania is a safe, high-value tourism destination featuring an unparalleled variety of world-class natural and cultural attractions in a small geographic area, managed in an environmentally and socially responsible manner, easily accessible to European tourism markets."

Authentic Albania Quality Mark to support Tourism Businesses in Albania

The Authentic Albania quality mark awards program supports enterprises in Albania's tourism industry by establishing quality hotel standards and building opportunities for tourism businesses. This program is the country's first system that rates accommodation facilities in Albania.

Gold, Silver and Bronze Authentic Albania awards were determined based on the Authentic Albania quality mark framework which evaluates facilities using seven key dimensions that together address the travelers' requirements for professionalism, safety, cleanliness and comfort, as well as demonstrate responsible tourism practices. These businesses represent a select group of Albanian accommodations that will be able to bear Authentic Albania quality mark symbol and benefit from promotion and marketing services provided by the ATA. All Authentic Albania quality mark awards are valid for two years, after which the accommodations must undergo a new assessment to remain in the program. The Authentic Albania quality mark framework was developed based on the 37 standards of the Global Sustainable Tourism Criteria. Quality standards and accreditations give travelers the confidence of staying in accommodations run by owners who are serious about providing customers with good value and high quality experiences.

The Authentic Albania Quality mark was developed to raise awareness among Albanian accommodation providers to deliver a product travelers value and appreciate. It evaluates facilities using seven key dimensions which are:

-Business & Governance	10%
-Customer Service/Satisfaction	21%
-Cleanliness Safety & Security	12%
-Management & Workforce	10%
-Responsible/Sustainable tourism	22%
-Marketing & Promotion	10%

The performance of a business today is appraised, including ways in which it can be even better tomorrow, along three award categories: must have, improving to: more is better, and for true excellence: deghter.

3. TOURISM IN THE KORÇA REGION AND TQM IN THE HOTEL INDUSTRY

The city of Korca is situated in southeastern part of Albania. The area occupied by the city today is a former Illyrian settlement. The potential for tourism development in Korca and the surrounding area is high thanks to its historical, cultural and natural wealth. Korca is mentioned as a castle in 1280 and in 1431, as an inhabited castle. After 1484, the city started to expand and development gaining the feature of an urban and regional centre. The city has participated historically in intensive exchange of culture and trade with Byzantium and Greece. Korca's region illustrates and encompassed three of these areas: historical tourism; archaeological tourism, religious tourism. Korca's region is well-known for old churches and monasteries, such as Orthodox Cathedral, which is the biggest in the Albania.

Korca destination as a city should not be seen as separate from the touristic villages surrounding it, since tourists coming to the city also demand to visit the touristic villages around, to take part in their activities or to enjoy their accommodations and traditional dishes. Municipal programs concerned with transforming Korca into "The City of Holidays" do not only help to increase the vibrancy of community life, but they also aim at making Korca a famous city in Albania and the neighboring countries. In other words, these activities help to increase the number of foreign and domestic tourists in rural areas, especially in summer time owing to their favorable climate and fresh air.

The aims of the research were:

a) Evaluate expectations and perceptions of hotel guests on the studied sample

b) Evaluate and calculate the SERVQUAL gap.

The respondents were studied concerning the following:

~"How many times have you visited this destination?"

The responses were: 43%- 1-2 times; 24%- visited it for the first time; 33%- more than twice.

So, we are able to notice that there is a continuous interest to visit these areas, enjoy the fresh air and the landscape, and also traditional cuisine that is often the main reason of visiting these rural areas.

~ Tourists that visit the destination, as far as *the nationality of tourists is concerned*, it results that most of them are native: 45% of them are Albanians from Albania; 19% Albanians from Greece; 10% are Albanians from Macedonia and 26% are foreign tourists, mainly Greeks about 10% followed from Macedonians, French, Germans, English and Asian people; about 1% are American people.

These data show that the interest of domestic tourists is still continuous and according the information gathered from the hotels of the area, there is a tendency of tourists to come during winter time to enjoy the snow and be able to skiing.

This research has tested SERVQUAL model for the measurement of service quality of hotel guests in 3, 4 star hotels in Pogradec and Korca, two cities with many tourist attractions.

Visitors were most satisfied with accommodation and least satisfied with the attractions and shopping facilities in the region. This underlines the need to improve the shopping and attractions offer, which would increase the length of stay of visitors.

RATING OF SERVICES RECEIVED

Visitors were most satisfied with accommodation and least satisfied with the attractions and shopping facilities in the region. So, it is important to improve the shopping and attractions offer, which would increase the length of stay of visitors.

TAB 1: RATING OF SERVICES RECEIVED

RATING OF SERVICES	ALL	INTERNATIONAL	DOMESTIC
	1 to 5	1 to 5	1 to 5
Hotel	3.8	3.7	3.9
Restaurant	3.5	3.4	3.7
Attractions	2.8	2.5	3.1
Shops	3.05	3.0	3.1

TAB 2: SERVQUAL GAP

Dimensions	Expectation	Perception	SERVQUAL Gap=perception-expectation
Tangibles	6,2	5,5	- 0,7
Reliability	6,5	5,9	- 0,6
Responsiveness	6,28	5,84	- 0,44
Assurance	6,3	5,9	- 0,4
Empathy	6,1	5,8	- 0,3
Total SERVQUAL gap	6,28	5,8	- 0,48

The results show that the average rating for expectations are higher than the average perception rating for expectations are higher than the average perception ratings in all dimensions of service quality. But research shows that there were problems in the dimensions of "reliability" (-0, 6) and "tangibles" (-0, 7) and hotels guests are more satisfied in the dimension of 'empathy', which is the narrowest (-0, 3)

4. CONCLUSIONS

The objective of TQM, simply stated, is to: "Do the right things right the first time, every time".

TQM is important in all sector of tourism, especially in hotel industry due to TQM is three main things to judge whether they should stay in this hotel again or should go for another one. The importance of total quality management (TQM) in the tourist industry has risen to an extraordinary level because of the change in preferences of tourists' behavior and the growth of competitiveness of new tourist destinations.

The major difficulty for service organizations in implementing TQM is determining measurements that provide quantifiable data. This study has shown how, by focusing on processes and identifying appropriate quality measures, it is possible to obtain such data.

Once a service organization identifies measurement techniques they should not experience any difficulties other than those faced in the manufacturing sector.

SERVQUAL can be widely applied in practice in various services. In the hotel industry, service quality is crucial to the satisfaction of the client.

According to gathered data and observation, there are some weaknesses about TQM success factors performance in these hotels.

Personnel need to work effectively as a team, in order to eliminate barriers to successful performance.

Hotels must focus on employee job satisfaction, because increased employee relations and satisfaction will lead to successful quality implementation in the service sector. For this, training and education based on total quality must be planned and provided.

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A STUDY ON SOCIO – ECONOMIC STATUS OF INTEGRATED FARMERS IN NORTH WESTERN ZONE OF TAMILNADU STATE

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ABSTRACT

Agriculture is considered as a crucial enterprise for the livelihood and nutritional security of the marginal and small farmers of the country. In this scenario with the limited possibilities of increasing the cultivable land Integrated Farming System plays an imperial role to provide sustainable income for the marginal and small farmers. In this context, knowledge about the socio economic status of the integrated farmers is very much essential for the policy makers to develop an effective programme. The present study was carried out in the North Western Zone of Tamilnadu with the specific objective of finding out the socio economic profile of the integrated farmers. A total of one sixty (160) farmers were randomly selected from four districts of the selected zone of Tamilnadu. The data was collected from selected farmers through a structured interview schedule after pre -testing. The findings of the study revealed most of the farmers (47.5 per cent) were old aged and were illiterates (30 per cent). Cent per cent of them were practicing agriculture as main occupation and 71.87 per cent of them were having medium farming experience. More than half (61.25 per cent) of the farmers were marginal and getting medium level of income (52.5 per cent). Majority (40.6 per cent) of the farmers had medium level of mass media exposure and extension agency contact. The study concludes that the farmers need more extension training regarding Integrated Farming System (IFS) to enrich their knowledge level and to improve their standard of living.

KEYWORDS

Integrated Farming System, socio-economic status, North Western Zone of Tamilnadu.

INTRODUCTION

The population of India is increasing leaps and bounds, demanding more production of food from limited cultivable land and other resources. In this regard agriculture sector plays an imperative role with the contribution of 18 % of the total Gross Domestic Product (GDP) along with more than 60 % population dependence (National policy for farmers, 2007 and Golait, 2007; Hiremath, 2007). The sector is being dominated by marginal and small farmers, having small landholdings of less than 2 hec for cultivation (7th Agricultural Census, 2002). In India, the livestock production is intrinsically linked with agriculture and each one is being dependent on the other and both are crucial for the overall food security of the people (Rao et al., 2003; Bithal and Ali, 2005; Ravikumar and Chander 2006, Singh et al., 2007). The sector contributes 22.14% % to the agriculture and GDP 3.93% (Rs. 2,41,177 crore) of the India's total G.D.P (National Accounts Statistics, 2011). In recent years, land based livelihoods of marginal and small farmers are increasingly becoming unsustainable, since their land has not been able to support the family's food requirements and fodder for their cattle. As a result, rural households are forced to look at an alternative means for supplementing their livelihoods (Vision 2030, 2011). This large proportion of the smallholders is in the unfavorable production environment (Pal et al., 2005) and they are in pressure to move to non-farm activities or better farming activities to augment their income (NCAER, 2009). Since, there are limited possibilities of increasing additional area under cultivation, it is of immense importance to produce more for ever-increasing population as well as to ensure the efficient use of feed resources including the crop residues. It is not possible with the present conventional agriculture system, which is subjected to a high degree of uncertainty of income and employment to the farmers. Hence, it is imperative to evolve a suitable strategy for augmenting the income of the farmer's especially for marginal and small farmers. In this context, the Integrated Farming System (IFS) is considered to be the most powerful tool for enhancing the profitability of the farming systems of marginal and small farmers (Anonymous, 2005; Thamizoli et al., 2006).

RESEARCH METHODOLOGY

The present investigation was purposively carried out in North Western Zone of Tamilnadu. To assess the real socio economic status of the integrated farmers in the North Western Zone all the four districts namely Salem, Dharmapuri, Krishnagiri and Namakkal were selected to conduct the present study. From each one of the selected district two blocks were randomly selected and thus a total of 8 blocks forms the study area. Two villages each from the selected blocks and then it comprises a total of 16 villages were randomly selected for the present investigation. The independent variables were selected by using a five point continuum scale from 30 extension specialists from various parts of the country. A sample of one sixty i.e. 40 respondents from each district were selected as sample for the study. A structured interview schedule was prepared and put for pretesting other than the study area. According to the results of pre testing the necessary corrections were made to finalize the interview schedule. The data was collected from the selected farmers through personal interview method by using the interview schedule. The collected data was subjected to the conventional analysis by using the necessary statistical methods. (Snedecor and Cochran 1996). The categorization of the variables was done by using mean and standard deviation and then the respondents were classified accordingly.

RESULTS AND DISCUSSION

AGE

Table 1 explains about the various age of the respondents. Majority of the farmers (47.5 per cent) were old aged followed by 34.37 per cent of them were middle age group and the remaining 18.2 per cent of them were young age group. These findings are contrast to the results of Bhalerao et al. (2010) who found that the livestock based farming system in Konkan has been taken up mainly by middle age farmers. Similarly, Mahadik et al. (2010) observed that majority of the farmers (68 per cent) of rice and backyard poultry farming were middle aged. This explains that the farmers have been practising the farming activities traditionally and this might be the reason for more number of old age respondents.

EDUCATION

The findings made in the study indicate that 30.00 per cent of the respondents were illiterates, 7.5 per cent of them can read and 16.8 per cent of them were able to read and write. Almost equally i.e. 13.7 per cent of the respondents were completed primary school and 15 per cent of them were high school level educated. Further, 8.12 and 5 per cent of them were in secondary and higher secondary levels respectively. A very meager i.e. only 3.75 per cent of the respondents were graduates in the study. These results are similar with the findings of Bhalerao et al. (2010) who reported that the IFS farmers were possessing high school level of education. Likewise, Prasad et al. (2011) reported that the integrated farmers from Sahibganj and Pakur districts of Jharkhand were having

low level of education. In contrast to these findings, Mahadik et al. (2010) observed that majority of the integrated farmers (36.8 per cent) were educated up to secondary level.

GENDER

It could be observed from the table 1 that majority of the respondents i.e. more than three fourth of the respondents (88.75 per cent) were male and only 11.25 per cent of them were females. The findings of the study indicate that male has taken up the farming activities traditionally.

OCCUPATION

PRIMARY OCCUPATION

From the table 1 it is observed that all the respondents were practising agriculture as main occupation. It was because of the reason that, the farmers with agriculture were basically selected as respondents for the study.

SECONDARY OCCUPATION

Table 1 indicates that most of the farmers (88.75 per cent) were doing livestock farming as their secondary occupation and 7.5 per cent of them were practising vermicomposting. A very meagre each 0.62 per cent of them were having horticulture and agro-forestry and only 1.8 per cent of them were agricultural labourer. The study is basically on integrated farming systems and the respondents were selected based on the land and livestock possession hence, the majority of the respondents were practising livestock farming as secondary occupation. In IFS livestock component can easily integrated with the agriculture and this might be the reason for possessing livestock as their secondary income source by more number of respondents. The observations in this study by the researcher is in line with Vision 2030 (2011a) among the various components of farming systems milch animals (cows and buffaloes), irrespective of breed and productivity, is the first choice of the farmers as an integral part of their farming system.

FARMING EXPERIENCE

Table 1 reveals the level of farming experience of the respondents. Nearly three fourth (71.87 per cent) of the respondents were possessing medium level of farming experience and more or less equal i.e. 15 per cent and 13.12 per cent of them had low level and high level of farming experience respectively. Traditionality of the farmers might be the reason for having more number of farmers in medium level of experience. These findings are in line with the results of Bhalerao et al. (2010) found that the respondents in their study were possessing medium level of farming experience.

OPERATIONAL LAND HOLDING

In the present investigation the respondents were classified (according to Government of Tamilnadu classification) based on the operational land possessed by them. It is clearly seen from the Table 1, that majority (61.25 per cent) of the respondents was marginal farmers, followed by small (38.75 per cent) farmers. It reflects the nature of study since IFS is suitable to the small and marginal farmers. Moreover in this study the IFS farmers were selected and this might be the reason for having only small and marginal farmers. In concordance with these findings Nageswaran et al. (2009) reported that majority of the IFS following farmers (47.3 %) were marginal farmers (with land holdings below 2.5 acres) and 29.4 per cent of them were small farmers (with land holdings between 2.5 to 5.0 acres). Similarly, Prasad et al. (2011) reported that majority of the integrated farmers from Sahibganj and Pakur districts of Jharkhand were belonged to small and marginal farmers. According to Thamizoli et al. (2006) IFS is considered to be the most powerful tool for enhancing the profitability of the farming systems of small and marginal farmers. In contrast to these results Hendrickson et al. (2008) reported that the IFS is more favored to medium farmers.

TABLE 1: PROFILE FARMERS PRACTICING IFS (N=160)

Sl.No.	Variables	Frequency	Percentage
1	Age		
	Young (Up to 33 years)	29	18.12
	Middle (34-43 years)	55	34.37
	Old (> 43 years)	76	47.5
	Mean \pm SD: 43.36 \pm 10.79		
2	Education		
	Illiterate	48	30
	Can read only	12	7.5
	Can read and write	27	16.8
	Primary	22	13.7
	High school	24	15
	Secondary	13	8.12
	Higher secondary	8	5
	Graduate and above	6	3.75
3	Gender		
	Male	142	88.75
	Female	18	11.25
4	Occupation		
	Primary occupation		
	Agriculture	160	100
	Others	0	
	Secondary occupation		
	Livestock farming	142	88.75
	Vermicomposting	12	7.5
	Horticulture	1	0.62
	Agro-forestry	2	0.62
	Agricultural laborer	3	1.8
5	Farming experience		
	Low (up to 11 years)	24	15
	Medium (11-25 years)	115	71.87
	High (>25 years)	21	13.12
	Mean \pm SD: 18.08 \pm 7.14		
6	Operational land holding		
	Landless	0	
	Marginal	98	61.25
	Small	62	38.75
	Semi-medium	-	
	Medium	-	
	Large	-	
7	Land use pattern		
	Cultivation	12	7.5
	Grazing	5	3.12
	Both cultivation & grazing	143	89.37
	Others	-	

Source: The data are original on the basis of a survey work conducted by the investigator.

LAND USE PATTERN

It could be observed from the table 1, 7.5 per cent of the respondents were using their lands for cultivation purpose only whereas a meager 3.12 percent of them were using it only for grazing animals. But, more than three-fourth (89.37 per cent) of the respondents were using their lands both for cultivation and grazing purpose. The Food and Agriculture Organization (FAOSTAT, 2011) defines agricultural land as the sum of arable land, permanent crops, permanent meadows. The findings of the study is in accordance to this definition i.e. the land in IFS can be used both for grazing and cultivation purposes.

CROPPING PATTERN

The cropping pattern in the selected districts is presented in the table below. It could be observed from the table that all the crops namely paddy, tapioca, groundnut, sorghum, sugarcane and cotton are being cultivated in almost all the districts because these selected districts are from the same zone. This might be the reason for such kind of commonness. Only the month of cultivation varies depends on the availability of water facilities. Further, the area under cultivation depends on the water availability, labor availability and the convenience of the farmer. Apart from these crops, the farmers were cultivating cereal and pulses, vegetables and fruits based on the water availability and need. Besides farmers were cultivating pulses as intercrops.

TABLE 2: CROPPING PATTERN IN THE SELECTED DISTRICTS

Sl. No.	District	Crops cultivated	Month of cultivation
1.	Dharmapuri	Tapioca Groundnut Pulses / Gingelly Cotton Fodder Sorghum	January - December June - September February - May August - February June - September January – April
2.	Salem	Turmeric Tapioca Cotton Pulses/groundnut Sugarcane Paddy Sorghum Groundnut	June - March November - October August - January Feb- Apr& Jun- Sept Dec - November December - March January – March April & September
3.	Krishnagiri	Paddy Ragi Sugarcane Groundnut	December - March July - Oct January - Dec July – Oct & December - Mar
4.	Namakkal	Tapioca Groundnut & pulses Gingelly Cotton Paddy Sugarcane Sorghum	January- December June - September October - January August - January September - January Nov - October January - April

Source: The data are original on the basis of a survey work conducted by the investigator.

LIVESTOCK POSSESSION

It is clearly seen from the table 3, 20 per cent of the farmers were possessing cattle alone and 4.37 per cent of them having buffaloes. 15 per cent and 1.25 per cent and 5.62 per cent of the respondents were having goat, sheep and poultry respectively. Whereas, the majority (53.75 per cent) of the respondents were having the combination of above said animals. The results indicate the nature of integration of animals along with agriculture. The reason for possessing dairy by more number of respondents might be of getting more income. These findings are in line with Vision 2030 (2011a). Moreover, goats plays major role in enhancing income source of the farmers due to the demand of goat meat (chevon) and these findings are correlated with the results of Prabu et al.(2011) who stated that the goat enterprise was observed to be a profitable income generating avenue in Tamilnadu. Further, among the combination of the animal's majority of the farmers were possessing dairy and goat as main enterprises.

TABLE 3: DISTRIBUTION OF THE RESPONDENTS ACCORDING TO LIVESTOCK POSSESSION AND ANNUAL INCOME (N=160)

Variables	Category	Frequency	Percentage
Livestock possession	Cattle	32	20
	Buffalo	7	4.37
	Goat	24	15
	Sheep	2	1.25
	Poultry	9	5.62
	Mixed	86	53.75
	Others	-	-
Annual income	Low	17	10.62
	Medium	84	52.51
	High	59	36.87

Source: The data are original on the basis of a survey work conducted by the investigator.

Note: The classification of low, medium, high were done by using mean \pm deviation.

ANNUAL INCOME

It is seen from the table 3 that majority of the farmers getting low and medium income with the existing farming system. The observations revealed that majority (52.5 per cent) of the respondents belong to medium income group (around Rs. 1lakh) followed by low (10.62 per cent) income group (about 70 thousands) and high (36.87 per cent) of more than 1lakh rupees income group. The reason for maximum of medium and low income is poor knowledge about the farming system models and lower adoptability of improved technologies. The findings of the study is in accordance with the observations of Mahadik et al. (2010) who observed that majority of the farmers (68 per cent) of rice and backyard poultry farming were earning medium level of income.

MASS MEDIA EXPOSURE

According to mean and standard deviation majority of integrated farmers had good exposure to the mass media channels. Table 4 explains that nearly half of the respondents (40.62 per cent and 37.5 per cent) were exposed to medium and high level of mass media channels respectively. Even then 21.8 per cent of the farmers remained in low level of mass media contact. Further among many mass media channels radio plays significant role i.e. 80. 6 per cent of them were using it for getting information in different frequencies. Television comes next to radio as main mass media source i.e. 76.25 per cent of them were using it.

Nearly half of the respondents (48.12 per cent) were using newspaper as main mass media source and each 21.87 per cent of them using field tour and exhibition for getting the needed information. 27.5 per cent of the farmers were using meeting as a mass media channel at various frequencies. A meager 5 per cent of them only using internet as a mass media source. In all the categories a considerable amount of the respondents were in never use of any mass media channels for their information source (Table 4). These results are in line with the reports of Mahadik et al. (2010) who stated that the integrated farmers were having good mass media exposure.

TABLE 4: DISTRIBUTION OF RESPONDENTS ACCORDING TO MASS MEDIA EXPOSURE (MME)

MME	Frequency of use			Total	Never use
	Regular	Occasional	Rare		
Radio	19 (11.87)	67 (41.87)	43 (26.87)	129 (80.6)	31 (19.37)
T.V.	29 (18.12)	50 (31.25)	43 (26.87)	122 (76.25)	38 (23.75)
Newspaper	2 (1.25)	24 (15.0)	51 (31.87)	77 (48.12)	83 (51.87)
Internet	1 (0.63)	3 (1.87)	4 (2.50)	8 (5)	152 (95.0)
Field tour	4 (2.50)	9 (5.63)	22 (13.75)	35 (21.87)	125 (78.13)
Exhibition	3 (1.87)	12 (7.50)	20 (12.50)	35 (21.87)	125 (78.13)
Meeting	2 (1.25)	10 (6.25)	32 (20.0)	44 (27.5)	116 (72.5)
Other	0	0	0	0	160 (100.0)
Level of MME		Frequency		Percentage	
Low (up to 1.17)		35		21.87	
Medium (1.18 to 4.6)		65		40.62	
High (more than 4.6)		60		37.5	

Note: The classification of low, medium, high were done by using mean \pm standard deviation (**Mean \pm S.D: 4.65 \pm 3.48**)

Source: The data are original on the basis of a survey work conducted by the investigator.

Figures in the parenthesis indicate percentage.

EXTENSION AGENCY CONTACT

As per the mean and standard deviation majority of integrated farmers had good contact with extension agencies. Table 5 reveals the level of extension agency contact by the respondents and it is found to be medium (41.25 per cent) and high level (36.75 per cent). It is clearly evident from the table 5, that among all extension agencies friends and relatives (82.5 per cent) and progressive farmers (77.5 per cent) followed by veterinarians (56.25 per cent) and livestock inspector (49.37 per cent) were found to be the prime source of information. However, very less i.e. 26.25 per cent and 13.75 per cent of the respondents were using Non Government Officials (NGOs) and Panchayat Union Office (PUO) as main extension agencies. It may be due to the fact, that there are hardly any NGOs and PUO working for the IFS development in the study area. In all the type of extension agencies a considerable amount of the respondents were in never use of any mass media channels for their information source (Table 5). These results are in line with the reports of Mahadik et al. (2010) who stated that the integrated farmers were having good level of extension agency contact. Similarly Jini (2008) in his study on tribal farmers revealed that the main source of extension contacts were gram sewak, KVK personnel and agriculture extension officers. Roy (2009) revealed that still today major source of communication for tribal farmers are localite channels.

TABLE 5: DISTRIBUTION OF RESPONDENTS ACCORDING TO CONTACT WITH EXTENSION AGENCY (N=160)

CEA	Frequency of contact					Total	Never use
	Daily	Weekly	Fortnightly	Monthly	More than a month		
VAS	0 (0.00)	12 (7.5)	23 (14.37)	22 (13.75)	33 (20.62)	90 (56.25)	70 (43.75)
LI	0 (0.00)	20 (12.5)	26 (16.25)	30 (18.75)	23 (14.37)	79 (49.37)	61 (38.12)
Progressive farmers	0 (0.00)	15 (9.37)	19 (11.87)	46 (28.75)	44 (27.5)	124 (77.5)	36 (22.5)
Friends & relatives	0 (0.00)	23 (14.37)	14 (8.75)	52 (32.5)	43 (26.87)	132 (82.5)	28 (17.5)
Non Government Officials	0 (0.00)	0 (0.00)	10 (6.25)	17 (10.62)	15 (9.37)	42 (26.25)	118 (73.75)
Panchayat Union Office	0 (0.00)	0 (0.00)	4 (2.5)	7 (4.37)	11 (6.87)	22 (13.75)	138 (86.25)
Others	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	160 (100)
Level of CEA		Frequency			Percentage		
Low (up to 3.13)		32			20		
Medium (3.14 to 6.78)		66			41.25		
High (more than 6.78)		62			38.75		

Note: The classification of low, medium, high were done by using mean \pm standard deviation (**Mean \pm S.D: 6.78 \pm 3.65**)

Source: The data are original on the basis of a survey work conducted by the investigator.

Figures in the parenthesis indicate percentage.

SOCIAL PARTICIPATION

From the table 6 it could be seen that the considerable amount of participation in the co-operatives (30 per cent) may be due to successful co-operative movement in milk and agriculture sector. About 19.37 per cent of the integrated farmers were participated in village panchayath whereas 19.7 per cent of them were participated in farmers groups in the study area. Representation of integrated farmers in farmers association, panchayat union was remained low. None of them were participated in market association. In all the categories majority of the respondents were not participating. This clearly explains about their poor participation in social organizations and this might be due to unavailability of time, work load in farming activities etc.

TABLE 6: DISTRIBUTION OF RESPONDENTS ACCORDING TO SOCIAL PARTICIPATION

Social participation	Office bearer in present	Member in present	Office bearer in past	Member in past	Total	No participation
Village panchayat	6 (3.75)	11 (6.87)	8 (5.0)	6 (3.75)	31 (19.37)	129 (80.62)
Panchayat union	0 (0.00)	5 (3.12)	0 (0.00)	3 (1.87)	8 (5.0)	152 (95)
Cooperative society	5 (3.12)	15 (9.37)	13 (8.12)	15 (9.37)	48 (30)	112 (70)
Farmers groups	6 (3.75)	11 (6.87)	8 (5.0)	6 (3.75)	31 (19.37)	129 (80.62)
Farmers association	0 (0.00)	3 (1.87)	0 (0.00)	3 (1.87)	6 (3.75)	154 (96.25)
Market association	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	160 (100)
Others	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Level of Social participation		Frequency			Percentage	
Low (up to 0.87)		85			53.12	
Medium (0.88 to 1.83)		16			10	
High (more than 1.83)		59			36.87	

Note: The classification of low, medium, high were done by using mean \pm standard deviation (**Mean \pm S.D: 1.83 \pm 2.67**)

Source: The data are original on the basis of a survey work conducted by the investigator.

Figures in the parenthesis indicate percentage.

CONCLUSION

The findings shows that majority of the respondents were old aged, illiterates, medium farming experience and marginal farmers category. Majority of the respondents were having medium level of extension agency contact and mass media exposure. Hence, the policy makers and extension agencies should focus on the integrated farmers by planning viable development programmes at the block and village level.

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ORGANIZATION CITIZENSHIP BEHAVIOUR: IT'S RELATION WITH MANAGEMENT STYLE AND ITS ANTECEDENTS

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ABSTRACT

This study is designed to measure the relationship between Organization citizenship behavior (OCB) and management style and identified the antecedent of OCB. OCB is a one antecedent of organizational performance. This study explores the definition of OCB and its relation with management style. However the antecedents of OCB are not properly investigated. Based on the discussion on the dimensions of OCB a number of antecedents were identified. When the relation of management style and OCB are clear, and the antecedents of OCB are known, managers would be able to promote OCB among their employees and result will be better performance.

KEYWORDS

Organizational Citizenship Behavior, Management style, job satisfaction and Organizational Commitment, Personality Characteristics, leadership behavior, Employee age and motivational theories.

INTRODUCTION

For the last two decades, OCB has been a major construct in the fields of psychology and management, so it has a great deal of attention in the literature (Batman & Organ 1983; Niehoff & Moorman, 1993; Organ and Ryan 1995; Podsakoff, 2000). OCB is referred as set of discretionary workplace behaviors that exceed one's basic job requirement. They are often described as behaviors that go beyond the job requirement.

Organ (1988) says OCB is held to be vital role for the better performance of the organization. Organ further explained that OCB can maximize the efficiency and productivity of both employees and the organization that ultimately contribute to effective functioning of the organization.

In this study we try to investigate the relationship between management style and organization citizenship behavior and explore antecedents of OCB. Management styles are also linked with organization citizenship behavior. According to Ehrhart (2004) there is positive association between leadership behavior and organization citizenship behavior. In organization historically it is believe that OCB is positive for organization and benefit for organization as well as all stake holders. OCB create an environment where people try to help each other and shows modern trend in management where managers and workers cooperate each other, avoid lengthy and non-important procedures and focus to increase performance of organization

The purpose of this study to identified and measure the impact of different antecedents with organization citizenship behavior, how outcome is use to increase the performance of organization and high lighten the factors that influence organization citizenship behavior. OCB is an important factor that can contribute for the better performance of an organization therefore it is difficult to understand the variables that significantly and positively aid in creating this positive behavior within the Organization. Researchers (Batman & Organ 1983; Organ 1983; 1990; 1997; Organ & Lingel, 1995; Organ & Moorman, 1993) have found that employee satisfaction, Organizational commitment, career development, organizational commitment, age, tenure, personality, motivation, leadership and leadership behavior all impact and affect OCB within the organization. Today world has changed in to global village and it is very difficult to sustain in market due to intense competition. So to take competitive advantage all organization has to required extra ordinary behavior from their staff member at all levels.

THE CONCEPT OF OCB

Organization citizenship behavior is define as an extra work or duties perform my employees of an organization that are not a part of their job description and these activities cannot measure to evaluate the performance of individual in organization formal evaluation system. Employees go beyond their core job or task role in organization, all these are voluntary act of individual that can't be enforced and their absence can't be penalized. According to Katz (1964), organization effectiveness is dependent on the voluntary efforts of workers that helps coworkers, subordinates, giving suggestion and protect the organization. According to (Jung & Hong, 2008), High level of OCB in organization gives a sign of employee's willingness to practice and adopt changes for implementing new management styles and new methodologies.

Organizational citizenship behaviors (OCB) are defined by Organ (1988), "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization".

Dennis Organ is generally considered as a father of OCB includes three aspects in this definition. 1st OCB's are thought of as discretionary behavior. 2nd OCB's goes above and beyond that which is enforceable requirement of the job description. 3rd OCB's contribute positively to overall organization effectiveness.

OCB is linked with organizational level and as well as individual outcomes. Many researchers concluded that when more and more employees show OCB practices on workplace the firm performance tend to increase and organization start growing (Niehoff & Yen, 2004). OCB is much similar to contextual performance, POB and Extra Roll Behavior because they all linked with maximizes the organization and individual outcome. As Organ says "OCB may at same point encourage some sort of reward but these Reward would be Indirect and uncertain". So we can compare OCB with others in terms of indirect and uncertain reward.

According to (Baker, 2005) there is negative correlation between OCB and Counterproductive work behavior (CWB). So it show when person show high OCB practices than he is not engage in negative performance of organization. Recently it is observe that management intentionally or unintentionally gives importance to OCB practices while evaluating performance of workers.

DIMENSION OF OCB

Organizational citizenship behavior was described by organ and his colleague smith in 1983 as having two basic dimensions 1st altruism and 2nd is generalized compliance.

Altruism identifies the behavior directed at specific individuals. When individual have specific problem, altruistic people go the extra mile in assisting them. The other class of OCB is generalized compliance, which is more impersonal conscientiousness: doing things right and proper for their own sake rather than for any specific person.

Organ (1988) highlights five specific categories of discretionary behavior and explains how each helps to improve efficiency in the organization.

- Sportsmanship
- Civic Virtue
- Courtesy
- Conscientiousness
- Altruism

Sportsmanship is a behavior of filling up petty grievances and refraining from complaining about trivial matters. Normally people think good sportsman is a person who does not complain for inconvenienced face by others. But be positive when other people are not following his suggestions and willing to sacrifice his personal interest for the wellbeing of work group and don't take it personal. Civic Virtue is keeping up with matters that affect the organization like participation in decision making, attending meetings, participation in the political life of the organization activities and engaged in organization activities that can help to improve organization and take a part in governance of organization. Courtesy refer such actions like consulting with others before decision have been taken, issuing reminder to other person, transmit information as well as giving advance notices or we can say that in organization altering others about change which cause affect on their work.

Conscientiousness shows impersonal behavior compliance with norms defining a good worker, it states workers go beyond minimal requirements of their specific tasks. Altruism refers discretionary behavior to help someone in face to face situations in problem or task that is relevant to organization. In simple words we can say that help coworkers individually in their task.

Research on the dimensions of OCB has generated somewhat conflict result. A few researchers have been successful in identifying four categories of OCB (Moorman & Blakely, 1995). But the weight of factor analytic evidence suggests a two-factor structure. Williams (1988) also found a two-dimensional definition of OCB:

1st benefits to the organization in general (OCBO) and benefits directed at individual within the organization (OCBI). Skarlicki and Latham (1995) examined OCB in university setting; their data also supported a two-factor model could be refers as an OCB.

Discussions on dimensions of OCB are carried further for a through conceptualization of OCB by analyzing the various antecedents of OCB.

MANAGEMENT STYLES

Managers are performing various roles in an organization and choose their style of management according to situation. Thus management style is a method of leadership adopt by managers. It also show the way of decision making and making relations with subordinates. There are different types of management styles. There is not a single best management style. In business situations are continuously changing and also the behavior of employees change too. So choose management style while considering all these factors. OCB is also affected by the applied management style.

Management or leadership style can be categories into two approaches

- Old management approaches
- Modern management approaches

Organization Citizenship Behavior Relationship with old Management Approaches

- Autocratic
- Paternalistic
- Democratic
- Laissez-faire

AUTOCRATIC

In this type of management style the manager takes decision unilaterally without the concern of subordinate. So this type of style represents the confidence of manager and also shows the opinion and personal characteristic of manager. Subordinates are fully depended on manager and they need more supervision. According to (Van Vugt, Jepson, Hart & De Cremer, 2004) autocratic management style negatively influence group effectiveness and stability, (Bass, 1990) said this type of style negatively affect group climate, feeling and happy. By the use of autocratic management style it is difficult to influence self-sacrificial behaviors like organization citizenship behavior (De Cremer, 2006). It is found that directive leadership can be use to get desire behavior in case of extra ordinary situation. For example some unbounded problem occurs and the employees are not trained and prepare to handle it than autocratic style of management is effective than compare to other style of management. Furthermore this approach is also useful when manager has to work with inexperience workers or team.

There are two types of autocratic leaders:

- Directive Autocrat takes decisions unilaterally and supervises subordinates closely
- Permissive Autocrat takes decisions unilaterally and gives subordinates freedom in carrying out their work

PATERNALISTIC

These type of managers also show dictatorial behavior but takes decision while considering the interest of employees and also business. Decisions are taken at upper level but employee feedback encourages increasing morale, decreasing employee turnover, increasing motivation and creating connection of loyalty between manager and workers. But this type of management style leads toward dependency on manger by employees. According to (Cheng 2004) Paternalistic leadership has significant impact on organization citizenship behavior and its direction will change with the types of paternalistic leadership. It is noted when leader adopted benevolent and moral leadership means taking care of his subordinates, it give positive effect on OCB and their subordinates show more organization citizenship behavior and when leader adopted authoritarian leadership style than sub ordinates shows less organization citizenship behavior.

DEMOCRATIC

The manager involves employees in decision-making process things are done by the concern of majority. It shows two way communication leaders to employees and employees to leader. This style provide large number of ideas and useful when to take complex decision and range number of specialist skills required. According to (Jayasingam, 2009) Many employees like the trust receive from democratic leaders and respond with high morale, cooperation and team spirit. So it is clear democratic management style and organization citizenship behavior has important impact on organization and individual relationships. For example, The upper level management of an organization decide to change from manual system to automatic system to get efficiency , effectiveness but having limited knowledge in this field, so management participate employees in decision making process.

LAISSEZ-FAIRE

Under this management style, the manger role is peripheral and employees manage their own functions. Manager avoids their duties and normally it shows horizontal style of communication which means occurs in equal and in both direction. Managers provide as much freedom as possible to his employees with little or no direction. It is more liberal form of management style among all styles of management. Using this type of style leader fails to provide standards and goals for followers and refuses to clarify expectations for the followers (Rowold, & Heinitz, 2007). This type of management style is best for highly professional group of people. It's doesn't always effective due to not deliberate and leads to poor management and also create bad image of organization. This approach has negative impact in creation of organization citizenship behavior specially organization deals in technical work.

ORGANIZATION CITIZENSHIP BEHAVIOR RELATIONSHIP WITH MODERN MANAGEMENT APPROACHES

Old or traditional management style doesn't apply in current days. It better to say "Command and conquer" management style. Managers doesn't care about the well-being of their employees, respect, fails to touch the heart and to get employees sympathy. Just force employees to obey and provide desired results. There is just fear factor that force employees to produce desired results. So what will be happened after doing all this, if you will get unreliable, inefficient, unmotivated and undependable employees? Someone not earn trust overnight. That's why modern management style comes in consideration.

As Jaime Menor 2002 say:

"By providing a simple gesture to an employee like saying "thank you" and encouraging him/her with an actions and made them think that you believe in her/his skills and ability will make your organization successful."

Following are some modern management style approaches:

- Transformational Leadership
- Transactional Leadership
- MBWA

TRANSFORMATIONAL LEADERSHIP

According to (Organ, Podsakoff, and MacKenzie, 2006), these type of leaders get followers to perform above and beyond expectations by providing individualized support, articulating a vision, providing an appropriate role model, intellectual stimulation, fostering the acceptance of group goals and expressing high performance expectations.

According to Shamir, House, and Arthur (1993) Transformational leaders motivate followers in three important ways:

- (1) By linking the organization's work values to follower values
- (2) By increasing follower self-efficacy
- (3) By facilitating followers social identification with their group or organization

According to (Podsakoff et al., 1990) Positive association between transformational leadership and OCB is expected and has been empirically supported. One variable which enhances transformational leadership is the show of self-sacrificial behaviors by the leader (Choi, & Mai-Dalton, 1999; De Cremer, & van Knippenberg, 2002, 2004; van Knippenberg, De Cremer, & Hogg, 2004; Yorges, Weiss, & Strickland, 1999).

TRANSACTIONAL LEADERSHIP

According to (Bass, 2008) Transactional leadership helps followers identify what must be done to accomplish organizations' desired goals and objectives. There is some considerations, (Bass, Avolio, Jung, & Berson, 2003) states, the transactional leaders might not be successful when they will unable to control the punishments or reward, or when the employees do not want the reward or act out of fear to avoid punishment. Researchers have studied that there is significant relationship exists between transactional leadership/contingent reward and OCB (Rubin, Bommer, & Bachrach, 2010; Walumbwa, Wu, & Orwa, 2008).

MBWA

Proactive listeners used management by walking around style. These managers try to get more and more information that are needed to solve problems. These managers carefully listens their subordinates, guide and support them to overcome in critical situations. By using MBWA style manager know the level of morale in firm and help to motivate their employees. In MBWA style the manager role is not as director but as coach and counselor and response time should be fast as much as possible. So time due to this style manager loose is authority and position power and employees feel that they will able to run business. Current evidence has shown performance monitoring have positive influence on subordinate performance and managerial effectiveness (Komaki, 19886, Desselles, & Bowman, 1989; Larson & Callahan, 1990). The effective functioning of an organization, however, depends not only on subordinates in role behaviors, but also on their extra-role or citizenship behavior (Organ, 1988a). David Packard, co-founder of Hewlett-Packard, developed this style and believes the office interaction with employees not helps manager, but also makes the employee feel cared for and connected with organization, which helps to motivate employees as a result productivity and employees loyalty increases. Now the question arises, does frequent monitoring of employees discourage employees in their performance, decrease helping behavior and also decrease organization citizenship behavior. So it is prove that MBWA leadership style both negatively and positively affect organization citizenship behavior.

ANTECEDENTS OF OCB

The search for a host of reliable predictors of OCB has been increasing during the last two decades. A wide range of employees, task, organizational and leader characteristics are consistently found to predict different types of OCB across a range of occupations (Podsakoff 2000).

During this last two decades the researchers tried to figure out various enabling factors of OCB, with varying degrees of predictive merit: personality (Organ, 1990) ; Organ, 1994 ; Organ & Lingl, 1995; Penner, 1997) , procedural justice (Moorman, 1991[8]; Aquino, 1995; Skarlicki & Latham, 1995; Farh, Earley, & Lin, 1997; Schappe, 1998)

Leadership characteristics (Deluga, 1995; Podsakoff, Mackenzie, & Bommer, 1996), motivational theories (Kemery, Bedeian, & Zacur, 1996; Tang & Ibrahim, 1998), and interview styles (Skarlicki & Latham 1995). Most of these studies provided more questions than answers, with low correlations and little variance accounted for in the data (Barbuto 2001).

Smith, (1983) and Bateman and Organ (1983) conducted the first research on the antecedents of OCB, finding job satisfaction to be the best predictor. After two decades of research, job satisfaction is still the leading predictor of OCB (Organ, 1997). This is problematic because, descriptively, job satisfaction is in and of itself a challenging outcome sought by organizational managers? The resulting implications are restricted to suffice that OCB is likely when worker are satisfied. Many scholars believe job satisfaction is too broad a construct for the accurate prediction of OCB (Deluga, 1995; Penner, Midili, & Kegelmeyer, 1997). This section considers the various individual and organizational variables commonly found to affect an employee's willingness and organization performance.

JOB SATISFACTION AND ORGANIZATIONAL COMMITMENT

One of the most intuitive antecedents of OCB is job satisfaction. Organ and Rayn 1995 conducted a meta-analysis of 28 studies and found a modest relationship between OCB and job satisfaction. This relationship was stronger than the relationship between In-role performance and job satisfaction. Job satisfaction has been found to have a positive relation with job performance and OCB. Which is turn has a significant influence on employees' absenteeism, turn over and psychological distress (Davis 1992). Workers with high level job satisfaction are more likely to engage in OCB (Brown 1993).

Along with job satisfaction, affective organization commitment is also an antecedent of OCB. Affective commitment is conceptualized as a strong belief in, and acceptance of, an organizations goals and a strong desire to maintain membership in the organization (Van Dyne 1995). It would seem logical that affective commitment drives those behaviors that do not depend primarily on reinforcement or formal rewards.

PERSONALITY CHARACTERISTICS

In terms of personality characteristics, conscientiousness, agreeableness, and positive and negatively affectivity garner the most support as antecedent of OCB (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Conscientiousness, in particular, has been found to have a strong relationship with the general compliance component of OCB (Organ 2006). However it has also been reported that personality measures are weaker predictors of OCB when compared to attitudinal predictors (Organ & Ryan, 1995).

LEADERSHIP BEHAVIOR AND LEADER-MEMBER EXCHANGE

Leadership has a strong influence on an employee's willingness to engage in OCB. However, rather than being associated with a particular leadership style, research finds that it is the quality if an employee relationship with his or her leader that counts (Podsakoff 2000). The quality of relationship between member and leader is often called leader-member exchange (LMX). Another leadership variable positively related to OCB is the leaders contingent reward behavior, such as expressing satisfaction or appreciation for good performance (Podsakoff 2000). Leadership behaviors may also influence OCB indirectly via employee perceptions of fairness or justice in the workplace.

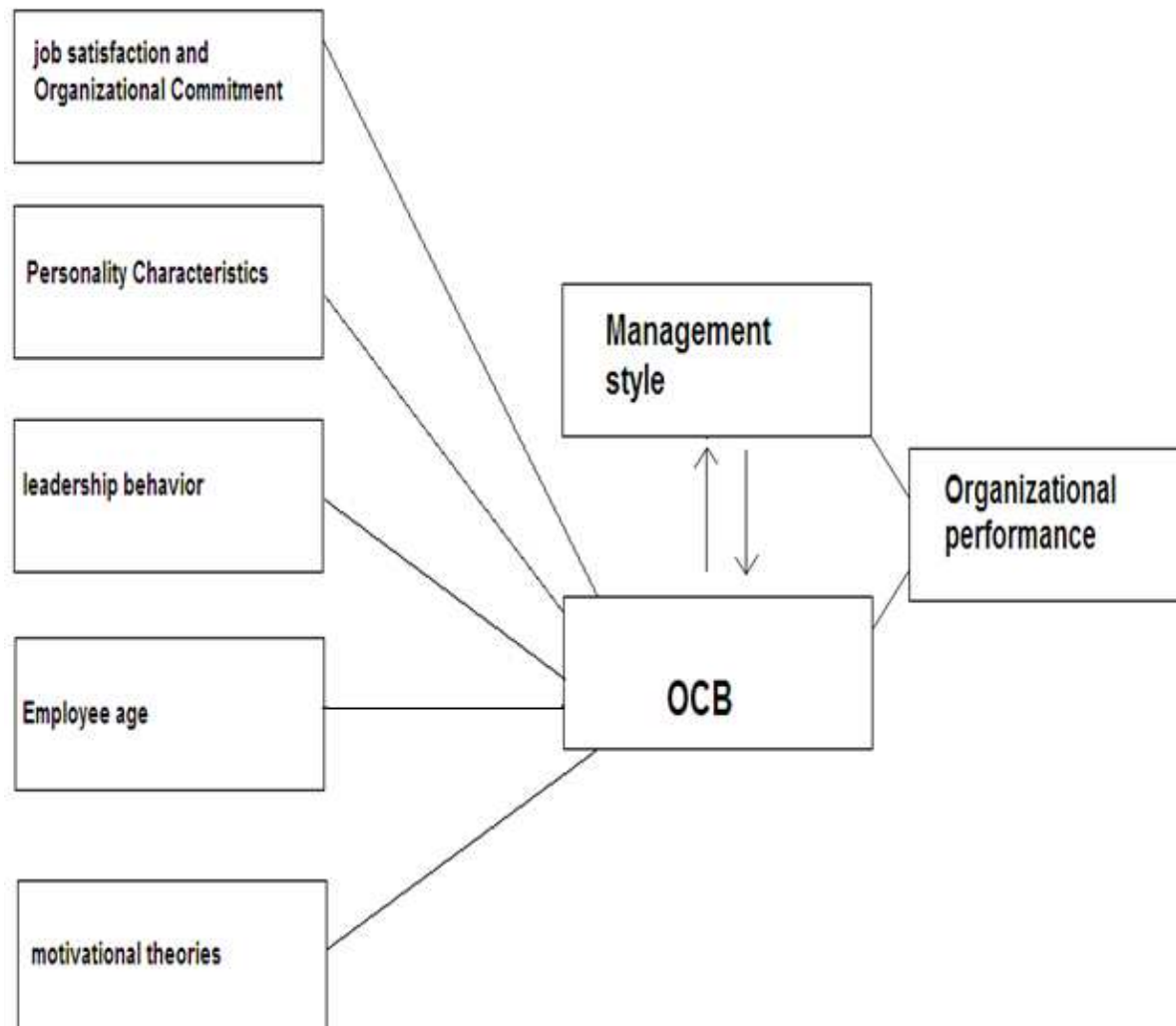
EMPLOYEE AGE

The proposition that younger and older worker may view work and self in fundamentally different ways is not new. Wagner and Rush (2000) pointed out that early years (20-34) are the years of establishment; later years (35-55) are strong sense of self and location. The authors argued that younger's employees coordinate their needs with the organizational needs. The older employees tend to be stricter in adjusting their needs with organizational needs. Therefore, younger and older employees may differ in their orientations towards self, others, and work, these differences may lead to different salient motives for OCB among older and younger employees.

MOTIVATIONAL THEORIES

Recent research using motivation measure an individual disposition has renewed interest in examining Organ's (1990) model proposing that an individual's motives may relate to his or her organizational citizenship behaviors (Kemery, et al., 1996); (Tang & Ibrahim, 1998). Penner, et al. (1997) explored the impact of personality and motivation on OCB. Since no previous research had used motivation to predict OCB, they develop their propositions from the volunteerism research. The researchers proposed five sources of motivation measured include intrinsic process, instrumental, self-concept-external, self-concept internal, and goal internalization. (Barbuto, 2001) argued that though the motivational theories work as antecedents for OCB. But the researchers cautioned that an individual's sources of motivation could have an impact on his level of OCB. As individual performance is going upward, motivational theories tend to be less applicable as antecedent.

FIGURE 1: ANTECEDENT OF OCB AND ITS RELATION WITH MANAGEMENT STYLE LEAD TOWARD BETTER PERFORMANCE OF ORGANIZATION

**STUDY METHODOLOGY**

According to Katz (1964), organization effectiveness is dependent on the voluntary efforts of workers that helps coworkers, subordinates, giving suggestion and protect the organization. According to Jung & Hong, (2008), High level of OCB in organization gives a sign of employee's willingness to practice and adopt changes for implementing new management styles and new methodologies. OCB is a one antecedent of organizational performance. This study explores the definition of OCB and its dimensions and relation with management style. Based on the discussion on the dimensions of OCB a number of antecedents were identified. When the relation of management style and OCB are clear, and the antecedents of OCB are known, managers would be able to promote OCB among their employees and result will be better performance.

For this study researchers used secondary data. Mostly data collect from detailed study of different research papers and also include different views of some experts. All the secondary data is used in this research obtain from article, newspaper, Journals, research papers.

PROPOSED CONCEPTUAL FRAME WORK AND RESEARCH QUESTIONS FOR FURTHER RESEARCH

To give direction to further researchers on OCB, the current authors develop a framework on the basis of literature review. This study tells the clear relation of management style and OCB, which are not previously focused in research. According to (Cheng et al, 2004) Paternalistic leadership has significant impact on organization citizenship behavior and its direction will change with the types of paternalistic leadership. So it's clearly stated it has much impact into OCB. So researchers can take into consideration. Second part of research antecedents of OCB. During this last two decades the researchers tried to figure out various enabling factors of OCB, with varying degrees of predictive merit: personality (Organ, 1990) ; Organ, 1994 ; Organ & Lingl, 1995; Penner, 1997) , procedural justice (Moorman, 1991[8];Aquino, 1995; Skarlicki & Latham, 1995; Farh, Earley, & Lin, 1997; Schappe, 1998). In addition different antecedents are identified on the basis of literature view. In this study, it was revealed that a number of antecedents trigger OCB. To develop the framework, a model is described which

clearly describe the main objective of research, if management style supported the employees and the employees are participated in decision making so it will cause to increase OCB and overall result to increase organization efficiency. The current authors applied the antecedents as a mean of understanding why employees need to increase overall performance of the organization.

Different questions rise from this research. The research about Relationship with management style and OCB are very rare. While according to researchers they have strong relationship. So it's new area of research which many researchers can take into consideration while it has positive relation or negatively related?

Second about antecedents of OCB, no doubt a huge work done by pervious researchers on describing antecedents of OCB but also require a lot of work because antecedents of OCB varies from location. For example in Pakistan people are emotionally attached with one another so emotion is also one of the antecedents of OCB. So in Pakistan context there is needed to do more work in this context. So there is need to do more work on antecedents of OCB.

LIMITATIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

There are several limitations for this study but this study will give much new area of research. First the research about Relationship with management style and OCB are very rare. While according to researchers they have strong relationship. According to (Cheng et al, 2004) Paternalistic leadership has significant impact on organization citizenship behavior and its direction will change with the types of paternalistic leadership. So it's clearly stated it has much impact into OCB. So it is new area of research. If management style supported the employees and the employees are participated in decision making so it will cause to increase OCB and overall result to increase organization efficiency. So it's new area of research which many researchers can take into consideration while it has positive relation or negatively related? So a lot work need to done.

In Pakistan context peoples of Pakistan are emotionally attached with one another so emotion is also one of the antecedents of OCB. So in Pakistan context there is needed to do more work in this context. , no doubt a huge work done by pervious researchers on describing antecedents of OCB but also require a lot of work because antecedents of OCB varies from location. So in Pakistan context there is needed to do more work in this context. So there is need to do more work on antecedents of OCB.

CONCLUSION

After taking the study of recent literature on OCB has distinguished between various dimensions of OCB and has examined the relationship between management style and OCB. After identified the antecedent of OCB and examined its relation with management style, study shows its lead toward better performance of the organization and, managers would be able to promote OCB among their employees for better performance. If management style supported the employees and the employees are participated in decision making so it will cause to increase OCB and overall result to increase organization efficiency.

Research on management style and OCB are very rare. While according to researchers they have strong relationship. According to (Cheng et al, 2004) Paternalistic leadership has significant impact on organization citizenship behavior and its direction will change with the types of paternalistic leadership. So it's clearly stated it has much impact into OCB. Antecedents of OCB are the factors that increase the level of employee performance in the organization. It is revealed from the various studies that there is a positive relationship between organization performance and OCB (cardona, Lawrence, & Bentler, 2004 and Hodson, 2002). If management style supported the employees and the employees are participated in decision making so it will cause to increase OCB. The main implication of this study helps managers to increase their overall productivity of the organization. If he will support his employees in decision making and antecedents of OCB are clear it will become cause to get the effectiveness of the organization.

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EXISTING GAP BETWEEN THE FINANCIAL LITERACY AND SAVING/INVESTMENT BEHAVIOUR AMONG INDIAN WOMEN: AN EMPIRICAL STUDY WITH SPECIAL REFERENCES TO COIMBATORE CITY

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ABSTRACT

Women represent a growing share of new customers for financial-services companies. The study aims to analyse the gap between financial literacy and saving/investment behaviour among the working women. The research methodology of the study consists of two stages exploratory and descriptive research. Coimbatore city is chosen as the study area. Women employed both in public and private organisations were considered as the sample population. Small samples of 30 respondents were chosen as the participants of the study. Based on the convenience sampling techniques, only voluntary individuals were included in the survey. The findings of the study shows that women have expressed high degree of awareness i.e. financial literacy towards traditional saving/investment avenues, but they have actively shifted their saving/investment avenues from traditional bank saving avenues to modern technically risky capital market operations.

KEYWORDS

financial literacy, investment behavior, saving behavior, Indian women.

INTRODUCTION

Women represent a growing share of new customers for financial-services companies. Businesses that help these enthusiastic investing along the learning curve will get a piece of the action. Indian women have become more financially independent in the past few decades. They are more likely to earn an income and run a household on their own. They're also getting more involved with long-term financial planning. As more women become serious investors, they are looking for an education in how to manage their growing stockpiles of money. They are eager students of financial market too. Financial education is necessary to ensure sufficient levels of investors and consumer protection as well as the smooth functioning of the financial markets. Creating financial literacy can play a critical role in equipping the consumers with the information, fundamental knowledge, and skills to evaluate their options and enables them to understand the implications of alternative financial decisions. Recent scenario of the Indian financial market shows that, the Indians are having high propensity to save, but they choose to put their money in low-yielding instruments and one of the responsible factors for such is lack of financial plan for future. Furthermore, "misplaced financial optimism" is directly fallout of the lack of financial literacy among Indian households. Unless investors become more aware, it is difficult to convert a country of savers into a country of investors. This research paper aims to analyze the existing gap between the financial literacy and saving/investment behavior among Indian women. The study is focused on the working women living in Coimbatore city, India.

REVIEW OF LITERATURE

Organization for Economic Cooperation & Development (OECD) defines Financial Literacy as a combination of financial awareness, knowledge, skills, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being. People achieve financial literacy through a process of financial education.

Government of India has recognized the importance of spreading financial literacy to intensify efforts to channelize domestic savings to investments. However, increasing range and complexity of products has made it very difficult for an ordinary person to take an informed decision. Financial literacy develops confidence, knowledge and skills to manage financial products and services enabling them to have more control of their present and future circumstances. Financial literacy will also help in protecting society and individuals against exploitative financial schemes and exorbitant interest rate charged by moneylenders. It is expected that financial education can lead to multiplier effects in the economy. A well-educated household would resort to regular savings, which in turn would lead to investment in right channels and income generation. Thus, the financial well-being of individuals will in turn increase the welfare of the society.

In complementary work on financial literacy Lusardi and Tufano (2009) found that low levels of financial resulted into an inability to understand basic financial concepts and poor judgment in borrowing decisions and retirement planning and hence poor financial management. Bagwell (2002) found that poor financial management leads to greater absenteeism at work.

From the extensive review of literature of an Indian study it has observed by Raj et.al (1998) that the investment experience of the respondents is not uniform. The respondents themselves generally took investment decisions. The alternative sources contributing to investment decisions such as advice/information available from friends and relatives, consultants and media were not much significant. The factors motivating investment decisions are safety, liquidity, convince, and price differences. For precautionary and contingency purposes a tendency of preferring safe securities such as cash and bank deposits was shown by the sample households. Gavini and Athma (1999) found that social considerations, tax benefits, and provision for old age were the reasons cited for saving in urban areas, whereas to provide for old age was the main reason in rural areas. Among the post office schemes, Indira Vikas Patra (IVP), KVP and Post Office Recurring Deposit Account (PORD) were the most popular, in both urban and rural areas. Kanagasabapathy K. (2001) put across the concept that in the economic sense, the savings behaviour is the obverse of a nation's consumption behaviour. Secondly, savings may be influenced also by the investment opportunities or investment demand, which in turn depends upon the growth prospects and the potential return available. Thirdly, the level of savings will also depend upon the avenues available in the economy for mobilizing such savings particularly from the household sector in the form of well-developed financial system with a variety of institutions and markets for different instruments. Last but not the least, the general thriftiness of the public as a part of nation's culture could also influence the saving behaviour in an economy. Jayachandran C. (2004) admits that during the course of his study that there is a moderate level of savings among the households. The major determinants of savings are the personal income, family size, family income and life cycle of the household. The most popular investment on physical assets is consumer durables and financial assets like bank deposits. There is a relative poor level of awareness among the rural about various financial assets. Large portions of the investors do not understand the basic fundamentals of the investments. Many investors have invested in safer financial assets like bank deposits. Only few investors preferred the investment on public issue but they are not aware about the market value of their holdings.

Kalavathi S. (2009) empirical study shows that the salaried households in Coimbatore city have greater awareness towards bank saving, investment in share/debenture/bonds and creating a provision for children's education. The author found that the financial literacy of salaried households is very high it that

correspondingly help them in designing the effective and efficient saving/investment schemes. It has been concluded from the study that among the various personal factors analysed, the households themselves have created healthy practices of promotion of saving/investment habit. It has been further inferred that males are found to have more awareness about the various saving/investment/insurance schemes compared to their women counterparts. Similarly the salaried class households at the age groups of 31-35 years and 36-40 years have exhibited higher degree of awareness towards various saving/investment/provisions modes. Similarly an analysis of socio-economic factors have depicted higher level of influences with high degree of education level, number of earning members in the family, job nature (security) and among ₹20,001 to ₹. 30,000 monthly incomes earning groups. The result of two-way ANOVA test of the study revealed the fact that there exists significant correlation between educational level and awareness about different modes of saving/investment, and provisions among salary earners. Moreover it has been observed that 81.50 per cent of the respondents opine that they do get enough information on saving/investment/provision modes that have influenced their level of awareness. It has been found that the popular TV business channel's and air time programmes on saving/investment have created massive awareness among the surveyed respondents and it plays a primary role in convincing the respondents to select the most safe, profitable saving/investment avenues.

Sethupathi. M. (2011) has mentioned that rural households in the study region have gained reasonable knowledge on the various savings and investment medium. But it is very ironical to assess that their knowledge is very much limited to the traditionally known savings and investment avenues like bank saving, holding insurance policy, investment in equities, gold or in land/building. The sample population's knowledge on the modern and market sophisticated investment avenues is very much limited. The author has also specified that the rural households in the study area primarily give importance to the safety of the principal money they invest before selecting savings/investment avenue. The study reveals a mixed investors' perceptions towards feasibility of financial services offered by various agencies in rural areas and it has been concluded that minimum deposit facilities or no-frill account is a more popular mode of financial inclusion among the rural masses of Tamilnadu in general and in particular to the study region Coimbatore District as per the opinion. Harsha Jariwala and Mahendra Sha (2011) in their empirical research work explain risk deriving from financial illiteracy, importance of financial literacy and need to create and develop financial literacy at the micro and macro levels.

Agarwalla et.al (2012) study attempted to understand the financial literacy levels of three important demographic groups, young working adults, retired and students in India. The study highlights the facts revealed in other authors i.e., previous studies that the financial knowledge among Indians appears to be low by global standards. The authors found that financial behaviour of Indians appears to be positive. The employed and the retired score high on behavior relative to the rest of the world. Indians match the best of the OECD sample in their propensity to assess affordability and have a high level of financial discipline. Most employed and retired borrow less and depend on their savings. Positive financial behaviour among Indians appears to be associated with higher financial knowledge.

SaritaBahl (2012) study aims to study the investment behavior among the working women in Punjab. The study show that how much women are aware about the investment benefits and whether they invest their money or not, and if invested, how much money is invested by them. She made efforts to determine the level of agreement of working women of Punjab on various aspects of investment planning.

From the detailed review of literature on financial literacy and financial behaviour it could be clearly inferred that the level of financial literacy in the Indian financial services sector is one of the important determinants of the financial behaviour and financial preferences of retail investors. Thus, the current pursuit is attempted by the authors.

IMPORTANCE OF THE STUDY

As per the RBI report published on 16th July 2012, financial inclusion is one of the top most policy priorities of the Government of India. In this process financial literacy will help in protecting society and individuals against exploitative financial schemes and exorbitant interest rate charged by moneylenders. Increasing range and complexity of products has made it very difficult for an ordinary person to take an informed decision. Financial literacy develops confidence, knowledge and skills to manage financial products and services enabling them to have more control of their present and future circumstances. Based on the review of RBI report's discussion the current empirical work is considered as important.

STATEMENT OF PROBLEM

From the elaborate review of existing empirical studies it could be understood that the benefits of financial literacy are not limited up to an individual or family level, but to the societal and macroeconomic level too. More over some authors have emphasized that having financial literacy and knowing the skills to manage the money essential for avoiding and solving financial problems, which in turn are vital to a prosperous, healthy and happy life. For the nation as a whole the household saving are critically important, as it help in maintaining economic growth, inflation stability, promotion of employment and infrastructure development. Thus, for a developing nation like India maintain a higher level of investment is a key determinant for economic uplift. But, the irony is that due to increased complexity of financial products and services, financial decisions are mostly annoying to many households in India or simply say the earning men and women. The women are observed to be more risk averters compared to their male counterparts. There are many reasons that could be influenced complexity of financial market performances understanding amid individuals or inability to understand basic financial concepts: speed of financial markets growth and frequent introduction new financial instruments, number of institutions participations, growing role of intermediaries etc.

OBJECTIVES

The study aims to analyse the gap between financial literacy and saving/investment behaviour among the working women, thus the following objectives are framed.

- To evaluate the financial decision making ability of women.
- To analyse the prevailing financial literacy and saving / investment practices among working women.
- To measure the gap between the financial literacy and saving / investment practices.

HYPOTHESIS

It is hypothetically believed that there exists close association between the financial literacy and saving / investment practices among the women in India.

RESEARCH DESIGN

The research methodology of the study consists of two stages exploratory and descriptive research. Coimbatore city is chose as the study area. Women employed both in public and private organisations were considered as the sample population. Small samples of 30 respondents were chosen as the participants of the study. Based on the convenience sampling techniques only voluntary individuals were included in the survey. The target groups chosen for this study were the women employees', who regularly save/invests.

RESULTS AND DISCUSSIONS

The present study aims to focus on particular knowledge about the key factors that influence saving/investment behavior and ways these factors impact investment risk tolerance and decision making process among women in different socio-economic status and life-style stages.

TABLE 1: SOCIAL-ECONOMIC PROFILE

Variables	Particulars	No. of respondents	Percentage
Age	25-30 years	19	63.30
	31-35 years	2	6.70
	36-40 years	4	13.30
	46-50 years	1	3.30
	51-55 years	4	13.30
Life structure	Young and single	7	23.30
	Just married	7	23.30
	Proud parents	16	53.30
Educational qualification	HSLC	2	6.70
	Diploma/Technical Education	2	6.70
	Under graduate	2	6.70
	Professional qualification	11	36.70
	Post graduate	12	40.00
	Others `	1	3.30
Nature of occupation	Professionals	18	60.00
	Employee	12	40.00
Monthly income	Below ` .5000	1	3.30
	` 5001-`.10000	7	23.30
	`.15001-`.20000	14	46.70
	`.20001-`.25000	2	6.70
	Above `.25001	6	20.00
Size of family	2-4 members	20	66.70
	5-7 members	10	33.30
Earning members in family	One	7	23.30
	Two	10	33.30
	Three	8	26.70
	Four	5	16.70
Dependents in family	One	14	46.70
	Two	10	33.30
	Three	6	20.00
Migration	Semi-urban area	12	40.00
	Town	18	60.00

Source: Primary Data

From the above table it has inferred that majority i.e., 63.30 per cent of the sample subjects are in the age group of 25-30 years and 40 per cent of women are post graduates. It indicates the women employees are young savers/investors. Out the thirty respondents surveyed 53.30 are married and they have one/two kids, thus it could conclude that they financial commitments towards the family are more. Around 47.60 per cent of the women employees' monthly income ranges between ` .15001-`.20000, 66.70 per cent of the sample subjects have opined that their family have 2-4 members, of which 33.30 per cent have two earning members and dependents per family. Further 60 per cent of the women are migrated from town area to the urban city.

Financial literacy implies that an individual must have the ability and confidence to use his/her financial knowledge to make financial decisions. The financial literacy levels of sample women employees' are discussed in the Table:2

TABLE 2: LEVEL OF FINANCIAL LITERACY

Nature	Sum	Mean	Rank
Safe/Low risk investment Avenues			
Saving accounts	115	3.83	1
Bank fixed deposits	102	3.40	4
Public provident fund	105	3.50	2
National saving certificates	93	3.10	5
Post office savings	103	3.43	3
Government securities	76	2.53	6
Moderate risk investment Avenues			
Mutual Funds	83	2.77	3
Life insurance	89	2.97	1
Debentures	83	2.77	3
Bonds	86	2.87	2
High risk investment Avenues			
Equity share Market	78	2.60	3
Commodity Market	85	2.83	1
Forex Market	82	2.73	2
Traditional investment Avenues			
Real Estates/ (Properties)	88	2.93	3
Gold/ Silver	101	3.37	1
Chit Funds	96	3.20	2
Emerging investment Avenues			
Virtual Real Estate	82	2.73	4
Hedge Funds	86	2.87	2
Private Equality Investments	92	3.07	1
Art & Passion	84	2.80	3

Source: Primary Data

Measure of Distance: Mean \pm SD: 3.02 \pm 0.34

From the elaborate data analysis it has inferred that though the entire women employee surveyed literate and most i.e., 83.40 per cent of the have completed collegiate education and well employed, they have gain more knowledge about the traditional bank savings, post office saving and investment in gold/silver ornaments. These sample women employees' exhibits poor financial literacy towards investment in government securities and stock market operations. However, they have gained moderate literacy towards mutual fund operations, insurance products, forex markets and real estate or other modern data investment practices.

TABLE 3: FINANCIAL & INVESTMENT MARKET PERFORMANCES

Sl. No	Particulars	No. of respondents	Percentage
1.	Very Familiar	4	13.33
2.	Familiar	14	46.70
3.	Not much familiar very	12	40.00
	Total	30	100

Source: Primary Data

From the current study it has been observed that only 46.70 per cent of the sample population are very familiar with the modern financial market functions, whereas 40 per cent of the sample subjects are not-at-all familiar with the financial market operation and just 4 per cent of the sample subjects have expressed high degree of awareness.

TABLE 4: THE FACTORS UNDER CONSIDERATION BEFORE INVESTMENT

Sl. No	Particulars	No. of respondents	Percentage
1.	Safety of the Principal	19	63.30
2.	Low risk	8	26.70
3.	High returns	2	6.70
4.	Maturity period	1	3.30
	Total	30	100

Source: Primary Data

Similarly, from elaborate data analysis it has inferred that 63.30 per cent of women workers those who participated in the study prefer to save/ investment vehicles that would ensure safety of the principle amount. Low risk investments are option of 26.70 per cent of women workers, high return seekers who invest for a longer period are 6.70 per cent and flexibility in maturity period is preferred by 3.30 per cent of women.

TABLE 5: THE TIME PERIOD PREFER TO INVEST

Sl. No	Particulars	No. of respondents	Percentage
1.	Short time (0-1 year)	18	60.00
2.	Medium term (1-5 years)	10	33.30
3.	Long term(>5 years)	2	6.70
	Total	30	100

Source: Primary Data

The data analysis reveal the fact that most of the women employees' surveyed have opined that they save/invest for short –term i.e., around 60 per cent. On the contrary 33.30 per cent of the sample women employees have said that they usually save for a medium term of 1-5 years and just 6.70 per cent of sample subjects tend to save/invest for long term of above five years.

TABLE 6: PREFERENCE ON INVESTMENT GROWTH

Sl. No	Particulars	No. of respondents	Percentage
1.	Steadily	12	40.00
2.	At an Average Rate	14	46.70
3.	Fast	4	13.30
	Total	30	100

Source: Primary Data

From the data interpretation it has observed that 46.70 per cent of women prefer their investment to growth on average rate i.e., neither too high nor too low. Steady growth in investment seekers are observed among 40 per cent of the samples. Whereas 13.30 per cent of the samples have opined that they expect their investments to grow at a fast rate.

TABLE 7: THE PURPOSE BEHIND INVESTMENT

Sl. No	Particulars	No. of respondents	Percentage
1.	Wealth Creation	9	30.00
2.	Tax Saving	7	23.30
3.	Earn Returns	1	3.30
4.	Meet Future Expenses	13	43.30
	Total	30	100

Source: Primary Data

Among the various purpose that may have motivated the women's saving and investment behaviours, in the current study it has observed that 43.30 per cent of women employees' say to meet future expenses, 30 per cent intention is to create wealth, 23.30 per cent aim for tax saving and 3.30 per cent aims for earning high returns.

TABLE 8: SAFE/LOW RISK INVESTMENT AVENUES

Sl. No	Particulars	No. of respondents	Percentage
1.	Saving accounts	25	83.30
2.	Bank fixed deposits	2	6.70
3.	Public provident fund	2	6.70
4.	Post office savings	1	3.30
	Total	30	100

Source: Primary Data

From the above table it has inferred that 83.30 per cent of the women have been saving their money in bank saving accounts, followed by 13.40 per cent in bank fixed deposits (6.70 per cent) and provident Funds also known as PF (6.70 per cent) and just 3.30 per cent are availing post office saving facilities.

TABLE 9: MODERATE RISK INVESTMENT AVENUES

Sl. No	Particulars	No. of respondents	Percentage
1.	Mutual funds	4	13.30
2.	Life insurance	21	70.70
3.	Debentures	5	16.70
	Total	30	100

Source: Primary Data

Table indicates that 70.70 per cent of working women have safely parked their saving in productive life insurance products. On the contrary 16.70 per cent of the working women have paid interest in debenture investments and 13.30 per cent in mutual funds.

TABLE 10: HIGH RISK INVESTMENT AVENUES

Sl. No	Particulars	No. of respondents	Percentage
1.	Equity share Market	17	56.70
2.	Commodity Market	4	13.30
3.	Forex Market	9	30.00
	Total	30	100

Source: Primary Data

High risk capital market investments practices of working women are observed as 56.70 per cent in equities, 30 per cent in forex dealings and 13.30 per cent in commodity markets like bullions.

TABLE 11: TRADITIONAL INVESTMENT AVENUES

Sl. No	Particulars	No. of respondents	Percentage
1.	Real Estates/ (Properties)	5	16.70
2.	Gold/ Silver	17	56.70
3.	Chit Funds	8	26.70
	Total	30	100

Source: Primary Data

It has inferred that 56.70 per cent of women in working category have been investing in gold/silvers as domestic consumers. It has further observed that 26.70 percent of women have been saving in private chits and 16.70 per cent in real estate properties.

TABLE 12: EMERGING INVESTMENT AVENUES

Sl. No	Particulars	No. of respondents	Percentage
1.	Virtual Real Estate	18	60.00
2.	Hedge Funds	6	20.00
3.	Private Equity Investments	1	3.30
4.	Art & Passion	5	16.70
	Total	30	100

Source: Primary Data

The table indicates that 60 per cent of women in working category are now-a-days paying more interest in investing in virtual real estates like owning a blogs, web sites or club members' ships in holiday inns etc., this clearly depicts the life style practices of IT/BPO professionals. Similarly the modern day women have also started to invest in hedging funds (20 per cent), Art & Passions (16.70 per cent) and in private equity investments i.e., 3.30 per cent.

TABLE 13: GAP BETWEEN FINANCIAL LITERACY AND SAVING INVESTMENT BEHAVIOUR

Options	Financial Literacy(Mean)	Saving Behaviour(Mean)	Mean Differences	t value	DF	Sig
Safe/Low risk investment Avenues						
Saving accounts	3.83	2.17	-1.66	3.247	29	.003
Bank fixed deposits	3.40	2.60	-0.80	4.980	29	.000
Public provident fund	3.50	2.50	-1.00	4.335	29	.000
National saving certificates	3.10	2.90	-0.20	4.535	29	.000
Post office savings	3.43	2.90	-0.53	3.714	29	.001
Government securities	2.53	3.47	0.94	7.473	29	.000
Moderate risk investment Avenues						
Mutual Funds	2.77	3.23	0.46	4.616	29	.000
Life insurance	2.97	3.03	0.06	4.090	29	.000
Debentures	2.77	3.23	0.46	4.267	29	.000
Bounds	2.87	3.13	0.26	4.853	29	.000
High risk investment Avenues						
Equity share Market	2.60	3.40	0.80	6.021	29	.000
Commodity Market	2.83	3.17	0.34	5.311	29	.000
Forex Market	2.73	3.27	0.54	6.707	29	.000
Traditional investment Avenues						
Real Estates/ (Properties)	2.93	3.07	0.14	3.713	29	.001
Gold/ Silver	3.37	2.63	-0.74	2.193	29	.036
Chit Funds	3.20	2.77	-0.43	3.084	29	.004
Emerging investment Avenues						
Virtual Real Estate	2.73	3.27	0.54	4.047	29	.000
Hedge Funds	2.87	3.13	0.26	3.973	29	.000
Private Equality Investments	3.07	2.93	-0.14	3.279	29	.003
Art & Passion	2.80	3.20	0.40	4.006	29	.000

Level of Significance: 5 per cent

From the elaborate discussion on prevailing financial literacy and current saving /investment behaviour of women those who are employed and can make a healthy contribution towards saving/investment, it has inferred that the modern day educated, well employed women exhibits a rational and calculative saving/investment behaviours. It could be evidenced from the above presented data analysis that due to increasing financial literacy the sample women have shifted their saving/investment avenues from traditional bank saving avenues to modern technically risky capital market operations like: investing in mutual

funds, shares, debentures and bonds of public and private companies. Moreover, the women have seemed to restrict their investments in gold/silver, rather they have focused to investment in real states, virtual real estates and arts and passions.

With the results of Paired 't' test results it could be concluded that there exists close association between the financial literacy and saving / investment practices among the women in India. Thus, the hypothesis framed stands accepted.

FINDINGS

From the detailed data analysis it could be revealed that though the sample population chosen study was very small, just representing thirty (30) samples as indicated in students't' test introduced by William Sealy Gosset. The study could be considered as real representative of the actual population, as the samples are handpicked by the authors and well debated interview cum data collection process was carried, in order to collect the most relevant data. The study reveals that the women in the study area are well-educated and recruited in highly reputed organisation with a moderately pay of ranges between `15001-`.20000 per month. The sample subjects have expressed high degree of awareness i.e. financial literacy towards traditional saving/investment avenues, but they have actively shifted their saving/investment avenues from traditional bank saving avenues to modern technically risky capital market operations like: investing in mutual funds, shares, debentures and bonds of public and private companies. Moreover, the women have seemed to restrict their investments in gold/silver, rather they have focused to investment in real states, virtual real estates and arts and passions. This shows positive sign of growth, liberalisation and activities participation of women in household and national savings/investments.

RECOMMENDATIONS

Women in India continue to play traditional roles even while changes are occurring in term of education, job opportunities and economic status. In India, educating women means educating her family, children and in turn the society in which she lives. Thus, creating right and appropriate strategic knowledge on finance, its handling techniques and its related risk can empower women's skills on saving /investments behaviours. Moreover, in a country where fifty percentage of its population are women it is their statutory right to gain prove financial literacy, especially at the time when RBI and government of India are aiming to implement national wide financial inclusion schemes. Thus, it is suggested to the banks, financial agencies, stock consultants and insurance companies to conduct regular seminar programmes, TV talk shows, debates and expert review on: (i) safe and possible investment with their surplus money (2) parameters of the investment instruments (3) Decision making parameters (4) degree of risk taking capability (5) Management of Debt practices (6) Means and methods by which women investors can avoid financial mistakes and like issues.

CONCLUSIONS

India needs very high rates of saving and investments to make a leap forward in her efforts of attaining high levels of growth. Since the beginning of planning, the emphasis was on saving and capital formation as the primary instruments of economic growth and increase in national income. Since fifty percent of their populations are women, the role and the contribution of women to the nation's growth and progress cannot be let unnoticed stated that most of women in India are unproductive. The women in regular stream of work forces earn, spend and save enough money for their future security and financial need. These women might be better financial decision makers, if they avoid delay in choosing their right saving/investment avenues. Woman must make a self-evaluation before she starts an investment plan, by continuous reading and tracking the financial and capital market operation, her literacy levels will surely enhanced.

SCOPE FOR FUTURE STUDY

The study suffers from certain limitations as its location specified and small samples of thirty respondents have participated in the study. It naturally provide future scope to conduct elaborate studies comparing a state with another or a study could focus on saving & investment pattern of working women in tier II & II cities of India. Since sustaining domestic saving is the primary mode of the today's Indian government and this study depicts a positive shift in women employees' saving/investment pattern, it provide as rational approach to the topics discussed.

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AN ANALYSIS OF AWARENESS AMONG SECONDARY SCHOOL TEACHERS TOWARDS CONTINUOUS AND COMPREHENSIVE EVALUATION IN CENTRAL INDIA

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ABSTRACT

Purpose of the school is an institution where talents are nurtured. Therefore it becomes very important to continuously revise and introduce such measures and schemes which will impact the mind, character and physical ability of the learner. Indian education is moving from summative to a continuous evaluation system. The present study was conducted to explore the awareness towards Continuous and Comprehensive Evaluation. The sample of 200 secondary school teachers was drawn from Central India. A self-made questionnaire comprising 29 multiple choice questions was used in this study. The study has brought out the level of awareness among secondary school teachers included in this study is not up to mark, even after more than two years of implementation of continuous evaluation system. Major finding of the study reveals that Government teachers are comparatively more aware as compared to private school teachers.

KEYWORDS

Awareness Secondary School, Continuous and Comprehensive Evaluation. Central India.

INTRODUCTION

Education as a planned endeavour, at a personal level on a small scale or institutional level on a large scale, aims at making children capable of becoming active, responsible, productive, and caring member of the society. They are made familiar with the various practices of the community by imparting the relevant skills and ideas. Ideally education is supposed to encourage the students to analyze and evaluate their experiences, to doubt, to question, to investigate. In other words, to be inquisitive and to think independently CBSE (2009). Education aims at making children capable of becoming responsible, productive and useful members of society. Knowledge skills and attitudes are built through learning experiences and opportunities created for learners in school. It is in the classroom that learners can analyze and evaluate their experiences, learn to doubt, to question to investigate and to think independently CBSE (2009). Education plays a key role in the development of a nation. The education system in vogue in a country reflects the ethos, aspirations and expectations of a particular society. As aspirations and expectations of each generation vary with time, constant review of curriculum and evaluation system becomes an essential exercise. Evaluation is very important component of the education system. It can make or destroy the purpose of education. Evaluation has remained a major irritant in the entire system of educational growth and development. It is the issue discussed widely but which could not be given a proper shape to solve the problems. All policy documents pertaining to Indian education stated that evaluation system in vogue was inadequate and required changes.

REVIEW OF LITERATURE

Examination are an indispensable part of the education process as some form of assessment is necessary to determine the effectiveness of teaching learning process and their internalization by learners. Various Commissions and Committees have felt the need for examination reforms. The Hunter Commission (1882), Hartog Committee Report (1929), the report of Central advisory Board or Sargeant Plan (1944), Secondary Education Commission or Mudaliar Commission (1952) have all made recommendations regarding reducing emphasis on external examination and encouraging internal assessment though Continuous and Comprehensive Evaluation.

The need for continuous and Comprehensive School Based Evaluation as been reiterated over the last few decades. The Kothari Commission report (1966) observed, "On the completion of the course, at the end of the lower of higher secondary stages, the students should receive a certificate from the school along with the recorded of this internal assessment as contained in his cumulative recorded. This certificate may be attached to that given by the Board in connections with external examination. It is further adds, "this internal assessment or evaluation conducted by the schools is of greater significance and should be given increasing importance. It should be comprehensive, evaluation all those aspects of students growths that are measured by the external examination and also those personality traits, interests and attitudes which many not assessed by it.

This aspects has been strongly taken care of in the National education Policy on Education (1986) which states that "Continuous and Comprehensive Evaluation, spread over the total span of instructional time.

Report on the Committee for Review of NPE (1986) recommendations brought out by Government of India in 1997 lays down norms for "Continues comprehensive internal evaluation and suggests safeguards against of this evaluation systems. Report on the CABE Committee on Policy brought by Ministry of Human Resources Development (MHRD), Government of India in January, 1992 has also referred to the provisions of NPE with regards to evaluation process and examination reforms and also suggested "Continuous and Comprehensive internal evaluation of the scholastics and non-scholastic achievements of the students.

The report of the Tasks Force on the role and status of the Board of Secondary education (1997) observed; In our scheme of things it is the Schools Board which are expected to play the central role in the academics renovations of the school systems. In other words, leadership has to come from the Board. Once the boards get committed to this vital and supplementary system of evaluations and push it vigorously, this innovation will come to be accepted by more and more schools.

"Learning without Burden: report of the National Advisory Committee appointed by the MHRD, Department of Education, Government of India has stated "Board examination, taken at the end of class X and XII have remained rigid, bureaucratic and essentially un-educative

According ,National Curriculum Framework , 2005 proposing Examination reforms " Indeed, boards should considered ,as a long measures ,making the Class examination optional , thus permitting students continuing in the same school to take an internal school examination instead and continues , "excellence in

diverse areas should be recognized and rewarded, And it is children's responsiveness to what is taught rather than just their capacity to retain it what should be the focus of evaluation.

Considered necessary to develop a scheme of evaluation in order to improve the evaluations system. A schools based evaluations scheme was conceived at implementation the idea of continues and comprehensive evaluations in school situation

NEED OF THE STUDY

The concept of evaluation in education was restricted to the academic performance of the learners for long time. Slowly it was realized that without the development of different aspects of personality, the so called human resource development cannot take place. Along with scholastic development, co-scholastic development is also the need of the hour. This is not possible through the conventional term-end summative evaluation. This gave rise to a new term; formation evaluation that has extended itself so much that continuous and comprehensive evaluation has become the most talked about concept in schools. Though it has been in vogue in schools for past some years at different levels, the change in the pattern of evaluation and introduction of grading system in Secondary School Examinations of CBSE has made it very important, especially with the plans of the board to extend the grading system to IX level also. Continuous and Comprehensive Evaluation (CCE) is intended to provide a holistic profile of the learners through assessment of both scholastic and co-scholastic aspects of education spread over the total span of instructional time in schools. It helps to identify those positive attributes of the learners which are not usually assessed during the examinations conducted by the Board. As it is spread over a period of two years in class IX and X it provides several opportunities for the school to identify the latent talents of the learners in different contexts. It can be interpreted, thus, that to secure a suitable future career, more attention is paid to holistic assessment of learners in CCE than in earlier evaluation systems. It intends to make assessment of learners' holistic profile throughout the academic session stress free, thus minimizing the hazards of summative evaluation. To reach high standards of development we should first strengthen our base, and CCE at secondary level serves this purpose. With so much emphasis on CCE in newspapers, television, internet and other mass media, different researchers from the field of education are conducting studies on different aspects of it. Since the whole emphasis of CCE is the betterment of learners, it becomes imperative to find out their perception about this whole idea of Continuous and Comprehensive Evaluation. It was in this context that the present study was undertaken.

STATEMENT OF PROBLEM

An Analysis of Awareness among Secondary School Teachers towards Continuous and Comprehensive Evaluation in Central India.

OBJECTIVES

The following are the objectives of the preset study

- 1) To find the difference in CCE awareness among male and female secondary school teachers.
- 2) To compare the CCE awareness among the secondary school teachers belonging to Urban and Rural areas.
- 3) To compare the CCE awareness among the secondary school teachers belonging to Government and Private school.

HYPOTHESIS

In light of the objectives, the following Hypothesis was formulated

HO₁: There is no significance difference in CCE awareness among male and female secondary school teachers

HO₂: There is no significance difference in CCE awareness among school teachers belonging to Urban and Rural areas.

HO₃: There is no significance difference in CCE awareness among school teachers belonging to Government and Private schools.

METHODOLOGY

Design of the study: The research study was essentially descriptive/survey in nature. Since teachers in secondary schools irrespective of sex and geographical location are involved in Continuous and Comprehensive Evaluation, the target or accessible population for the study therefore consisted of the secondary school teachers in Central India.

Sample: Incidental sampling technique was used to draw the sample of the study. Total Sample size was 200. There were 100 boys and 100 girls students from both Urban and Rural Schools. The breakup of sample is depicted in the table below.

RESULTS AND DISCUSSION

TABLE-1: BREAK OF SAMPLE

S No	School	Sample size	Gender	
			Male	Female
1	School1 (Private)	50	25	25
2	School 2 (Private)	50	25	25
3	School 3 (Government)	50	25	25
4	School 4(Government)	50	25	25
Total		200	100	100

TABLE-2: DEMOGRAPHIC PROFILE OF SECONDARY SCHOOL TEACHERS

Gender			Educational qualification			Teaching Experience			Teachers other source of incomes		
Sex	Frequency	%	Group	Frequency	%	Group	Frequency	%	Group	Frequency	%
Male	100	50	M.A.B.Ed	60	30	≤ 1	10	5	Yes	34	17
Female	100	50	M.Sc. B.Ed	70	35	1-3	20	10	No	166	83
			M.Ed	10	05	4-7	40	20			
			M.Phil	40	20	8-10	50	25			
			Ph.D	20	10	≥ 10	80	40			

TABLE-3: TEST OF ANALYSIS OF CCE AWARENESS MALE AND FEMALE TEACHERS

Group	N	Mean	SD	Mean difference	t-ratio	Decision
Male	100	9.34	2.83	0.79	1.77	H ₀ accepted
Female	100	8.55	2.31			

There is no significant difference in CCE awareness among male and female secondary school teachers. Observation of Table-3 reveals that the "t" ratio is 1.77 which is not significant at 0.05 level. It means that male and female secondary school teachers have equal awareness. Hence Null hypothesis is accepted. It is therefore, concluded that there is no significant difference in CCE awareness among males and female secondary school teachers.

TABLE-4: TEST OF ANALYSIS OF CCE AWARENESS AMONG TEACHERS BELONGING TO URBAN AND RURAL AREAS

Group	N	Mean	SD	Mean difference	t-ratio	Decision
Urban	100	9.19	2.49	0.39	1.06	H ₀ accepted
Rural	100	9.70	2.73			

There is no significant difference in CCE awareness among secondary school teachers belonging to Urban and Rural area. Observation of Table-4 reveals that the "t" ratio is 1.06 which is not significant at 0.05 level. It means that secondary school teachers belonging to Urban and Rural area have equal awareness. Hence Null hypothesis is accepted. It is therefore, concluded that there is no significant difference in CCE awareness among secondary school teachers belonging to Urban and Rural area.

TABLE-5: TEST OF ANALYSIS OF CCE AWARENESS AMONG TEACHERS BELONGING TO GOVERNMENT AND PRIVATE SCHOOLS

Group	N	Mean	SD	Mean difference	t-ratio	Decision
Govt. School	100	10.19	2.79	1.59	3.9	H ₀ rejected
Private school	100	9.70	1.88			

There is no significant difference in CCE awareness among secondary school teachers belonging Government and Private schools. Observation of Table-4 reveals that the "t" ratio is 3.9 which is significant at 0.05 levels. It means that secondary school teachers belonging to Urban and Rural area have equal awareness. Hence Null hypothesis is rejected. It is therefore, concluded that secondary school teachers working in Government school have more awareness towards CCE.

CONCLUSION

1. Total mean score is less than 50% means that teachers included in this study is less aware about CCE.
2. Female and Male teacher have equal awareness about CCE.
3. Awareness among teacher working in urban area and rural area have equal awareness about CCE.
4. Awareness among teacher working in Government school and private schools, Government school teacher have more awareness about CCE than private school teachers.

RECOMMENDATIONS

- (1) Seminars, conferences and workshops should be organized regularly for school teachers to expose them acquire the skills required to practice CCE in schools. These seminars/conferences/workshops should also embrace programmes that will up-date the knowledge and skills of the serving lecturers on the various CCE techniques. This will help them implement CCE in schools adequately.
- (2) Schools should be adequately funded since a lot of money is needed in the implementation of CCE. Computer usage should be introduced and computers made available to schools to facilitate the implementation of CCE practices. Apart from facilitating instructions, computer introduces innovations to teaching as well as secures examination materials adequately.
- (3) School authorities/government should encourage teachers to participate effectively in these seminars, conferences and workshops by sponsoring their attendance to these conferences.
- (4) Manuals on CCE implementation procedures should be made available to schools to get them well informed.
- (5) Adequate incentives or remuneration should be given to teachers of schools who distinguish themselves in the implementation of continuous assessment.

LIMITATIONS OF THE STUDY

After retrospective view of the whole study, the investigators find that there were a few limitations that constricted the area of generalization of this study. The limitations were as given below:

1. Due to paucity of time and resources a sample of only 200 secondary school teachers was taken which restricted the scope of generalization.
2. There are many variables which may affect the awareness of teachers towards CCE like some socioeconomic variables, intellectual level, and maturity level and so on. Though these variables were included in the study, they were not used in analysis in any way.
3. Since the awareness was measured on the basis of fixed responses, the students might have given socially accepted responses instead of giving correct responses.
4. Only a very few schools affiliated to CBSE were selected in this study.
5. Some respondents put tick mark against more than one alternative and sometimes they left some of the items unanswered which presented difficulty in accurate analysis of data.
6. The biggest limitation was that some teachers consulted with each other while making their choice. So the result might have got affected due to this.
7. Present study was conducted only in one state therefore more empirical evidences will be required from more states before ample generalization may be made. In light of this, it is suggested that a similar but more elaborate study may be conducted using a larger sample and covering more states in India.

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CURRENCY FUTURES POTENTIAL IN INDIAN CAPITAL MARKETS

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ABSTRACT

Currency futures were introduced to mitigate the risk arising out of excess volatility in the exchange rate. The prime objective of using currency futures as a derivative is to combat currency risk volatility. Within its first year of operation, the daily turnover of exchange traded currency derivatives already reached around Rs. 30,000 crores. The study describes the benefits of currency futures, how currency futures work in the Indian context, and various reasons for fluctuation in currency. The objectives of the study were twofold: Part A was to analyse the changes in the daily value of Rupee compared to the Dollar, Euro and Pound respectively. Data was collected from multiple observation points separately for every month for a 13 month period from January 2012 to January 2013. Kolmogorov Smirnov test was subsequently used to test the author's null hypothesis that the returns are normally distributed; which in turn was accepted. Part B of the study analysed NSE, BSE and MCX data for the same time period of 13 months across two parameters – price and the volume of transactions. The finding was that there are high correlation values between price fluctuations of the three indexes.

JEL CLASSIFICATION

F37, F31, G14, G15, G17.

KEYWORDS

Bombay Stock Exchange (BSE), Currency Futures, Exchange Rate, Multi Commodity Exchange (MCX), National Stock Exchange (NSE)

1. INTRODUCTION

Currency futures refers to a standardized foreign exchange derivative contract traded on a recognized stock exchange to buy or sell one currency against another on a specified future date, at a price specified on the date of the contract, but does not include a forward contract. Currency futures can be used for trading and for combating currency risk volatility. It allows the clients to view the movement of exchange rate to offset the currency risk. The market for currency futures refers to the place where currency futures are traded.

Investors can exit their obligation to buy or sell the currency prior to the contract's delivery date because currency futures contracts are marked-to-market daily. This is done by closing out the position.

The regulators in India have already permitted stock exchanges to offer currency futures in the following pairs – USDINR, EURINR, GBPINR, and JPYINR. FIIs and NRIs are not permitted to participate in risk management – only residents of India may trade in currency futures.

The biggest advantage of trading and foreign currency is that it allows hedge for 12 calendar months. Margin trading is allowed which gives a daily settlement of the mark-to-market pay-in and pay-out in smaller affordable sizes which allows disciplined trading on the recognized stock exchanges. The DVP (*Delivery versus Payment*) principle against cash settlement offers convenience to trade. Electronic platforms of National Exchange for Automated Trading – (NEAT), NSE; FX Market Tracker; MCX – SX Electronic Trade Form etc. are used as trading platforms. Standardized brokerage systems also make trading transparent.

The banks have already been told to do KYC guidelines and open a client account for current account trading mandated by SEBI. Minimum 1% of notional value of contract or higher as per the exchange rate is the initial margin and extreme loss margin (1%) MTM (mark-to-market) settlements have to be done in case of currency futures so that liquidity is higher. The Reserve Bank of India has already sought checks on currency trading as it was resulting in speculation. FSDC (Financial Stability and Development Council) has recently come when the rupee is on a low vis-à-vis and the economy is under pressure. Currency betting through futures has its own repercussions on the economy as the rupee against dollar has already gone up to 57.11¹ over the last year.

1.1 ADVANTAGES OF CURRENCY FUTURES

- Low Commission
- Cut Out the Middleman
- Standardised Lot Size
- Low Transaction Costs
- Near Instantaneous Transactions
- Low Margins; High Leverage
- Online Access
- No Cornering the Market

No Insider Trading - Due to the Forex market's size and non-centralised nature, there is virtually no chance for ill effects caused by insider trading. Fraud possibilities, at least against the system as a whole, are significantly fewer than for any other financial instruments.

Table 1.1 gives a comparison of parameters for the four currency pairs as given by the Reserve Bank of India.

¹ US Dollar to Indian Rupee Exchange Rate as on June 22, 2012

TABLE 1.1: COMPARATIVE FEATURES FOR FOUR-PERMITTED CURRENCY PAIRS

	USD-INR	EUR-INR	GBP-INR	JPY-INR
Underlying	USD-Indian Rupee (USDINR)	Euro-Indian Rupee (EURINR)	Pound Sterling – Indian Rupee (GBPINR)	Japanese Yen – Indian Rupee (JPYINR)
Trading Hours	9 a.m. to 5 p.m	9 a.m. to 5 p.m	9 a.m. to 5 p.m	9 a.m. to 5 p.m
Size of the contract	USD 1,000	Euro 1,000	GBP 1,000	Japanese Yen 1,00,000
Quotation	The contract would be quoted in rupee terms. However, the outstanding positions would be in USD terms.	The contract would be quoted in rupee terms. However, the outstanding positions would be in Euro terms.	The contract would be quoted in rupee terms. However, the outstanding positions would be in Pound Sterling terms.	The contract would be quoted in rupee terms. However, the outstanding positions would be in Japanese Yen terms.
Tenor of the contract	The maximum maturity of the contract would be 12 months.	The maximum maturity of the contract would be 12 months.	The maximum maturity of the contract would be 12 months.	The maximum maturity of the contract would be 12 months.
Available contracts	All monthly maturities from 1 to 12 months would be made available.	All monthly maturities from 1 to 12 months would be made available.	All monthly maturities from 1 to 12 months would be made available.	All monthly maturities from 1 to 12 months would be made available.
Settlement mechanism	Cash settled in Indian Rupee.	Cash settled in Indian Rupee.	Cash settled in Indian Rupee.	Cash settled in Indian Rupee.
Settlement price	The settlement price would be the Reserve Bank Reference Rate for USDINR on the date of expiry.	The settlement price would be the Reserve Bank Reference Rate for EURINR on the date of expiry.	GBPINR Exchange rate published by the Reserve Bank in its Press Release captioned RBI Reference Rate for US\$ and Euro.	JPYINR Exchange rate published by the Reserve Bank in its Press Release captioned RBI Reference Rate for US\$ and Euro.
Final settlement day	The contract would expire on the last working day (excluding Saturdays) of the month. The last working day would be taken to be the same as that for Interbank Settlements in Mumbai. The rules for Interbank Settlements, including those for 'known holidays' and 'subsequently declared holiday' would be those as laid down by FEDAI.			

Source: RBI

1.2 BASIC WORKING OF A CURRENCY FUTURE

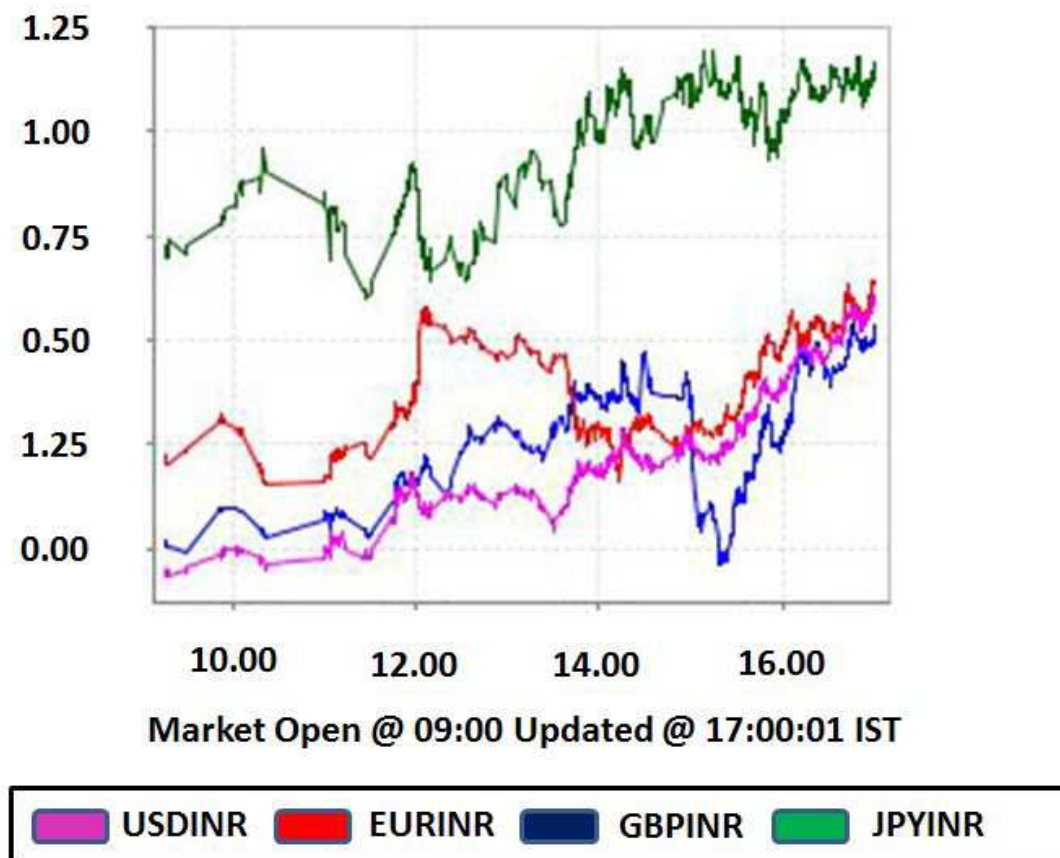
A person invests \$200,000 abroad for a year when \$1 = Rs 50. If his investments yield 20 per cent returns in a year, he stands to make \$40,000; or Rs 20 lakh (\$40,000 x 50) in rupee terms. However, if the dollar weakens to Rs 45, the returns would fall to Rs 18 lakh, a loss of Rs 2 lakh.

But if the person had sold a 12 month futures contract at the spot price of Rs 50, amounting to \$200,000, and the dollar did fall to Rs 45, he could cover the transaction by buying the dollar and make good the loss incurred in the international market.

The upfront payment will be 1.75 per cent of \$200,000 or \$3,500. Of course, in case the rupee weakens to say 47, the losses in the futures market would be made up by profits in the international market. Thus the investor is safeguarded against both a rise and a fall in currency, thereby ensuring safe returns.

Figure 1.2.1 shows the near month movement chart for February 2013.

FIGURE 1.2.1: NEAR MONTH MOVEMENT CHART AS ON FEBRUARY 2013



Source: NSE

2. LITERATURE REVIEW

Chatrath, Ramchander and Song (1996) explicitly examines the relationship between level of currency futures trading and the volatility in the spot rates of the British pound, Canadian dollar, Japanese Yen, Swiss Franc, and Deutsche Mark. The researchers provide strong evidence on the causality between futures trading volume exchange rate volatility, as it is found out that the trading activity in futures has a positive impact on conditional volatility in the exchange rate changes, with a weaker feedback from the exchange rate fluctuations to the futures volatility.

Bhargava and Malhotra (2007) focuses on trading in futures on four currencies over the time period of 1982-2000. The authors find evidence that day traders and speculators destabilize the market for futures. Furthermore it is inconclusive whether offsetting volatility stabilizes or destabilizes the market. Exchange rate movements affect expected future cash flow by changing the home currency value of foreign cash inflows and outflows and the terms of trade and competition. On one hand, some models (Grundy and McNichols, 1989; Holthausen and Verrecchia, 1990; Kim and Verrecchia, 1991) show that informed traders prefer to trade large amounts at any given price and hence size is positively related to the quality of information and is therefore correlated with price volatility. On the other hand, some other models (Kyle, 1985; Admati and Pfleiderer, 1988) indicate that a monopolist informed trader may disguise his trading activity by splitting one large trade into several small trades. Thus, trade size may not necessarily convey adverse information.

3. OBJECTIVES

PART A

1. To analyse the critical changes in the daily value of Rupee compared to the Dollar, Euro and Pound respectively for the 13 month time period of *January 2012 – January 2013*.
2. To study the offering insights into currency future derivatives market in India.

PART B

To analyse NSE, BSE and MCX data across two parameters – price and volume of transactions for the 13 month time period of *January 2012 – January 2013*.

4. RESEARCH METHODOLOGY

Till January 2010, RBI had permitted futures only on the USD-INR rates. Exchange traded currency futures have since been expanded to the Euro, Pound and Yen pairing since January 2010.

Consideration set: USD-INR, EUR-INR, and GBP-INR pairing. Secondary data has been used.

Data source: RBI Data Warehouse; NSE, BSE, MCX reports.

Study period: January 2012 – January 2013 (for daily changes in values of currency rates pairings); January 2012 – January 2013 (for NSE – BSE – MCX comparison)

Software Used: SPSS 20.0; MS Excel 2010

4.1 HYPOTHESIS

For normal distribution of currencies

H_0 : The currencies pairs are normally distributed.

H_1 : The currencies pairs are not normally distributed.

For correlation between indexes

H_0 : There is low correlation between the three indexes – NSE, MCX, and BSE.

H_1 : There is high correlation between the three indexes – NSE, MCX, and BSE.

5. ANALYSIS

5.1 PART A: ANALYSIS OF DAILY VALUE OF RUPEE W.R.T. DOLLAR, EURO AND POUND

Tables 5.1.1, 5.1.2, and 5.1.3 show the descriptive statistics for the value of rupee based on daily observations of exchange rate w.r.t. dollar, euro, and pound.

The number of observations differs slightly every month (ranging between 17 – 21) because number of working days differs every month; holidays; and other activities like bank closing at end of quarter.

Negative means in Jan-12, Feb-12, July-12, Sep-12, and Jan-13 (USDINR); Jan-12, July-12, Sep-12, and Jan-13 (EURINR); Jan-12, Sep-12, and Jan-13 (GBPINR) can be seen from Tables 5.1.1, 5.1.2, and 5.1.3 respectively.

Implication: These negative means are an indication of decreasing exchange rate from beginning of the month to the end of the month. In other terms rupee is appreciating and the dollar is at discount in 5 out of 13 months; rupee is appreciating and the euro is at discount in 4 out of 13 months; and rupee is appreciating and the pound is at discount in 3 out of 13 months.

TABLE 5.1.1: DESCRIPTIVE STATISTICS OF DAILY CHANGES IN THE VALUE OF RUPEE W.R.T. DOLLAR (MONTH WISE) JANUARY 2012 – JANUARY 2013

PERIOD	NO. OF OBSERVATIONS	MEAN	S.D.	MIN.	MAX.	SKEWNESS	KURTOSIS
Jan-12	20	-0.1808	0.2427	-0.5895	0.2235	-0.0208	-1.2350
Feb-12	18	-0.0329	0.2095	-0.4037	0.3550	0.0475	-0.6977
Mar-12	19	0.1054	0.2845	-0.5583	0.5468	-0.7442	0.4089
Apr-12	17	0.1150	0.2424	-0.3060	0.5615	0.2164	-0.7092
May-12	21	0.1663	0.4099	-0.5617	1.0455	-0.1990	-0.1461
Jun-12	20	0.0196	0.3912	-0.6105	0.8160	0.4900	-0.5879
Jul-12	21	-0.0011	0.4506	-1.0175	0.6128	-0.6124	-0.3443
Aug-12	20	0.0119	0.2551	-0.6115	0.3455	-0.8612	0.2813
Sep-12	18	-0.1532	0.3675	-0.7530	0.3590	-0.2816	-1.4012
Oct-12	19	0.0702	0.3641	-0.4500	0.7485	0.3853	-0.7513
Nov-12	18	0.0415	0.3339	-0.6755	0.5940	-0.3848	0.1127
Dec-12	19	0.0114	0.1887	-0.3783	0.3863	0.0340	-0.0272
Jan-13	21	-0.0735	0.2847	-0.6963	0.4305	-0.1534	-0.2324

Source: Computed Output

TABLE 5.1.2: DESCRIPTIVE STATISTICS OF DAILY CHANGES IN THE VALUE OF RUPEE W.R.T. EURO (MONTH WISE) JANUARY 2012 – JANUARY 2013

PERIOD	NO. OF OBSERVATIONS	MEAN	S.D.	MIN.	MAX.	SKEWNESS	KURTOSIS
Jan-12	20	-0.1860	0.3896	-0.9400	0.4100	-0.4437	-0.6037
Feb-12	18	0.0711	0.4523	-0.8275	1.0338	0.0101	0.1946
Mar-12	19	0.1458	0.3714	-0.7777	0.6140	-1.0914	0.9540
Apr-12	17	0.1252	0.3424	-0.4860	0.6950	-0.2065	-0.9377
May-12	21	0.0004	0.4941	-1.2810	0.6677	-0.9869	1.1708
Jun-12	20	0.0889	0.3685	-0.7437	0.6395	-0.1736	-0.1306
Jul-12	21	-0.0942	0.4618	-1.3680	0.5735	-1.0953	1.4239
Aug-12	20	0.0674	0.2621	-0.3855	0.7824	0.9723	1.7452
Sep-12	18	-0.0859	0.4513	-1.0585	0.5890	-0.2725	-0.4626
Oct-12	19	0.1244	0.3099	-0.3365	0.7130	0.2653	-1.0903
Nov-12	18	0.0654	0.4231	-0.8800	0.7340	-0.6428	0.0992
Dec-12	19	0.0621	0.3713	-0.8975	0.6285	-0.7672	1.0070
Jan-13	21	-0.0118	0.5083	-0.6955	0.9710	0.7527	-0.3375

Source: Computed Output

TABLE 5.1.3: DESCRIPTIVE STATISTICS OF DAILY CHANGES IN THE VALUE OF RUPEE W.R.T. POUND (MONTH WISE) JANUARY 2012 – JANUARY 2013

PERIOD	NO. OF OBSERVATIONS	MEAN	S.D.	MIN.	MAX.	SKEWNESS	KURTOSIS
Jan-12	20	-0.2255	0.4141	-1.0300	0.4900	-0.0244	-0.7169
Feb-12	18	0.0002	0.4756	-1.0488	0.7820	-0.4979	0.0463
Mar-12	19	0.1869	0.3809	-0.7552	0.5940	-1.2800	1.0059
Apr-12	17	0.2614	0.4101	-0.5121	1.1961	0.7162	1.1592
May-12	21	0.0725	0.5545	-0.9950	1.3075	0.0651	0.4554
Jun-12	20	0.1013	0.5478	-0.8802	0.8653	-0.6188	-0.8944
Jul-12	21	0.0124	0.5579	-1.3682	0.8283	-0.7946	0.3553
Aug-12	20	0.0505	0.2529	-0.4219	0.5312	-0.1163	-0.3099
Sep-12	18	-0.1262	0.5344	-1.1659	0.6217	-0.4983	-0.6472
Oct-12	19	0.1007	0.4465	-0.8621	0.8351	-0.4548	-0.1212
Nov-12	18	0.0397	0.4810	-0.9688	0.8997	-0.5984	0.4118
Dec-12	19	0.0554	0.4119	-0.6294	0.9654	0.2782	-0.0313
Jan-13	21	-0.2382	0.5139	-1.2142	0.9424	0.4125	0.1013

Source: Computed Output

Table 5.1.4 shows summation of Skewness and Kurtosis distribution based on Tables 5.1.1, 5.1.2, and 5.1.3.

We can see from Table 5.1.4 that there is positive skewness in Feb-12, Apr-12, Jun-12, Oct-12, and Dec-12 (USDINR); Feb-12, Aug-12, Oct-12, and Jan-13 (EURINR); Apr-12, May-12, Dec-12, Jan-13 (GBPINR). These distributions have a right tail and the negative skewness in the rest of the months means that the distribution has a left tail. USDINR has negative skewness in 8 out of 13 months while EURINR and GBPINR have negative skewness in 9 out of 13 months.

Implication: Negative skewness indicates tail on the left side of the probability density function is longer than the right side and the bulk of the values lie to the right of the mean. This points towards frequent small gains and few extreme losses. Positive skewness represents frequent small losses and few extreme gains. USDINR, USDEUR, and USDGBP all lean towards negative skewness in substantially more months than positive skewness, and this shows that there is a higher likelihood for frequent small gains and fewer extreme losses.

Table 5.1.4 also shows kurtosis values. USDINR has positive values in 3 out of 13 months while EURINR and GBPINR have positive values in 9 out of 13 months each.

Implication: Positive kurtosis is leptokurtic while the negative values are platykurtic. The leptokurtic values are a sign of lesser risk of extreme outcomes. This shows that USDINR shows higher risk of extreme outcomes in more months than EURINR and GBPINR.

TABLE 5.1.4: SUMMATION OF SKEWNESS AND KURTOSIS VALUES

PERIOD	USD - INR		EUR - INR		GBP - INR	
	SKEWNESS	KURTOSIS	SKEWNESS	KURTOSIS	SKEWNESS	KURTOSIS
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
Jan-12		-0.0208		-1.2350		-0.4437
Feb-12	0.0475			-0.6977	0.0101	0.1946
Mar-12		-0.7442	0.4089			-1.0914
Apr-12	0.2164			-0.7092		-0.2065
May-12		-0.1990		-0.1461		-0.9869
Jun-12	0.4900			-0.5879		-0.1736
Jul-12		-0.6124		-0.3443		-1.0953
Aug-12		-0.8612	0.2813		0.9723	1.7452
Sep-12		-0.2816		-1.4012		-0.2725
Oct-12	0.3853			-0.7513	0.2653	
Nov-12		-0.3848	0.1127			-0.6428
Dec-12	0.0340			-0.0272		-0.7672
Jan-13		-0.1534		-0.2324	0.7527	
						-0.3375
						0.4125
						0.1013

Source: Computed Output

5.1.1 KOLMOGOROV – SMIRNOV TEST

The Kolmogorov–Smirnov test (K-S test) is a nonparametric test for the equality of continuous, one-dimensional probability distributions that can be used to compare a sample with a reference probability distribution (one-sample K-S test), or to compare two samples (two-sample K-S test). The K-S test tries to determine if two datasets differ significantly.

The test is used to verify if the empirical data has a normal, scaled-t, hyperbolic, NIG or GH distribution. The KS-test has the advantage of making no assumption about the distribution of data. Technically speaking it is non-parametric and distribution free. The K-S test statistic quantifies a distance between the empirical distribution function of the sample and the cumulative distribution function of the reference distribution, or between the empirical distribution functions of two samples.

The null distribution of this statistic is calculated under the null hypothesis that the samples are drawn from the same distribution (*in the two-sample case*) or that the sample is drawn from the reference distribution (*in the one-sample case*). In each case, the distributions considered under the null hypothesis are continuous distributions but are otherwise unrestricted.

As seen from calculation of standard error and kurtosis statistic (Table 1 – Table 3)², the distribution is normal in all cases. The Kolmogorov test results in Tables 5.1.1.1, 5.1.1.2, and 5.1.1.3 also clearly shows that the distribution is in fact normal in every case.

Hence, null hypothesis that the currency pairs are normally distributed is accepted.

TABLE 5.1.1.1: ONE-SAMPLE KOLMOGOROV SMIRNOV TEST FOR USDINR

		Jan_20 12	Feb_20 12	Mar_20 12	Apr_20 12	May_20 12	Jun_20 12	Jul_20 12	Aug_20 12	Sep_20 12	Oct_20 12	Nov_20 12	Dec_20 12	Jan_20 13
N		20	18	19	17	21	20	21	20	18	19	18	19	21
Normal Parameters _{a,b}	Mean	-.1808	-.0329	.1054	.1150	.1663	.0196	-.0011	.0120	-.1532	.0702	.0415	.0114	-.0735
	Std. Deviation	.24265	.20952	.28453	.24243	.40994	.39120	.45056	.25509	.36749	.36408	.33390	.18871	.28465
Most Extreme Differences	Absolute	.169	.091	.105	.129	.155	.151	.144	.135	.205	.111	.153	.154	.071
	Positive	.169	.079	.068	.129	.121	.151	.087	.096	.109	.111	.122	.154	.071
	Negative	-.148	-.091	-.105	-.094	-.155	-.108	-.144	-.135	-.205	-.084	-.153	-.134	-.069
Kolmogorov-Smirnov Z		.754	.385	.456	.533	.710	.677	.658	.606	.868	.486	.648	.671	.324
Asymp. Sig. (2-tailed)		.620	.998	.986	.939	.695	.749	.779	.857	.438	.972	.796	.759	1.000
a. Test distribution is Normal.														
b. Calculated from data.														

Source: Computed Output

TABLE 5.1.1.2: ONE-SAMPLE KOLMOGOROV SMIRNOV TEST FOR EURINR

		Jan_20 12	Feb_20 12	Mar_20 12	Apr_20 12	May_20 12	Jun_20 12	Jul_20 12	Aug_20 12	Sep_20 12	Oct_20 12	Nov_20 12	Dec_20 12	Jan_20 13
N		21	19	20	18	22	21	22	21	19	20	19	20	22
Normal Parameters _{a,b}	Mean	66.3986	65.0936	66.5269	68.1617	69.6991	70.3087	68.2520	68.8750	70.1263	68.7522	70.3665	71.6555	72.1286
	Std. Deviation	1.59128	.65901	1.07466	.94039	.57884	.88627	.69189	.60006	.99237	1.03684	.91176	.88769	.51458
Most Extreme Differences	Absolute	.196	.115	.181	.256	.131	.110	.197	.138	.147	.151	.188	.196	.138
	Positive	.196	.071	.181	.256	.131	.110	.197	.138	.129	.141	.188	.104	.117
	Negative	-.161	-.115	-.141	-.155	-.086	-.103	-.092	-.127	-.147	-.151	-.109	-.196	-.138
Kolmogorov-Smirnov Z		.900	.500	.811	1.084	.614	.506	.924	.631	.642	.677	.818	.878	.649
Asymp. Sig. (2-tailed)		.393	.964	.527	.190	.845	.960	.361	.821	.805	.749	.515	.424	.793
a. Test distribution is Normal.														
b. Calculated from data.														

Source: Computed Output

TABLE 5.1.1.3: ONE-SAMPLE KOLMOGOROV SMIRNOV TEST FOR GBPINR

		Jan_20 12	Feb_20 12	Mar_20 12	Apr_20 12	May_20 12	Jun_20 12	Jul_20 12	Aug_20 12	Sep_20 12	Oct_20 12	Nov_20 12	Dec_20 12	Jan_20 13
N		20	18	19	17	21	20	21	20	18	19	18	19	21
Normal Parameters _{a,b}	Mean	-.2255	.0002	.1869	.2614	.0725	.1013	.0124	.0505	-.1262	.1007	.0397	.0554	-.2382
	Std. Deviation	.41414	.47558	.38088	.41011	.55446	.54781	.55791	.25286	.53441	.44653	.48097	.41187	.51388
Most Extreme Differences	Absolute	.119	.169	.178	.159	.149	.170	.177	.117	.146	.102	.111	.142	.149
	Positive	.119	.087	.143	.159	.149	.116	.072	.088	.083	.071	.106	.130	.149
	Negative	-.096	-.169	-.178	-.122	-.145	-.170	-.177	-.117	-.146	-.102	-.111	-.142	-.081
Kolmogorov-Smirnov Z		.532	.715	.774	.657	.685	.759	.810	.522	.620	.446	.470	.617	.682
Asymp. Sig. (2-tailed)		.940	.686	.586	.782	.737	.612	.528	.948	.836	.989	.980	.841	.741
a. Test distribution is Normal.														
b. Calculated from data.														

Source: Computed Output

It can be seen from Table 5.1.1.4 that the correlation value ranges between 0.764 for USDINR – EURINR to 0.934 for USDINR – GBPINR.

² See Appendix

TABLE 5.1.1.4: CORRELATION FOR USDINR - EURINR - GBPINR

Correlations				
		USDINR	EURINR	GBPINR
USDINR	Pearson Correlation	1	.761**	.934**
	Sig. (2-tailed)		0	0
	N	264	264	264
EURINR	Pearson Correlation	.761**	1	.877**
	Sig. (2-tailed)	0		0
	N	264	264	264
GBPINR	Pearson Correlation	.934**	.877**	1
	Sig. (2-tailed)	0	0	
	N	264	264	264

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Computed Output

5.2 PART B: ANALYSIS OF BSE, NSE, AND MCX

Table 5.2.1 shows the month end price for the three indexes NSE (CNX NIFTY), MCX (Multi Commodity Exchange), and BSE (SENSEX) and the volume of trade contracts. Table 5.2.2 shows skewness and kurtosis values for the data.

Implication: Higher trading volume is an indication of higher level of speculation and hence there is a positive correlation between intra-day trading volume and higher degree of speculative motive behind trading of currency. Table 5.2.3 summarises the skewness and kurtosis values and the implications.

TABLE 5.2.1: BSE VS. NSE VS. MCX – PRICE AND VOLUME

	NSE		MCX		BSE	
	Price (Rs.)	Volume	Price (Rs.)	Volume	Price (Rs.)	Volume
Jan-12	5087.3	180791971	10769.35	34951833	17193.55	15662941
Feb-12	5385.2	251776075	11449.52	33412640	17752.69	21461250
Mar-12	5295.55	188926318	11538.88	32788973	17404.2	16647647
Apr-12	5248.15	137361978	11417.59	28118319	17318.81	10670000
May-12	4924.25	147023369	10558.22	34671822	16218.53	11359545
Jun-12	5278.9	144681959	10932.13	35489824	17429.98	10467619
Jul-12	5229	121478106	11136.69	31177743	17236.18	9558636
Aug-12	5258.5	131044153	11410.19	31779426	17429.56	10119500
Sep-12	5703.3	167398924	11734.1	34262400	18762.74	11359500
Oct-12	5619.7	131050460	11934.95	30743243	18505.38	8103500
Nov-12	5879.85	115019971	12034.22	32064560	19339.9	7317500
Dec-12	5905.1	120303114	12374.97	29290291	19426.71	8808421
Jan-13	6034.75	133711802	13030.49	31607221	19894.98	9174783

Source: Bloomberg

TABLE 5.2.2: BSE VS. NSE VS. MCX – PRICE AND VOLUME (SKEWNESS AND KURTOSIS)

	NSE		MCX		BSE	
	Price (Rs.)	Volume	Price (Rs.)	Volume	Price (Rs.)	Volume
Skewness	0.4044	1.7321	0.6392	-0.3491	0.4159	1.5181
Kurtosis	-0.9716	3.2998	0.5353	-0.5162	-0.7552	1.9974

Source: Computed Output

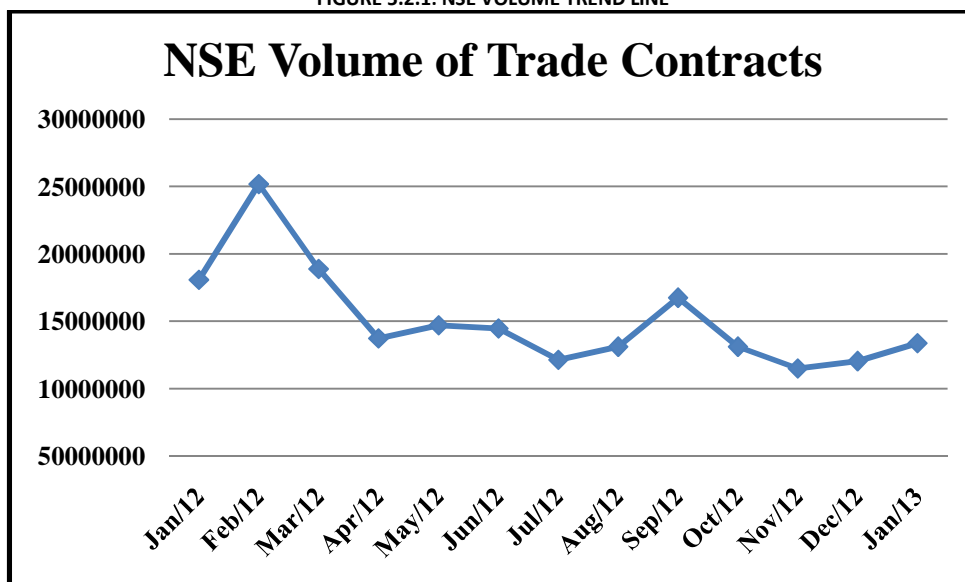
TABLE 5.2.3: BSE VS. NSE VS. MCX – PRICE AND VOLUME (SKEWNESS AND KURTOSIS)

	POSITIVE		NEGATIVE	
SKEWNESS	Price	Volume	Price	Volume
	NSE, MCX, BSE	NSE, BSE	N.A.	MCX
Implication	Frequent small drops and few sharp gains		Frequent small gains and few sharp drops	
KURTOSIS	MCX	NSE, BSE	NSE, BSE	MCX
Implication	Lesser risk of extreme changes		Higher risk of extreme changes	

Source: Computed Output

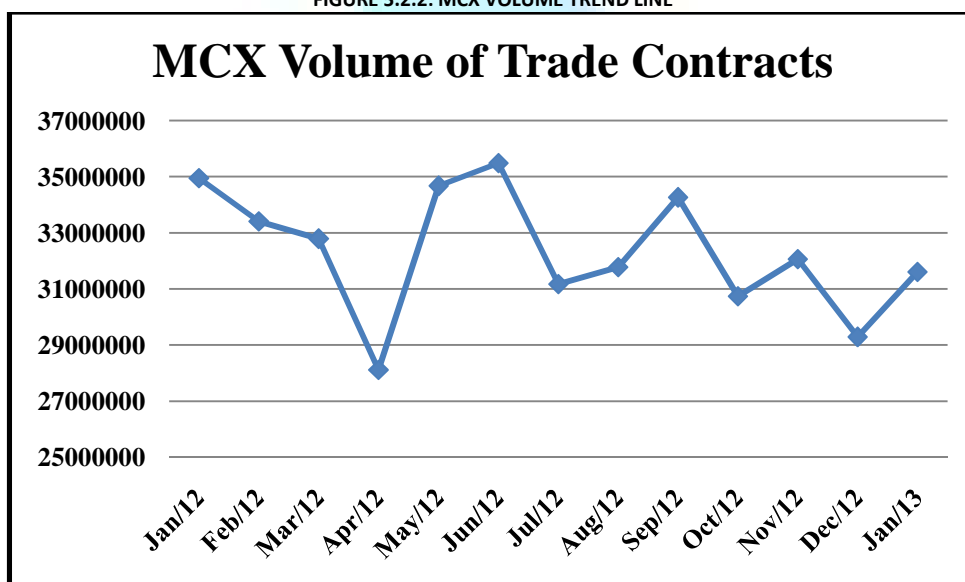
Figures 5.2.1, 5.2.2, and 5.2.3 show the trend lines for the volume of contracts traded.

FIGURE 5.2.1: NSE VOLUME TREND LINE



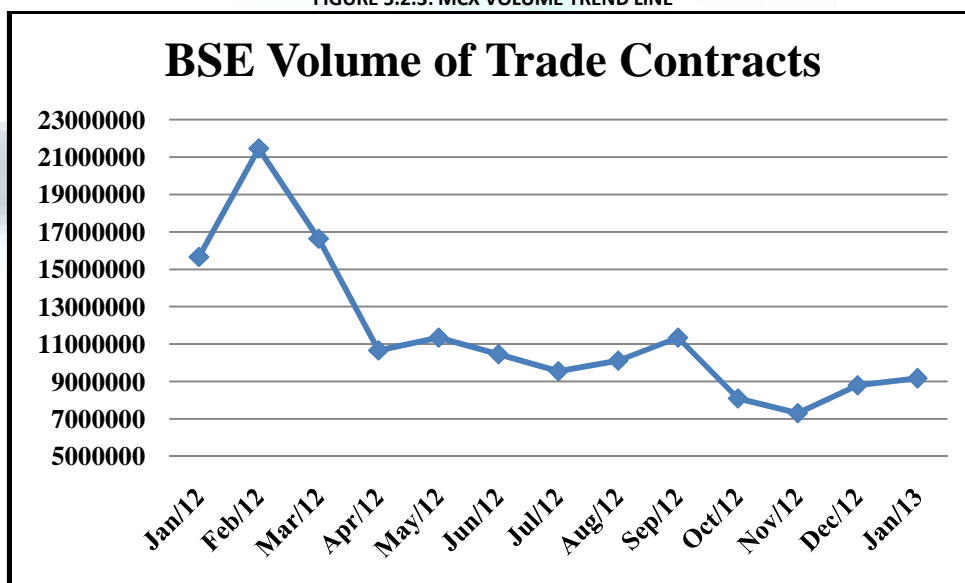
Source: NSE

FIGURE 5.2.2: MCX VOLUME TREND LINE



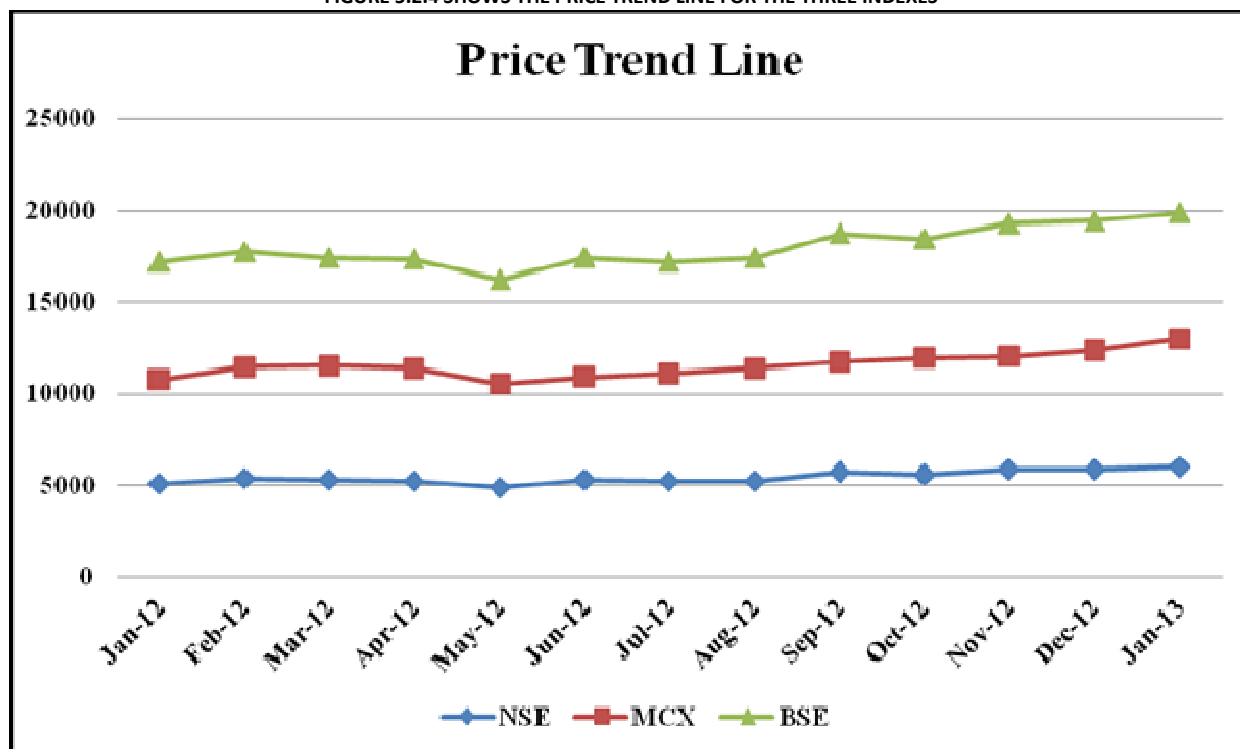
Source: MCX

FIGURE 5.2.3: MCX VOLUME TREND LINE



Source: MCX

FIGURE 5.2.4 SHOWS THE PRICE TREND LINE FOR THE THREE INDEXES



Source: Bloomberg

Table 5.2.4 shows the inter – index correlation. It can be seen that correlation values are very high. We therefore reject the null hypothesis and accept the alternate hypothesis that there is significant correlation between the three indexes.

TABLE 5.2.4: INTER INDEX CORRELATION

Correlations		Price_NSE	Price_MCX	Price_BSE
Price_NSE	Pearson Correlation	1	.941**	.995**
	Sig. (2-tailed)		.000	.000
	N	13	13	13
Price_MCX	Pearson Correlation	.941**	1	.933**
	Sig. (2-tailed)	.000		.000
	N	13	13	13
Price_BSE	Pearson Correlation	.995**	.933**	1
	Sig. (2-tailed)	.000	.000	
	N	13	13	13

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Computed Output

6. FINDINGS AND CONCLUSIONS

1. The currencies exhibit normal distribution based on both: a. kurtosis values and b. Kolmogorov – Smirnov test.
2. Kolmogorov – Smirnov test as a goodness of fit test rejects the hypothesis of equal cumulative distribution functions (point wise) for the pre and post free-float period.
3. There is high correlation between indexes.
4. Volatility has led to instability in economy. Quality and enhancement is at a lower level. Volatility shocks in this period are too significant. We cannot rule out that currency trading will increase spot price volatility.
5. The volumes have fallen during one year but currency derivatives market can withstand transaction charges and one will get a better picture if the time series correlation is spread over a longer period.
6. Currency Market volatility will affect effectiveness to offset the profits and losses as they would depend on relative movement of two currencies.
7. In day to day parlance the vast bulk of currency liquidity is intraday, meaning you buy now and you get out in 20 minutes. That is not hedging, but is trading and is speculation.

7. FUTURE SCOPE FOR STUDY

Given the mixed empirical results between price and trading volume especially in emerging markets context, more empirical research from other emerging financial markets is needed to better understand the price-volume relationship. Very few studies have examined the price-volume relationship in Indian market.

8. SUGGESTIONS

1. Extending working hours may help to increase volume of currency futures.
2. NRIs and FIIs will also participate in currency futures in India once market opens up.
3. Greater trade and financial inflows from Eurozone and Japan can make standardized contracts possible.
4. There has been a fall back in the volumes because of some stamp duty issues but the market is still very liquid but fortunately or unfortunately that is still largely speculative. To make it meaningful, RBI needs to make a few structural changes.

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10. APPENDIX

TABLE 1

Descriptive Statistics USDINR									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Jan_2012	20	-.59	.22	-.1808	.24265	-.021	.512	-1.235	.992
Feb_2012	18	-.40	.36	-.0329	.20952	.048	.536	-.698	1.038
Mar_2012	19	-.56	.55	.1054	.28453	-.744	.524	.409	1.014
Apr_2012	17	-.31	.56	.1150	.24243	.216	.550	-.709	1.063
May_2012	21	-.56	1.05	.1663	.40994	-.199	.501	-.146	.972
Jun_2012	20	-.61	.82	.0196	.39120	.490	.512	-.588	.992
Jul_2012	21	-1.02	.61	-.0011	.45056	-.612	.501	-.344	.972
Aug_2012	20	-.61	.35	.0120	.25509	-.861	.512	.281	.992
Sep_2012	18	-.75	.36	-.1532	.36749	-.282	.536	-1.401	1.038
Oct_2012	19	-.45	.75	.0702	.36408	.385	.524	-.751	1.014
Nov_2012	18	-.68	.59	.0415	.33390	-.385	.536	.113	1.038
Dec_2012	19	-.38	.39	.0114	.18871	.034	.524	-.027	1.014
Jan_2013	21	-.70	.43	-.0735	.28465	-.153	.501	-.232	.972
Valid N (listwise)	17								

TABLE 2

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Jan_12	20	-.94	.41	-.1860	.38957	-.444	.512	-0.604	.992
Feb_12	18	-.83	1.03	.0711	.45229	.010	.536	.195	1.038
Mar_12	19	-.78	.61	.1458	.37145	-1.091	.524	.954	1.014
Apr_12	17	-.49	.70	.1252	.34245	-.206	.550	-.938	1.063
May_12	21	-1.28	0.67	.0004	.49412	-.987	.501	1.171	.972
Jun_12	20	-.74	.64	.0889	.36849	-.174	.512	-.131	.992
Jul_12	21	-1.37	.57	-.0942	.46180	-1.095	.501	1.424	.972
Aug_12	20	-.39	.78	.0674	.26206	.972	.512	1.745	.992
Sep_12	18	-1.06	.59	-.0859	.45129	-.272	.536	-0.463	1.038
Oct_12	19	-.34	.71	.1244	.30985	.265	.524	-1.090	1.014
Nov_12	18	-.88	.73	.0654	.42310	-.643	.536	.099	1.038
Dec_12	19	-.90	.63	.0621	.37127	-.767	.524	1.007	1.014
Jan_13	21	-.70	.97	-.0118	.50825	.753	.501	-.337	.972
Valid N (listwise)	17								

TABLE 3

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Jan_2012	20	-1.03	.49	-.2255	.41414	-.024	.512	-0.717	.992
Feb_2012	18	-1.05	.78	.0002	.47558	-.498	.536	.046	1.038
Mar_2012	19	-.76	.59	.1869	.38088	-1.280	.524	1.006	1.014
Apr_2012	17	-.51	1.20	.2614	.41011	.716	.550	1.159	1.063
May_2012	21	-1.00	1.31	.0725	.55446	.065	.501	.455	.972
Jun_2012	20	-.88	.87	.1013	.54781	-.619	.512	-.894	.992
Jul_2012	21	-1.37	.83	.0124	.55791	-.795	.501	.355	.972
Aug_2012	20	-.42	.53	.0505	.25286	-.116	.512	-.310	.992
Sep_2012	18	-1.17	.62	-.1262	.53441	-.498	.536	-0.647	1.038
Oct_2012	19	-.86	.84	.1007	.44653	-.455	.524	-.121	1.014
Nov_2012	18	-.97	.90	.0397	.48097	-.598	.536	.412	1.038
Dec_2012	19	-.63	.97	.0554	.41187	.278	.524	-.031	1.014
Jan_2013	21	-1.21	.94	-.2382	.51388	.412	.501	.101	.972

DETERMINANTS OF INSTITUTIONAL CREDIT TO AGRICULTURE IN UNION TERRITORY OF PUDUCHERRY: AN ECONOMIC ANALYSIS

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ABSTRACT

In India farmers are not able to meet their agriculture expenditure from their own savings alone. Hence borrowing becomes essential for farmers to manage their farms. The financial requirement of the farmers is met by the institutional and non-institutional sources besides their own resources. Credit is an important instrument for crop production the present study examined the determinants of flow of institutional credit to agriculture in union territory of Puducherry and Karaikal district formed the universe of the study. The method of data collection was by personal interview, using a separate pretested schedule. A determinant of flow of institutional credit to agriculture was analyzed by using a multiple linear regression and principal component regression. It could be observed that all the variables had a positive correlation. A backward elimination multiple linear regression analysis showed a significant positive relationship of crop loan with the high yielding variety, rainfall, term loan, however negative relationship with land holding pattern variables. The results of PC regression showed that commercial crops, HYV, land holding, bank deposit, and term loans influenced significantly with the flow of crop loan. Impact of agricultural credit lending programme was indicated that most of the farmers expressed the positive impact of the programme on the agricultural improvement.

KEYWORDS

Agricultural credit, Determinant, Institutional credit, Institutions.

INTRODUCTION

The institutional credit encourages the poor farmers to invest in capital intensive new technologies to increase farm income. Even if a fraction of the additional income is saved and invested on farm, net worth of the farmers, their repaying capacity, and borrowing power all grow, and in the long run their dependence on credit itself may be less. A study was conducted to analyze the determinants of institutional credit to agriculture in union territory of Puducherry.

Puducherry is the union territory which gets maximum share in institutional credit per hectare gross cropped area in India. Puducherry is a highly banked area with 118 branches. In this territory the highest credit of Rs.4500 per ha of cropped area is disbursed. Puducherry is economically advanced as evidenced by the high per capita income of Rs.61064 and with an annual compound growth rate of 13.3 percent. This territory is highly developed in agriculture in terms of highest fertilizer consumption per cropped ha (534.80 Kgs per ha), highest cropping intensity (202 percent) and largest (41.29 percent) of net irrigated area to net cultivated area as well as coverage of 73 percent of paddy area under high yielding varieties. Further it has witnessed highest productivity in crops like cotton, paddy, ragi and sesamum. All these positive attributes of Puducherry appear to be because of good financial facilities besides the availabilities of other infrastructures. Hence it is worthwhile to study flow of institutional credit to agriculture in the union territory of Puducherry. The present study was carried out with the following objectives, to analyze the determinants of the flow of institutional credit to agriculture in Union Territory of Puducherry.

METHODOLOGY

DATA SOURCES

The secondary data on crop loan, term loan, total loan, rainfall, and fertilizer consumption, size of land holding and area of irrigation to gross cropped area were collected from different sources such as lead bank Indian bank, Directorate of Economics and Statistics, Directorate of Agriculture, State Cooperative Banks, and Reserve Bank websites.

TOOLS OF ANALYSIS

ANALYSIS OF CREDIT SUPPLY

Analysis of the factors determining the flow of crop loan, term loan and total agricultural loan over the study period was made by applying the multiple linear regressions for the time series data. In the analysis, a backward elimination technique was used.

The model of regression fit for analysis and the estimates of the parameters have the following form.

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + \dots + b_nx_n + e_i$$

Where,

Y = Dependent variable

a = Estimated intercept

b_i = Estimated coefficient

x_i = Variables considered, for $i = 1, 2, 3, \dots, n$

e_i = Error term

The variables considered in the model for the years 1980-81 to 2005-06 are,

x_1 = Proportion of area under irrigation to the gross cropped area (CGA)

x_2 = Proportion of area under commercial crop to the CGA

x_3 = Proportion of area under high yielding varieties (HYV) to CGA

x_4 = Level of fertilizer consumption per hectare of CGA in kgs.

x_5 = Amount of rainfall in the state per year in mm

x_6 = Average operational size of land holdings in the state in hectares.

x_7 = The number of commercial banks and regional rural banks (RRBs) per lakh population

x_8 = Level of bank deposit per capita of the state (Rs)

x_9 = Dummy variable for the impact of financial reform measures on agricultural credit. It is "0" for years 1980-81 to 1992-93 and "1" for years from 1993-94 to 2005-06.

x_{10} = Quantum of crop loan per hectare CGA, used as an independent variable for term loan (Rs)

x_{11} = Quantum of term loan per hectare CGA, used as an independent variable for crop loan (Rs)

An application of multiple linear regression analysis is often faced with the problem of Multicollinearity, which is phenomenon of the existence of perfect linear relationship among the explanatory variables. If the explanatory variables are perfectly linearly correlated, that is if the correlation coefficient of these variables is equal to or near to unity, the accuracy and stability of the parameter estimates obtained by the method of OLS will be impaired and apparently signs attached to certain regression coefficients will be per versed. It gives misleading results.

Collinearities between two or more independent variables may arise due to the inherent characteristics of the economic variables, which move together, which may be influenced by some unknown factor. To depend upon the results obtained by the method of OLS, thus a test for Multicollinearity is crucial.

PRINCIPAL COMPONENTS REGRESSION ANALYSIS

To overcome the effect of Multicollinearity various methods are suggested by various authors like dropping out the collinear variables, increasing the sample size, use of extraneous information etc., but none of these methods could improve the efficiency and accuracy of the OLS estimates. The application of principal component regression analysis is found to be the most suitable one to overcome the problem of Multicollinearity. (Choubey, et al, 1989)

The method of principal components analysis is a special case of the general method of factor analysis. The principal components regression keeps all the explanatory variables in the model but brings some changes in the estimates of least square estimates in a way which reduces the effect of Multicollinearity. (Jolliffe, 1986).

The aim of the method of principal components is the construction, out of the set of variables X_j 's ($j = 1, 2, 3, \dots, K$) of new variables (P_i) called principal components, which are linear combinations of the X 's.

It should be noted at the outset that the method of principal components can be applied by using the original variables, or the deviation from their means, or the standardized variables. In this study the standardized values of variables are analyzed first, then standardized coefficients of variables were converted into unstandardized coefficients by using the method outlined by Nieuwoudt (1972).

The a 's called factor loadings are chosen in such a way that constructed principal components satisfy two conditions (i) the principal components are orthogonal (ii) the first principal component P_1 absorbs and accounts for the maximum proportion of the total variation in the set of all the X 's, the second principal component absorbs the maximum of the remaining in the X 's and so on.

To compute the principal component regression a series of steps are required. The procedures are given below.

a) Estimation of the Factor Loadings and Latent Roots of the Principal Component

For the estimation of the loadings and latent roots of the principal component a procedure is outlined by Koutsoyiannis (1977).

b) Estimation of the Principal Component Model

Assuming that we have retained r number of principal components (where $r < K$) out of all the principal components, such that:

$$P_1 = a_{11}z_1 + a_{12}z_2 + \dots + a_{1k}z_k$$

$$P_2 = a_{21}z_1 + a_{22}z_2 + \dots + a_{2k}z_k$$

$$\begin{matrix} \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet \end{matrix}$$

$$P_i = a_{r1}z_1 + a_{r2}z_2 + \dots + a_{rk}z_k$$

Where the Z 's are the standardized values of the original X 's.

We regress Y on the chosen components.

$$Y = W_1P_1 + W_2P_2 + \dots + W_rP_r + V$$

From which we obtain the OLS estimates W_1, W_2, \dots, W_r of the principal components (where V is the random term).

c) Estimation of the Structural Parameters, B 's

Given the estimates a 's and w 's we transform back from the w 's to obtain estimates of b 's the coefficients of the standardized X 's in the original modes, by a multiplication of the matrices set as follows:

$$P_1 \quad P_2 \dots P_r \quad W_i \quad \text{Standardized } b_i\text{'s}$$

$$\begin{pmatrix} a_{11} & a_{12} & \dots & a_{1r} \\ a_{21} & a_{22} & \dots & a_{2r} \\ \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet \\ a_{k1} & a_{k2} & \dots & a_{kr} \end{pmatrix} \begin{pmatrix} W_1 \\ W_2 \\ \bullet \\ W_r \end{pmatrix} = \begin{pmatrix} b_1 \\ b_2 \\ \bullet \\ b_k \end{pmatrix}$$

We have thus the principal components estimates of the b 's of original standardized variables. If we retain all K principal components the coefficients of the standardized X 's would be identical with those obtained by the straightforward application of OLS of Y on the standardized X 's.

The variance of b 's computed by taking the number of principal components into consideration. If we take the variance of b_1 where there are three principal components.

$$\text{Var}(b_1) = a_{11}^2 \text{var } W_1 + a_{12}^2 \text{var } W_2 + a_{13}^2 \text{var } W_3$$

Where a_{11}, a_{12} and a_{13} are factor loadings of variable x_1 in the first second and third principal components respectively. The variance of W_1 is given as:

$$\text{Var}(W_1) = \frac{1 - \sum_{i=1}^r \lambda_i a_{1i}^2}{(n-r)\lambda_1}$$

In general,

$$\text{Var}(b_i) = \sum_{j=1}^k \sum_{l=1}^r a_{ij}^2 \times \text{Var}(W_l)$$

Where

n = Number of observations

r = Number of principal components

k = Number of explanatory variables

a_{ij} = Factor loadings of the i^{th} variable in the j principal component

W_i = Coefficients of the regression of Y on the principal components.

The significance of the b 's is thus tested by using the student's t test as

$$t = \frac{b_i}{\text{Var}(b_i)}$$

This follows the t distribution with $(n-1-k)$ degrees of freedom.

The unstandardized regression coefficients of the variables are obtained by multiplying the standardized regression coefficients computed in the before mentioned procedure by S_y/S_{x_j} , where S_y and S_{x_j} are standard deviations of the dependent and independent variables, respectively. The unstandardized coefficients are expressed in terms of units of measurements of the variables, the standardized coefficients are however, independent of the original units of measurement and comparison of any two variables show the relative importance of the independent variables involved (Nieuwoudt, 1972).

RESULTS AND DISCUSSION

TABLE 1: FACTOR DETERMINING THE FLOW OF PER HA CROP LOAN: A REGRESSION ANALYSIS

EXPLANATORY VARIABLES	MULTIPLE LINEAR REGRESSION	PRINCIPAL COMPONENT REGRESSION	
	BACKWARD ELIMINATION	UNSTANDARDISED COEFFICIENTS	STANDARDIZED COEFFICIENTS
Constant	100.28** (3.23)	97.99** (3.23)	-
Irrigation	-	1.95 (0.51)	0.185
Commercial crops	-	0.55* (2.30)	0.125
HYV	2.63** (3.31)	2.81** (3.53)	0.270
Fertilizer consumption	-	0.30 (0.68)	0.255
Rainfall	0.45 (1.73)	0.47 (1.79)	0.086
Land holding	-12.22** (4.13)	8.08** (3.13)	-0.201
Bank branch expansion	-	0.07 (0.03)	-0.310
Bank deposit	-	0.23** (2.89)	0.241
Term loan	0.80** (15.40)	1.80** (5.43)	1.180
R^2	0.941	0.856	
Durbin Watson d value	2.021	2.133	

Figures in parentheses indicate 't' statistic value. Note:

** Significant at 1 per cent level

* Significant at 5 per cent level

DETERMINANTS OF FLOW OF INSTITUTIONAL CREDIT

The factors influencing the flow of agricultural loans viz., crop, term and total loans in the state were analyzed by the using a multiple linear regression analysis and principal component regression analysis. The results are furnished below.

CROP LOAN

To analyze the factors influencing the flow of crop loan in the state, nine variables were assessed and the results are presented in table 1. From the table, it could be observed that all the variables had a positive correlation.

A backward elimination multiple linear regression analysis showed a significant positive relationship of crop loan with the high yielding variety, and term loan, however negative relationship with variables land holding pattern. The regression, on the other hand, had showed a higher percentage of goodness of fit, which is 94.1 percent. It was also observed from the table that the result of the principal component regression analysis on factors affecting the crop loan is presented. The results of principal component regression showed that commercial crops, HYV, land holding, bank deposit, and term loans influenced significantly the flow of crop loan. According to the results, an increase in the proportion of area under commercial crops per GCA by one unit increased the flow of short term credit per hectare GCA by Rs.0.55 per annum. A unit increase in the proportion of HYV per GCA induced an increase of Rs.2.81 credit per hectare GCA. Likewise the increase in the level of land holding per cultivator, there was an associated increase in agricultural credit per ha GCA of Rs.8.08 and for every unit increase in the amount of bank deposit per capita, there was an associated increase in the amount of credit per ha GCA is increased by Rs.0.23 per ha GCA. The advances of crop loan were found to have a complementary relation with the advances of term loan. For every rupee increase in term credit per ha GCA, there was an associated increase of crop loan Rs.1.80 per ha GCA.

In table 1 standardized coefficient are also presented. That is, mean value of the variable is deducted from each observation and subsequently the result of each observation is divided by the standard deviation of the variables. These values were used for the PC regression analysis. The resulting standardized coefficients were free of units and the values indicate only the relative importance of the variables in influencing the dependent variable. From the table, it was evident that the most important factor in influencing the flow of crop loan was the term loan followed by level fertilizer use and per capita bank deposit.

TABLE 2: FACTOR DETERMINING THE FLOW OF PER HA TERM LOAN: A REGRESSION ANALYSIS

EXPLANATORY VARIABLES	MULTIPLE LINEAR REGRESSION	PRINCIPAL COMPONENT REGRESSION	
	BACKWARD ELIMINATION	UNSTANDARDISED COEFFICIENTS	STANDARDIZED COEFFICIENTS
Constant	-61.85** (3.75)	-59.31** (3.66)	-
Irrigation	-	-2.27 (1.19)	-0.213
Commercial crops	-	0.65** (2.71)	0.311
HYV	-	0.81 (0.69)	0.232
Fertilizer consumption	0.85** (8.14)	0.84** (8.02)	0.264
Rainfall	-	-0.23 (1.38)	-0.192
Land holding	4.00** (2.52)	3.75** (2.41)	0.042
Bank branch expansion	2.61** (4.23)	2.66** (4.37)	0.300
Bank deposit	0.51** (8.04)	0.508** (8.16)	0.473
Crop loan	-	0.15 (1.25)	0.322
R ²	0.953	0.885	-
Durbin Watson d value	1.985	2.121	-

Figures in parentheses indicate 't' statistic value

Note: ** Significant at 1 per cent level
* Significant at 5 per cent level

TERM LOAN

Similar to that of crop loan the flow of term loan in the U.T of Puducherry was analyzed both by multiple linear regression and principle component regression. The analysis of PC regression involved components with eigen values of more than 0.75, and four principal components were extracted. The measures of goodness of fit adjusted for degree of freedom was significantly high enough to about 0.88. The Durbin Watson test of autocorrelation for these components regression showed a value of 2.121, which was free of auto correlation problem.

Results of multiple linear regression analysis had come up with a significant positive relation of level of fertilizer use, land holding, bank branch expansion and bank deposit. Crop loan and high yielding variety was reported to be insignificant the measures of goodness of fit had been showed to be 0.953, which was very high and significant. The results of principal component regression analysis, on the other hand, factors such as commercial crops, level of fertilizer use, land holding indicated to have significant positive relationship.

A unit increase in the level of bank deposit per capita, induces an associated increase Rs.0.508 term loan per ha GCA. On the other hand, a unit increase in the level of land holding hectare induced an increase of Rs.3.75 term loan per ha GCA. For every unit increase in the consumption of fertilizer per GCA, the amount of credit per ha GCA is increased by Rs.0.84. and for every unit increase in the number of bank branches per lakh population, there was an associated increase in the level of agricultural credit Rs.2.66 per hectare GCA.

TOTAL AGRICULTURAL LOAN

The combined quantum of crop and term loans was also subjected for a similar pattern of analysis. The results of multiple linear and principal component regression analysis are presented in table 3.

In the principal component regression analysis, three principal components with eigen values of more than one were taken. The goodness of fit for the model of PC regression adjusted for its degrees of freedom showed that 72.9 percent of variation in the model explained by these variables. The value of the Durbin Watson d test, which was 1.878, indicated the absence of autocorrelation problem in the component regression.

TABLE 3. FACTOR DETERMINING THE FLOW OF PER HA TOTAL AGRICULTURAL LOAN: A REGRESSION ANALYSIS

Explanatory variables	MULTIPLE LINEAR REGRESSION	PRINCIPAL COMPONENT REGRESSION	
	BACKWARD ELIMINATION	UNSTANDARDISED COEFFICIENTS	STANDARDIZED COEFFICIENTS
Constant	37.69 (1.22)	31.74 (1.09)	-
Irrigation	2.52** (2.60)	2.25** (3.03)	0.206
Commercial crops	-	1.07** (2.67)	0.125
HYV	-	1.95 (0.98)	0.255
Fertilizer consumption	1.01** (6.04)	0.92** (5.90)	0.406
Rainfall	-	0.32 (1.19)	0.233
Land holding	-7.08** (2.36)	-6.15* (2.17)	-0.096
Bank branch expansion	-	1.53** (2.24)	0.315
Bank deposit	0.61** (8.36)	0.60** (9.11)	0.788
R ²	0.952	0.729	-
Durbin Watson d value	1.434	1.878	-

Figures in parentheses indicate 't' statistic value

Note: ** Significant at 1 per cent level
* Significant at 5 per cent level

The analysis of linear regression had come up with the positively significant coefficients for irrigation, level of fertilizer use, and per capita bank deposit and negative coefficients for land holding variable. Factors as irrigation, commercial crops, and bank branch expansion and bank deposits had positive significant influence on total agricultural loan in the Union Territory of Puducherry. For each unit increase in the proportion of irrigation and commercial crops per GCA, the consumption of per GCA, will be increased by Rs.2.25 and Rs.1.07 units respectively.

On the other hand sizes of land holding was related to the flow of agricultural credit negatively. It was meant that if the average size of holding per cultivator was reduced by one hectare, the credit supply or absorption increases by Rs.6.15 per GCA. For each unit increase in the proportion of level of fertilizer use, branch expansion and per capita bank deposit per GCA, the consumption of per GCA, will be increased by Rs.0.92, Rs.1.53 and Rs.0.60 respectively. Similar study was conducted by Abate *et al.*, (2003).

CONCLUSION

The forgoing analysis indicated that the most important factor in influencing the flow of crop loans was the commercial crops, HYV, land holding, bank deposit, and term loans. Accordingly, the fertilizer use, played a key role in the flow of term loans followed by land holding, bank branch expansion and bank deposit variables. The irrigation was the prominent factors in the flow of the total loans, followed by level of fertilizer use, and per capita bank deposit. The policy of RBI played the primary role in determining the flow of institutional finance to agriculture. Therefore, to channel sufficient financial resources to the sector effectively, strengthening the ground level planning activity and monitoring of banks to fulfil the RBI priority sector lending policy are crucially essential.

SUGGESTIONS

The policy of RBI played the primary role in determining the flow of institutional finance to agriculture. Therefore, to channel sufficient financial resources to the sector effectively, strengthening the ground level planning activity and monitoring of banks to fulfill the RBI priority sector lending policy are crucially essential. There was a tendency of the banking sector to lend to and invest in less risk areas than to agricultural sector. So the banks have to be advised to lend for priority sector. Time lag between the releases of credit may be avoided.

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AGED RURAL PEOPLE'S HEALTH PROBLEMS: A CASE STUDY OF KANYAKUMARI DISTRICT

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ABSTRACT

Due to greater economic security and a big advancement in the medical field, demographic transition has taken place in the world. It leads to a decline in the death rate and an increase in the number of aged people. The general objective of this article is to understand the disease burden of the aged rural people of Kanyakumari district, where there is a large number of aged people. The study made use of both primary and secondary data. The primary data have been collected from 200 sampling units. The aged people are encountered with problems such as low earning, limited care and high healthcare expenditure. The present study supports the view of earlier studies that the type of diseases also changes as time passes and among the aged, women are more in number than that of men. As far as health expenditure is concerned, it is reported that as people get aged, much expense is required to get treatment for their diseases. Households which have elderly people are making catastrophic expenditure. It is inferred from the survey that the average monthly medical care expenditure is 1334.50 rupees (47.54% of total income). There is significant positive correlation between age of elderly and medical care expenditure, between education and medical care expenditure and between income and medical care expenditure. Aged people are much affected by the ever rising health care expenditure and many communicable and non-communicable diseases. Hence, they should be protected from all these problems by taking suitable measures.

JEL CODE

I1.

KEYWORDS

catastrophic expenditure, disease burden, demographic transition, geriatric persons, oldest old.

INTRODUCTION

In the past six decades, the world has experienced enormous gain in health. Under-five child mortality rate (U5MR) has declined much, around 28% in 1950 to 7.28 in 2008 (World Development Indicators (WDI) 2010). The most deadly and debilitating diseases including leprosy, measles, poliomyelitis and many childhood diseases have been contained or almost eliminated. At present smallpox, which affected more than 50 million a year, was almost eradicated. The World Health Assembly declared that smallpox was eradicated in 1980; 13 years after the intensified programme for the eradication of smallpox began (Medlin et al in Jamison et al 2006). The incidence of paralytic poliomyelitis in children fell by more than 99%, from about 1000 cases per day in 1988 to fewer than four cases per day in 2003. The poliomyelitis-endemic countries fell from 125 in 1988 to just six by 2003. The six countries are Afghanistan, Egypt, India, Niger, Nigeria and Pakistan. The number of guinea worm disease cases also fell by 99% from 1986 level. The geographical range of this disease has also decreased from 20 to just 12 countries (Miller et al in Jamison et al 2006).

India has also achieved a good deal in health during these decades. Smallpox and guinea worm diseases have been eradicated from the country. Polio is on the verge of being eradicated. There is no occurrence of polio in India between 13th January 2011 and 12th January 2012 (John 2012). In India leprosy, kala azar and filariasis are expected to be eradicated within a short period of time. Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR) have come down significantly. IMR has decreased from 83 per 1000 live births in 1990 to 52 in 2008 and U5MR has declined from 116 to 69 in the same period (WDI 2010). These rates have come down to 50 and 64 respectively in 2009 (Dhar 2011). The crude death rate is around 7%. It means that the human population becomes healthier.

As population becomes healthier and people live long, the average age increases. The life expectancy at birth (LEB), which is the proxy of improving health conditions, in the world has increased from 60 years in 1975 to 67 years for male and 71 years for female in 2008. (WDI 2010). The global population in 2005 shows that there were 600 million people in the age of 60 and above. Of these, 86 million persons were the oldest-old¹ and were expected to reach 394 million in 2050 (Kishore 2009). The Life Expectancy at Birth (LEB) has increased to 64 years in 2008 (GOI 2011) from 36.7 years in 1951 (Purohit 2010). Hence, in India, the proportion of old people (≥ 60) has increased from 4.9% in 1901 to 5.5% in 1951 and about 10% in 2011 and is expected to reach 17.5% in 2050 (Bhaskaraiah and Murugaiah (2011), Census 2011). In absolute term, it increased from 24 million in 1961 to 100 million in 2011 and is expected to reach 326 million in 2050 (Ennapadam and Krishnamoorthy 2010, Census 2011). It indicates that the proportion of elderly is increasing at a higher rate than that of the general population. In India, the growth rate of elderly people was 3% per annum against 2% per annum of the general population (Balasubramanian 2007).

This demographic transition² is the consequence of the decline in the death rate and almost constant or slowly declining birth rate (IEG World Bank 2009). Rising average level of income and education along with improvements in health technology and expanded public health interventions are the main reasons for this gain in health (Rout and Prasanth 2007). High income promotes better health through improved nutrition, improved access to public goods such as safe drinking water and sanitation and increased ability to purchase more and higher quality medical care. Pharmaceutical invention of vaccines and antibiotics reduced the incidence of many diseases and deaths drastically (Jack and Maureen in Spence and Maureen 2009). Economic growth that has enhanced the affordability of health goods and services reduced the transmission of diseases. Better nutrition along with advances in hygiene and education has also played a role in reducing mortality and in improving health of individuals.

As individuals live longer, there is high incidence of diseases that affect only the older people and rise in healthcare expenditure. The rising healthcare expenditure has its impact on the aged as well as on the economy. Aging leads to high dependency and a slowdown in economic growth. Hence, aging is considered as a major achievement of the 20th century and a major challenge of 21st century (Aiyar 2006).

REVIEW OF LITERATURE

The unavoidable factor for a high demand for medical care is the age of individuals. 'Senility is the harbour of diseases' is an adage. The Bible says, "The days of our lives are 70 years, and if by reason of strength they are eighty years, yet their boast is only labour and sorrow ..." (Psalms 90: 10). Whether one is rich or poor, male or female, educated or uneducated, married or unmarried, physical worker or mental worker, forward or backward, he/she requires much medical care services when aged.

World Health Organisation (2000) in Jamison et al (2006) says the disease burden of the elderly people is more than the non-elderly people. Mortality resulting from lower respiratory diseases is approximately 10-fold higher among the people between 60 and 69 years of age than among the people between 15 and 59. Speizer et al in Jamison (2006) points out that the incidence of Chronic Obstructive Pulmonary Diseases (COPD) increases dramatically with age while it was very low before the age of 45.

Jamison et al (2006) assert that the Disability Adjusted Life Years (DALYs) for females per 1000 population for the age group between 5-14 years were only 73.7, while it was 441.6 for the people of the age group 60-69 years, 641 for 70-79 years and 800 for 80+ years at the global level in 2001. For males, the respective figures are 70.9, 540.4, 721 and 856.7 in the same year.

Henderson (2008) finds out that as people get aged, much expense is required to treat their diseases. The healthcare expenditure increases enormously due to more number of healthcare related visits and long stays in hospitals and escalated drugs cost. In most of the households, elderly members are making catastrophic¹ expenditures. It is reported that over one-half of the life-time medical expenditure is made after the age of 65. The per capita expense on healthcare of elderly people was four times higher than that of the average expense on non-elderly people and seven times more than on each young person. The aged people constitute only less than 12% of total population, but they consume over one third of all medical resources.

Human Development Report 2009 concludes that the high incidence of diseases increases not only the demand for medical care but also the dependency ratio. It is expected that there will be 71 non-working aged people for every 100 working-age people in 2050.

Sharma in Kishore (2009) reveals that the pattern of diseases also changes due to the epidemiological transition, the non-acceptance of traditional norms and values and the change in the lifestyle. In 1980, the top diseases that disturbed the elderly people are vision impairment 88%, locomotive disabilities 40%, neurological diseases 18.7%, cardiovascular 17.4%, respiratory diseases 16.1% and skin diseases 13.3%. However, at present, the diseases occupying the top ten places are, hypertension (39.53%), vision impairment (35.3%), arthritis (33.67%), COPD (19.92%), coronary heart disease (18.85%), hypertrophy of prostate (16.23%), diabetes mellitus (15.23%) dyspepsia (11.03%), irritable bowel syndrome (9.21%) and depression (8.5%).

Many studies prove that among the aged, women are more in number than that of men. Majority of the women who live beyond 75 years of age have no husband. Two thirds of the men in the 65 to 74 age group live with their wives, against only one half of the women of this age group live with their husbands (Henderson 2005).

Rajan (2004) laments that of the daughters and daughters-in-law, many are employed and the age-old joint family system is almost completely disappeared. A large number of parents are not taken proper care by their children. They are exposed to lack of emotional, physical and financial support. They face physical problems in maintaining their health, economic problems to face medical expenses due to inadequacy of income, and social problems such as loneliness and feeling of helplessness.

NEED OF THE STUDY

Kanyakumari is one of the districts in Tamil Nadu having a high literacy rate. The people are well educated and health conscious. The proportion of the elderly is much higher than the national average and the state average. As per 2001 Census, the percentage of people above 60 years old was 9.96 (1.67 lakhs out of 16.76 lakhs) against the state average of 9.08 and the national average of 7.4. The percentage of 80 and above 80 to the total in the district was 1.19 (0.2 lakh out of 16.76 lakhs) against 0.71% in the state and this oldest-old group constitutes 11.98% (0.2 lakh out of 1.67 lakhs) in the district against 7.78% in the state and 14.33 at the global level among the elderly people. It means that the district has a higher proportion of elderly people than that of the state and the nation as a whole. Hence, it is the duty of researcher to bring to the notice of authorities the health problems of the aged rural people.

STATEMENT OF THE PROBLEM

The existence of a significant proportion of aged people, who have a repository of knowledge and experience, is a sign of credit to any economy. However, the expenditure on them for the healthcare services they require is a serious concern not only to them but also to those who care them and to the whole economy. The reality is that if the present population gets aged, the need for medical care will increase and the total output will come down. Hence, the present study "Aged Rural People's Health Care Problems: A Case Study of Kanyakumari District" is carried out to understand the disease burden of aged rural people.

OBJECTIVES

The following are the objectives of the present study.

1. To understand the disease burden of the aged.
2. To calculate the share of healthcare expenditure to the monthly income of the surveyed respondents.
3. To estimate the economic impact of the healthcare expenses on the families having aged people.
4. To compare certain variables such as aged female percentage and the relationship between income, education and age and healthcare expenditure with already established facts.

HYPOTHESES

The following hypotheses have been formulated and tested.

- The relationship between age and healthcare expenditure is negative.
- There is no significant correlation between education and healthcare expenditure.
- The positive correlation existing between income and healthcare expenditure is insignificant.

METHODOLOGY

The study made use of both primary data and secondary data. The primary data have been collected from 200 sampling units. At the first stage, two taluks out of four taluks were selected at random. Then, from each selected taluk, one village panchayat was selected. After that, sampling units were selected at random after conducting a pilot study. The required data have been collected with the help of a scientifically prepared interview schedule. The information available in the filled in interview schedules was presented in a master table and then in small tables that are suitable for analytical purposes. Very few statistical tools such as average, correlation coefficient and multiple regression analysis and 't'-test have also been applied to make the study analytical and scientific.

RESULTS AND DISCUSSION

AGE-WISE DISTRIBUTION OF THE RESPONDENTS

Of the two hundred surveyed geriatric persons, the age-wise distribution shows, only a few persons are nearing ninety. The average age of the respondents is 68 years. The age composition of the sample respondents is presented in table 1.

TABLE – 1: AGE-WISE DISTRIBUTION OF THE RESPONDENTS

Sl. No	Age group	No. of Respondents
1	60 – 64	62 (31)
2	65 – 69	58 (29)
3	70 – 74	38 (19)
4	75 – 79	24 (12)
5	80 – 84	12 (6)
6	85 – 89	6 (3)
	Total	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

SEX-WISE DISTRIBUTION OF THE RESPONDENTS

Many studies concluded that the aged women are more in number than men. This is true in this survey also. The sex-wise distribution of the respondents is given in table 2.

TABLE – 2: SEX-WISE DISTRIBUTION OF THE RESPONDENTS

Sl. No	Sex	No. of respondents
1	Male	94 (47)
2	Female	106 (53)
	Total	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

NATURE OF FAMILY OF THE RESPONDENTS

Nature of family is another social institution. The family system consists of joint family, extended family and nuclear family. There is no joint family among the surveyed households. The survey information is tabulated in the following table.

TABLE – 3: NATURE OF FAMILY OF THE RESPONDENTS

Sl. No	Nature of family	No. of Respondents
1	Extended family*	144 (72)
2	Nuclear family	56 (28)
	Total	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

*Nuclear family plus some other family members who don't constitute a family unit.

EDUCATIONAL STATUS OF THE RESPONDENTS

Education is the most powerful factor that transforms human population into human capital. Better the education, the greater the availability of social and economic opportunities will be. The educational status of the sample respondents is illustrated in the table given below.

TABLE – 4: EDUCATIONAL STATUS OF THE RESPONDENTS

Sl. No	Educational Status	No. of Respondents
1	Illiterate	76 (38)
2	Primary	94 (47)
3	Secondary	20 (10)
4	Higher Secondary	6 (3)
5	Degree	4 (2)
	Total	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

PLACE OF RESIDENCE OF THE RESPONDENTS

In general, aged parents like to stay with their children. If it is not possible, they stay in separate houses. The place of residence of the respondents is presented in the table given below.

TABLE – 5: PEOPLE WITH WHOM THE RESPONDENTS STAY

Sl. No	People with whom they stay	No. of Respondents
1	Son	98 (49)
2	Daughter	46 (23)
3	Relative	6 (3)
4	Separate	50 (25)
	Total	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

PRE & POST OCCUPATIONAL PATTERN OF THE RESPONDENTS

Occupational pattern refers to the type of work performed by the respondents. The occupational pattern of the respondents, before and after 60 years of age, is given in the following table.

TABLE – 6: OCCUPATIONAL PATTERN OF THE RESPONDENTS

Sl. No	Occupation	No. of Respondents	
		Before 60 years of age	After 60 years of age
1	Private	34	12 (S 8) (Se 4)
2	Government	8	0
3	Agriculture	26	4 (S 2) (D 2)
4	Business	14	4 (S 2) (Se 2)
5	Self-employed	40	34 (S 20) (D 8) (Se 6)
6	Coolie	78	134 (S 62) (D 28) (R 6) (Se 38)
6	No occupation	Nil	12 (S 4) (D 8)
	Total	200	200

Source: Primary data, Figures in parentheses their respective percentages to total.

Number within bracket gives the staying places of aged people.

S = son, D = daughter, Se = separate and R = relatives.

The above table shows that except six persons all are economically active even after their 60 years. It is contrary to the generally accepted fact that after sixty years most of them are not economically active; but supports the view expressed by Rajan (2004). He reports that 63% of aged men and 58% of aged women are involved in economic activities.

MONTHLY INCOME OF THE RESPONDENTS

If the aged people have some sources of income, they can meet their day to day expenditure without much difficulty. Their income can be utilized for health caring and other purposes. The income, including pension, details of the respondents are given in table 7. The average monthly income of the respondents is Rs.2807.

TABLE – 7: MONTHLY INCOME OF THE RESPONDENTS

Sl. No	Monthly income (in `)	Staying places of respondents with/in				Total
		Sons	Daughters	Relatives	Separate houses	
1	1000-2000	44	14	4	20	82 (41)
2	2001-3000	26	10	2	20	58 (29)
3	3001-4000	2	12	Nil	Nil	14 (7)
4	4001-5000	8	Nil	Nil	2	10 (5)
5	5001-6000	6	Nil	Nil	6	12 (6)
6	6001-7000	4	Nil	Nil	Nil	4 (2)
7	7001-8000	Nil	Nil	Nil	2	2 (1)
8	8001-9000	Nil	Nil	Nil	Nil	0
9	9001-10000	4	Nil	Nil	Nil	4 (2)
10	10001-11000	Nil	Nil	Nil	Nil	0
11	11001-12000	Nil	2	Nil	Nil	2 (1)
10	No income	4	8	Nil	Nil	12 (6)
	Total	98	46	6	50	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

Even among the aged respondents, there is significant positive correlation between education and income and significant negative correlation between age and income. These are in support of already discussed established facts. The correlation coefficient values calculated are given in the following table.

TABLE – 8: CORRELATION BETWEEN EDUCATION & AGE AND INCOME

Sl. No.	Factors	Income
1	Education	0.31**
2	Age	-0.26**

** Significant at 1% level of probability

HEALTH CONDITIONS OF THE RESPONDENTS

Illness increases as age passes. So, aged people suffer from many diseases. The health conditions of the respondents are presented in the table 9. Here, health indicates a condition in which individuals are free from major diseases and healthy enough to do manual works. The term average health indicates that individuals are not free from common diseases but free from very serious diseases. But the third group suffers from many diseases. All these are based on the views expressed by the respondents.

TABLE – 9: HEALTH CONDITIONS OF THE RESPONDENTS

Sl. No	Health Condition	No. of Respondents
1	Good	56 (28)
2	Average	138 (69)
3	Bad	6 (3)
	Total	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

DISEASES OF THE RESPONDENTS

The common diseases are classified into two: major and minor diseases. The minor diseases are cough or cold, fever, hearing impairment, joint pains and vomiting and major diseases refer to heart attack, diabetes, asthma, sugar, high blood pressure, nervous disorder and tuberculosis. The surveyed aged people are suffered from many diseases. Some diseases like cough and fever are common but temporary. Diseases like asthma are common but their intensity is positively related to age. However, diseases like hypertension, heart attack and diabetes are permanent and mostly age related. The diseases that affect the aged people are presented in the table given below.

TABLE - 10: DISEASES OF THE RESPONDENTS

Sl. No	Diseases	Affected No. of Respondents
1	Hypertension	66 (33)
2	Arthritis	52 (26)
3	Vision impairments	34 (17)
4	Diabetes	32 (16)
5	COPD	30 (15)
6	Hearing impairments	8 (4)
7	Nervous disorder	6 (3)
8	Asthma	5 (2.5)
9	TB	4 (2)
10	Cough	78 (39)
11	Fever	32 (16)
12	Dysentery	11 (5.5)

Source: Primary data, Figures in parentheses their respective percentages to total.

SYSTEM OF TREATMENT UNDERTAKEN BY THE RESPONDENTS

There are different systems of medical treatment available in Kanyakumari district. However, most of the informants prefer Allopathic system of treatment to Siddha, Ayurveda and Homeopathy. The system of medicine taken by the aged people in the surveyed area is illustrated in table 11.

TABLE – 11: SYSTEMS OF TREATMENT UNDERTAKEN BY THE RESPONDENTS

Sl. No	Treatment	No. of Respondents
1	Allopathic	102 (51)
2	Homeopathy	60 (30)
3	Ayurveda	26 (13)
4	Siddha	12 (6)
	Total	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

CARETAKERS OF THE RESPONDENTS

Human beings aspire for love and affection. This tendency is more when one gets aged. So a study is complete only if a note is made on the people who take care of them. Classification of the respondents on the basis of caretakers is illustrated in the table 12.

TABLE – 12: CARETAKERS OF THE SAMPLE RESPONDENTS

Sl. No	Caretakers	No. of Respondents
1	Spouse	62 (H14, W 48)
2	Son	92 (F 38, M 54)
3	Daughter	34 (F 6, M 28)
4	Daughter-in-law	4 (MIL 4)
5	Self care	8 (SC 8)
	Total	200

Source: Primary data, Number in bracket shows the persons who are cared

H = husband, W = wife, F = fathers, M = mothers, FIL = father-in-law, MIL = mother-in-law, SC = self care.

Table 12 shows that of the 62 persons who are taken care of by their spouses, 48 are wives and husbands are only 14. Out of the 92 persons taken care of by their sons, mothers are 54 and fathers are only 38. It also supports the already established facts regarding the sex composition of aged people.

FEELINGS OF THE RESPONDENTS REGARDING THEIR CARE

Care givers may be very sincere or may not be sincere. Because of their age, old age people may not be in a position to recognise the service rendered by the caretakers. However, in this survey only limited number of respondents are dissatisfied. The opinion of the respondents about the care that was extended by the care givers is presented below.

TABLE – 13: OPINION OF THE RESPONDENTS REGARDING THE CARE PROVIDED

Sl. No	Care Service	No. of Respondents		Total
		Male	Female	
1	Satisfied	78	90	168 (87.5)
2	Dissatisfied	11	13	24 (12.5)
	Total	89	103	192 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

The above table finds that out of the 192 respondents, who depend on others for care only 24 are dissatisfied. A special interview was also conducted to understand why 24 respondents are dissatisfied. Interview information reveals the following. Thirteen respondents reported that the food items given to them are inadequate or not good. It is very important to note that all the four respondents who are taken care of by their daughters-in-law are dissatisfied.

MONTHLY MEDICAL CARE EXPENDITURE OF THE RESPONDENTS

The study shows that during old-age, the medical care expenditure is heavy. It includes, doctor's fees, medicines and other expenses. The average monthly medical care expenditure of the respondents is portrayed in table 14.

TABLE – 14: MONTHLY MEDICAL CARE EXPENDITURE OF THE RESPONDENTS

Sl. No	Amount (in rupees)	Age			Total
		61-70	71-80	81-90	
1	401 – 500	14	Nil	Nil	14 (7)
2	501 – 1000	50	16	Nil	66 (33)
3	1001 – 1500	42	8	6	56 (28)
4	1501 – 2000	16	10	2	28 (14)
5	2001 – 2500	14	14	Nil	28 (14)
6	2501 – 3000	4	4	Nil	8 (4)
	Total	140	52	8	200 (100)

Source: Primary data, Figures in parentheses their respective percentages to total.

Table 14 shows that the average monthly medical care expenditure is Rs.1334.50 (47.54% of the average monthly income). Certainly, this expenditure is catastrophic in nature as it exceeds 40% of the total income and 54.45% of the non-subsistence income. If this amount is subtracted from the average income, the money meant for consumption of other commodities is only Rs.1472.5 (2807 – 1334.5 = 1472.5). To the aged people, who have no income or income less than the healthcare expenditure, have no alternative other than selling their little property they own. The income data show that there are 53 persons out of 200 surveyed with income less than Rs.1334.50 and 12 persons without any income.

A personal interview was conducted to know the feelings of the eight retired respondents who served in government departments. All they reported that after receiving the salary, the first thing they did was purchasing of food articles and other things for the entire month, but after 60 or 65 years of age, the first thing they do is buying of medicines for the whole month.

CORRELATION AND REGRESSION ANALYSIS

The correlation analysis explains the relationship existing between age and healthcare expenditure, education and healthcare expenditure and income and healthcare expenditure. The details are portrayed in the table given below.

TABLE – 15: CORRELATION COEFFICIENT VALUES

Sl. No.	Factors	Healthcare Expenditure
1	Age	0.16
2	Education	0.32**
3	Income	0.33**

** Significant at 1% level of probability

From the above table it is obvious that there is significant positive correlation between education and health expenditure and income and healthcare expenditure. It means that the last two hypotheses are rejected. There is positive correlation between age and healthcare expenditure. However, the value is significant neither at 5% level nor at 1% level. The regression equation given below shows the influence of three factors, age, education and income on health expenditure.

$$H = -849.42 + 0.22 * X_1 + 0.32 * X_2 + 0.24 * X_3, R^2 = 0.21$$

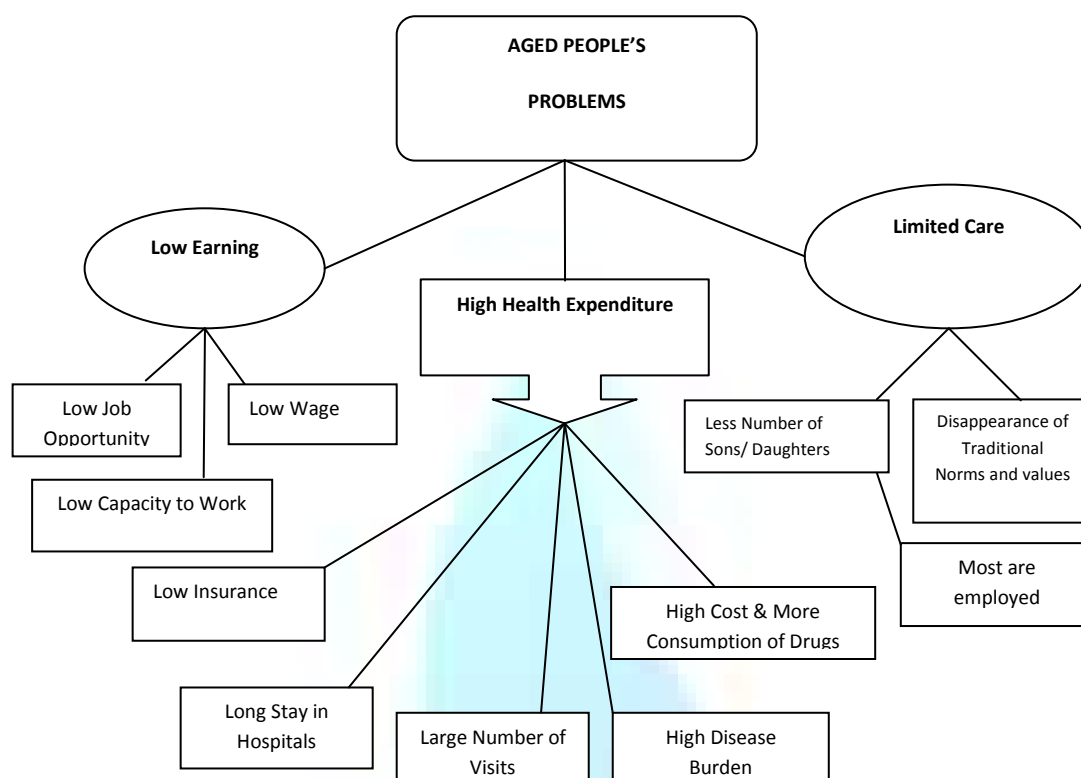
H = Healthcare expenditure, X_1 = Education, X_2 = Income, X_3 = Age

The calculated beta values are significant at 5% level.

The calculated 'f' value (ANOVA), 8.63 shows that there is significant variance among the three influencing factors.

The flow chart given below shows the various problems of the aged people.

FLOW CHART 1



FINDINGS

It is very obvious from the above analysis that the aged people are suffering from many diseases. As age increases, both the disease burden and the economic burden increase. Allopathic treatment is preferred for its fastness in cure by 102 respondents though prices of many drugs and hospital charges are very high. Like other commodities, the healthcare is also a normal commodity; i.e., its consumption decreases as the price of it increases. Because of very high drug prices and very high cost of medical services, the demand for medical care will decrease. If the demand decreases, then the people will become sick. Most of the medical expenses are out-of-pocket spending and so it leads to impoverishment of individuals who have undergone medical treatment.

The pattern of diseases also changes due to changes in the life style and the social values and norms followed. The aged are affected not only by low earnings but also by limited care as there are less number of care givers. However, 144 aged people are staying either with their sons or with their daughters and six are in relative's houses as there are no issues and 87.5% respondents are satisfied with the way in which they were treated by their care providers.

The aged informants worked not only before their 60 years of age but also after that. The important point to be considered is that before the age of 60 years there were only 78 coolies, but after 60 years of age, there are 134 coolies as the pension amount is insufficient or no pension from the previous occupation.

Among the aged, the expenditure on healthcare increases as age increases. It is clear from the positive correlation between age and medical care expenditure. High educational qualification favours high medical expenditure. The calculated r value is significant at 1% level of probability. In the same way, there is significant positive correlation between income and healthcare expenditure.

The average monthly income of the respondents is Rs.2807/-. The average expense on medical care is Rs.1335/-. So the amount of money available for the day-to-day consumption per month is only Rs.1472/-.

SUGGESTIONS

The ever rising healthcare expense of the aged people is a stumbling block for their peaceful survival. Unless they are protected from this heavy burden, the sufferings of these poor human beings cannot be wiped out. The main feasible solution is to make medical care accessible to all through healthcare insurance coverage. The universal health insurance coverage will increase the demand for medical care by making it indirectly cheap.

High out-of-pocket spending is the main reason for the impoverishment of individuals. The reason for high out-of-pocket spending is low public spending on health sector. Therefore, the public spending on health sector should be raised to at least 5% of the GDP from the present share of less than 1% and all medicines including the lifesaving should be made available in public sector hospitals at free of cost to all poor people, particularly the aged people.

State-sponsored care for elderly is available in countries like Canada and UK. In the same pattern, it is advisable to have such programmes in India also and establish specialized clinics for geriatric care. Mobile medical care, particularly to the aged, can also be implemented as getting treatment in hospitals requires personal visits. Personal visit is expensive and almost impossible for the oldest and the oldest-old.

CONCLUSIONS

Aged rural people are suffering from many diseases while their income is limited. Their age makes them unmovable and their poor economic condition makes them hesitate to take treatment. Hence, it is the duty of the welfare state to take necessary steps for ensuring quality healthcare to all at free of cost or at a reasonable rate.

LIMITATIONS

The present study is also not free from limitations. The scope of the study area is only two taluks of a district. Even in the two taluks, only two rural panchayats are selected for the study. As the area covered is very limited it may not help much to draw inference for the whole universe. The primary data collected are also subject to all limitations of primary data.

SCOPE FOR FURTHER RESEARCH

Similar studies can be conducted in other areas and for other vulnerable groups. Study can also be conducted on the aged people's preference for health care systems and healthcare providers. Studies on the coverage of aged by insurance can also be carried out to know how the economic burden can be reduced.

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ENDNOTES

¹ 60 – 65 young-old, 66 – 75 old-old, 76 – 80 oldest and above 80 oldest-old.

² A situation where population becomes healthier and people live long: an increase in the share of older people.

³ When the health expenditure exceeds 40% of the non-subsistence income of a household, then the expenditure is called catastrophic (WDI 2010).

HEALTH STATUS OF THE SKILLED COALMINE WORKERS: A STUDY IN JAINTIA HILLS DISTRICT OF MEGHALAYA

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ABSTRACT

Coal Mining in Meghalaya is a "boom and bane" industry. It has not only brought employment opportunity and wealth to Meghalaya but has also lead to ecological poverty and environmental pollution. Large scale unscientific exploitation of coal in Jaintia Hills District has resulted into serious environmental degradation, loss of vegetation, land degradation and wanton deforestation. Exploration of new coalmines and encroachment of forest and agricultural land are regular phenomena in the coal mining belts. It has created shortage of safe drinking water, water pollution, and increase in wasteland, land subsidence and high concentration of coal dust. These have adversely affected health of the workers and the communities living adjoining the coal mining belts. Therefore, the present study intends to find out the health status of skilled coal mine workers working in coal belts of Jaintia Hills District of Meghalaya.

KEYWORDS

Working environment, coalmine workers, Jaintia Hills district.

1.0 INTRODUCTION

Health is a fundamental Human Right according to the Declaration adopted by the World Health Assembly at Alma Ata in 1978. It is defined as a state of complete physical and social well being and not merely an absence of disease or infirmity (WHO, 1984). The dimensions of health include spiritual, emotional, vocational, political, cultural, socio-economic, environmental, philosophical, educational, nutritional, curative and preventive aspects. Disease is an abnormal vital process, a changed condition of life, which is inimical to the true development of the individual and tends to organic dissolution. Human health in its broadest sense of physical, mental and social well being is to a great extent depending on the access of the people to a healthy environment. Thus, health is that balanced condition of the living organism in which the integral, harmonious performance of the vital functions tends to the preservation and the normal development of the individual.

Physical dimension of health denotes the notion of perfect functioning of the body. It includes a good complexion, clean skin, bright eyes, firm flesh, not too fat, a sweet breath, good appetite, sound sleep, regular activity of bowels & bladder and proper coordination of bodily movements. It also includes all intact special senses, normal pulse rate, blood pressure and exercise tolerance. A mentally healthy person is one who is free from internal conflicts, well adjusted (i.e. able to get along well with others and he accepts criticism and is not easily upset), searches for identity, a firm sense of self esteem, knows himself (his needs, problems and goals), good self control and faces problems and tries to solve them intelligently. The social dimension implies harmony and integration with in the individual, between each individual and other member of the society and between individuals and the world in which they live. Spiritual dimension refers to that part of individual which reaches out and strives for meaning and purpose in life. Emotional dimension is that part of the mental health which can be seen as knowing or cognition while emotional health relates to the feelings of the individuals. Vocational dimension is a new dimension of life. It refers to mental and physical adaptation to work (human goals, capacities and limitations). The other determinants of health are environmental factors, life style of the people and the way they live, socio-economic conditions, economic status, educational status, occupation and health services.

The programmes for health services in India generally cover promotive health services, preventive health services and curative health services. The promotive health services include those services, which can improve the health of the people and this is usually achieved through awareness campaigns. The preventive health services include the provision of adequate portable water, sanitation and hygiene services, food security and overall healthy environment. The curative health services address health problems like diseases of different kinds, malnutrition/under nutrition, disabilities, and controlling population growth through family planning measures.

1.1 COAL MINING BELTS IN JAINTIA HILLS

Jaintia Hills District being a component of the Meghalaya Plateau has its physiographical features almost similar to that of Khasi Hills District, situated in the eastern part of the state of Meghalaya. The district was created in 1972 with Jowai as the administrative headquarter covering a total area of 3,819 Sq.km. It is bounded by the state of Assam in the North and East and the plains of Bangladesh in the South and East Khasi Hills District in the West. The Marangsih peak on the Eastern plateau of Jaintia Hills stands majestically at the elevation of 1631 meters and is the highest peak.

The Jaintia Hills is richly endowed with natural resources with coal and limestone deposits. The total estimated inferred reserve of coal in Jaintia Hills District is about 40 million tonnes spreading over 60 sq.km area. Besides coal and limestone deposits, other minerals like clay, shale, and phosphate have also been detected in Jaintia Hills District.

1.2 METHOD OF EXTRACTION

The following methods have been practiced for extraction of coal in Jaintia Hills District.

(i) *Site Selection by traditional practice*: Firstly the landowners or investors along with the *sordar*, the most experienced person relating to the matter of coal mining helps the landowners to survey and guess the propose site for coalmining. Once the survey of the land satisfies the parties about the possibility of coal deposits, the work is initiated. Such type of guessing and forecast tends the owners to take a risk despite of non- existence of coal in the mine at the proposed site which often causes a huge loss to the owner.

(ii) *Modern practice*: Unlike the traditional practice, presently the landowners ascertain the presence of coal seams using machineries. To assess the uniformity of coal beds boring and drilling methods are carried out. This process assures the landowner about the presence of coal seams and its thickness. Thus by initiating this practice the landowner avoids the risk of not finding the coal beds.

The method of extraction of coal depends on the type of mines or on the nature of coal seams. The coal deposits found on the hill-slopes as well as along the river sides are operated by 'side-cutting'. In the areas where the deposits are found in the plain lands or flat areas the extractions is done by 'box-cutting'. In this

method the land is first cleared by cutting and removing the ground vegetation and then pits ranging from 50 to 180 feet are dug into the ground to reach the coal seam by removing the earth crust. To access the coal seams, a great deal of rock work is required for dipping down to the elevation of the coal seams. The method is known as 'box cutting'. On the basis of this opening (*box cutting*) the size of the coalmines are classified as small, medium, and large mines. The size and the opening of a 'box cutting' range between 10 x 10 sq. fts to 25 x 25 sq.fts. During the process of excavation heavy equipments like bulldozers, tractors and cranes are used to strip off the upper layer of the earth and compressor machines are used to drill for making a sizable hole for inserting high intensity dynamite for blasting. While digging out, mine wastes comprising pieces of rocks and soil are generated in huge quantity which are removed and collected or dumped near the mining site. These waste materials are called as coalmine spoils (Gupta et al. 2002).

The system of excavation of coal in both the types is done by *rat hole mining method*. Rat hole tunnels are made into the sideways at the coal face. The lower seams thickness of coal ranges between 1-3 feet and the coal is extracted with the help of pickaxe. The extracted coal is brought out with the help of a wooden trolley. Men and women carry out the coal to the surface manually using cone shaped baskets (*Khoh*) made of bamboo. In medium and large coalmines, the mined coal is brought up using cranes or elevators. The extracted coal from the mines is deported along the roadside for transportation to other parts of the country.

Investment: Generally the investors use to invest 2.50-20.00 lakhs for each 'box cutting' depending on the depth of the coal beds and the size of the opening of the cutting. The additional expenditure incurred is about Rs. 2.00-3.00 lakhs for water pump, and wooden ladders. In large coalmines the owners use cranes, boring machines and water pump. Drill man, driver, and helpers operate these machineries. For this an additional expenditure of about Rs.6.00-7.00 lakhs is incurred.

1.3 HEALTH STATUS OF COALMINE WORKERS

The coal miner's occupational environment is characterised by numerous hazards not encountered in any other profession. The factors result in significant psychological burden and excessive stress that causes various acute functional and organic disturbances. The effects of excessive stress are general morbidity, sickness, absenteeism, unpleasant feelings of being burnt out and lack of enthusiasm for work. There is deterioration of health status or depletion of biological potential of the workers over a period of time. The occupational underground work places are characterised by the occurrence of hazardous chemical, biological and physical factors which puts these coalmine workers at high risk. The workers are often confused between disease and symptoms because of their illiteracy. The diseases and the symptoms are not clearly manifested at an early stage. Therefore, the investigator studied the symptoms of the diseases which are related to other diseases based on review of related literature on occupational health and disease pattern among coalmine workers.

For the purpose of the studying the health status of skilled coalmine workers the following variables were chosen by the investigator. The various chosen variables were: humid working conditions, thermal environment, inadequate living conditions, loss of weight, malnutrition, addiction to alcohol and substance abuse, fatigue, overstress, musculoskeletal disorders, work related injuries and physical burnout. The variables were clubbed under health status of coalmine for pooled item analysis.

Correlation analysis was carried out by the investigator to study the health status of different categories of workers based upon their age and years of working experience

Humid working conditions

Heat and humidity are encountered in deep underground mines, where the virgin rock temperatures and air temperatures increases with depth, principally due to the geothermal gradient and auto compression of the air column. Both natural and 'man made' sources contribute to the underground heat load with blasting and equipment operation as significant heat contributors. The other source of underground heat is through energy released in blasting which eventually finds its way into the underground environment as heat. It is probable that some of the heat produced is carried away with the blasting fumes out of the development end and some remains in the broken rock which is released prior to and during rock removal. The proportion of heat removed by each process is a function of rock fragmentation. The use of mechanical processes adds to the heat load of underground mines. This includes the operation of hydraulics, compressed air and any friction related heat, diesel engine source that releases heat into the underground environment. Hot working conditions with high sweat rates with excessive loss of body fluid may result in dehydration and electrolytes imbalance. It is established that dehydration and electrolytes disturbances will impair both mental and physical work performance. Prolonged exposure to heat can pose serious risk to workers health.

Thermal environment

Poor working conditions associated with working in hot environments both in dry and humid conditions leads to heat stress which degrade mental performance of the workers. The greatest problems of heat stress have been traditionally associated with underground mines operation. Factors such as the rock and ground water temperature, heat released from blasting when stone and coal are broken also contribute markedly to the thermal load of the mine atmosphere. Further water in the underground mines has a detrimental effect on the mine atmosphere by increasing the level of humidity. The symptoms on health status of workers are usually characterised by heat cramps, which usually occur after heavy sweating and are associated with the subsequent excessive loss of salt from the body. Heat exhaustion is also characterised by weakness, rapid pulse, dizziness, headache and nausea.

Inadequate living conditions

As observed from the field the coalmine workers often suffer from illness like cold, fever, cough, cholera and jaundice primarily due to the nature of occupation and poor living conditions. Their living site is very unhygienic and they are commonly associated with malaria emanating from mosquitoes due to absence of proper drainage system. The other problems faced by the workers are unhygienic environment in their dwelling places like absence of sanitation. The health status of coalmine workers are also characterised by malnutrition, loss of weight, stress, diabetes, hypertension, anemia, dry scaly skin, brittle nails, loss of appetite, weakened muscles, pain in joints, weakened immune system, chronic diarrhea, constant irritability, exhaustion and fatigue,

Loss of weight

Weight loss for these workers is unintentional and is due to manifestation of illness. Weight loss results in decrease of body fluid, muscle mass or fat. A decrease in body fluid can come from medications, lack of fluid intake, or illnesses such as diabetes. The loss of weight and lack of nutrition is associated with chronic illness. Rapid weight loss degrades the quality of nutrition in the body and it weakens the immune system. It is a clear sign that the body poorly digests food or has significantly decreased the food absorption capacity. Coughing, nausea, fatigue, weakness, lack of energy, fever, sore throat, anxiety and depressive symptoms are experienced by the workers in case there is weight loss.

Malnutrition

Malnutrition is an imbalance of essential nutrients in the body, due to improper consumption of nutritious food which leads to under nutrition. It is a harmful condition and can give rise to complications like loss of fat, breathing difficulties, a higher risk of respiratory failure, depression, weakened immune system, increasing risk of infections, higher susceptibility to feeling cold, tiredness, liver and respiratory failure. Malnutrition symptoms are observed at any age. This leads to low output urine leading to kidney problems. It may also give rise to hypertension, dizziness or strokes.

Addiction to alcohol and substance abuse

The coalmine workers after working for long hours feel physically retarded and tiresome. They work as underground miners or in the surface. They are engaged as operator of heavy equipment and excavators to strip earth, loading and unloading of coal. These workers always show the symptoms of physically stress and tiredness. Accidents and injuries are common in coal mining work because of poor working conditions. To succumb these work related injuries the workers use painkillers and when the prescribed dose no longer works, they take more to get relief which leads them to addiction. The underground coal miners are scared to go deep inside the underground mines. They use alcohol before entering the mines. The performances of coalmine workers are affected due to addiction to alcohol and substance abuse. The symptoms of increase use of alcohol and substance abuse are tension, psychological stress, feeling of physical sickness with regular headaches, colds and stomach problems.

Fatigue

The coalmine workers work without any social security benefits, besides poor and risky conditions of work. This creates physical and mental stress among the coalmine workers and lead to their physical ailment and fatigue. Further it cannot be denied that barriers to health services among the migrant coalmine workers arise due to financial constraints. With the minimal wages the migrant workers receive and with the frequency at which they fall ill due to their nature of work, it is difficult for them to finance appropriate health care facilities. These migrant workers view that although they earn more in the coal mining work, their work in their native place was less strenuous, implying better health. They often suffer from fatigue, sensation of tiredness, weariness, exhaustion and weakness. Fatigue is a symptom of a wide variety of mild to serious diseases and conditions including infection, inflammation, trauma, malignancy, chronic diseases, and mental illnesses.

Overstress

Overstress in workers life is associated with hassles, deadlines, frustrations, and demands. For workers, stress is so common that it has become a way of their life. Stress is not always bad. In small doses, it can help perform under pressure and motivate to do the best. The symptoms of overstress affects nervous system, nervous reflexes, which includes biting nails, clenching the jaw, grinding teeth, hunching shoulders, tapping feet, holding breath, changes in mood, anxiety, depression, panic attacks, frustration, habitual anger, feelings of helplessness and hopelessness, impatience, irritability, restlessness, constant fatigue, and in general feeling of being depleted, spiritually, emotionally and physically.

Musculoskeletal disorders

Work related musculoskeletal disorders refer to a collection of painful disorders of muscles, nerves, tendons, ligaments and joints that are common among the coal miners. Musculoskeletal disorders such as disorder to the upper limb (hand, wrist, arm, shoulder, neck and back etc) and lower limb (hip, knee, ankle and foot) of muscles, nerves, tendons, ligaments, joints and cartilage are the most common occupational disease in the underground coal mining due to poor working conditions. The workers walk to the underground on their hands and crawl on knees, back or stomachs to reach the coal face. It is at this coal face where the workers sit, kneel and squatter in awkward posture for more than 8-10 hours in a confined space. This ultimately leads to musculoskeletal disorders. Pain is the chief symptom of most musculoskeletal disorders. The pain may be mild or severe, local or widespread. Although pain may be acute and short-lived as is the case with most injuries, pain may be ongoing with chronic illnesses such as rheumatoid arthritis.

Work-related injuries

Work related injuries in the work place are a major source of ill health and disability among the skilled coalmine workers in Jaintia Hills District. Work related injuries are common in coal mining work. There is no system of compensation due to work related injuries in these coalmines despite loss of work days. The work related injuries are caused due to faulty equipments including hand tools, defective drills and blasting equipments leading to serious injuries and fatalities. Overwork, physical stress and strain and exposures to dust and gases leads to common work related injuries among the workers. The injuries are diverse and it frequently occurs when objects drop or fall on the worker. The natures of injury are in the form of wounds, sprains or strains, finger blistering and injuries to eyes. These manifest mostly in mental ill-health relational problems at work place and absentmindedness. These further lead to poor quality of life for employees and decrease the productivity and impair the quality of life in work environment.

Physical burnout

Occupational stress can be temporary or permanent. It depends mostly on how long it continues, how powerful they are and how strong the workers recovery powers are both physically and psychologically. This condition is called burnout a situation in which workers are emotionally exhausted, become detached from their work and feel unable to accomplish their goals. When workers become burned out, they are more likely to complain and cause errors leading to fatal accidents. Work environment uncertainty influences the stress level among workers. Task demand is a factor related to a worker's job. They include working conditions and the physical work layout. Works where temperatures, noise or other working conditions are dangerous or undesirable can increase anxiety. Role ambiguity is created when role expectations are not clearly understood and the workers are not sure what to do in a particular situation. Individual factors encompass factors in the worker's personal life. Primarily these factors are family issues, personal economic problems and inherent personality characteristics. Increase tension interrupts the process of blood circulation and increases psychological stress among workers. The symptoms of physical burnout are characterised by appearance of anxiety and depression, development of cynical attitudes, suspicious outlook, excessive use of alcohol and other drugs, feeling physically sick on a regular basis with headaches, cold and stomach problems.

1.4 HEALTH STATUS OF COALMINE WORKERS (AGE AS CONSTANT FACTOR)

For studying the health status of the coalmine workers age factor was taken into consideration for only sixty skilled workers. For studying the health status of workers, women and children were excluded. The age distribution of the sample workers were: fourteen skilled workers in the age group of 19 - 25 years, thirteen workers in the age group of 26 - 35 years, nine workers in the age group of 36 - 45 years and twenty four workers in the age group of 46 - 55 years. Pearson's correlation analysis was used to find out relationship between dependent and independent variables.

TABLE NO. 1.1: FACTORS AFFECTING HEALTH STATUS OF SKILLED WORKERS [POOLED ITEMS] (AGE AS CONSTANT FACTOR)

Factor	HC	TE	ILC	LW	MN	ASA	FT	OVS	MD	WRI	PBO
HC	1										
TE	0.92**	1									
ILC	0.15	0.12	1								
LW	0.37**	0.86*	0.08	1							
MN	0.11	0.15	0.85**	0.83**	1						
ASA	0.14	0.17	0.13	0.67*	0.11	1					
FT	0.74**	0.26*	0.18	0.22	0.12	0.25*	1				
OVS	0.84*	0.81**	0.23	0.13	0.77**	0.50**	0.64**	1			
MD	0.41**	0.90**	0.13	0.18	0.13	0.18	0.12	0.31*	1		
WRI	0.99**	0.89**	0.19	0.15	0.19	0.40**	0.73**	0.84**	0.31*	1	
PBO	0.15	0.26*	0.35*	0.85*	0.30*	0.09	0.26*	0.27*	0.93**	0.07	1

**Correlation is significant at 0.01 level *Correlation is significant at 0.05 level.

The data analysis on the first item i.e. 'working under humid condition of work' is having positive correlation with overstress with a correlation of 0.84 which is significant at 0.05 probability level. The humid condition of work is also having high positive correlation with thermal environment, loss of weight, fatigue, musculoskeletal disorders and work related injury with a correlation of 0.92, 0.37, 0.74, 0.41 and 0.99 respectively which are significant at 0.01 probability level. It indicates that the humid condition is correlated with overstress. On the other hand the five variables i.e. thermal environment, loss of weights, fatigue, musculoskeletal disorder and work related injuries are highly responsible factors detrimental to the health status of the coalmine workers. Hence the humid condition of work is undoubtedly responsible for accident, injuries' and ill-health of the coalmine workers.

The second item i.e. 'working under thermal environment' for skilled coalmine workers is having positive correlation with loss of weight, fatigue and physical burnout with a correlation of 0.86, 0.26 and 0.26 respectively which are significant at 0.05 probability level. On the other hand, the humid condition, overstress, musculoskeletal disorders and work related injuries is having high positive correlation with a correlation of 0.92, 0.81, 0.90 and 0.89 respectively which are significant at 0.01 probability level. It indicates that the thermal environment is positively correlated with the loss of weight, fatigue and physical burnout. The working under humid condition of work, overstress, musculoskeletal disorders, fatigue and work related injuries are highly responsible factors to detrimental to the health of workers. Hence working under thermal environment conditions is directly or indirectly responsible for the ill-health of coalmine workers.

The third item i.e. 'working under inadequate living conditions' for skilled coalmine workers is having positive correlation with physical burnout with a correlation of 0.35 which is significant at 0.05 probability level. It is also having high positive correlation with malnutrition with a correlation of 0.85 which is significant at 0.01 probability level. It indicates that physical burnout and malnutrition among the skilled coalmine workers is correlated with inadequate living condition.

The fourth item i.e. 'experience of loss of weight' for skilled coalmine workers is having positive correlation with thermal environment, addiction to alcohol & substance abuse and physical burnout with a correlation of 0.86, 0.67 and 0.85 respectively which are significant at 0.05 probability level. On the other hand, it is also having high positive correlation with humid condition of work and malnutrition with a correlation of 0.37 and 0.83 respectively, which are significant at 0.01 probability level. It indicates that loss of weight among the skilled coalmine workers is correlated with thermal environment, addiction to alcohol & substance abuse and physical burnout.

The fifth item i.e. 'working under malnutrition' for skilled coalmine workers are having a positive correlation with physical burnout with a correlation of 0.30 which is significant at 0.05 probability level. Inadequate living condition, experience of loss of weight and overstress are also having high positive correlation with respect to malnutrition with a correlation of 0.85, 0.83 and 0.77 respectively which are significant at 0.01 probability level. It indicates that the malnutrition is correlated with physical burnout. Inadequate living condition, experience of loss of weight and overstress and physical burnout are also responsible factors deteriorating the health status of the coalmine workers.

The sixth item i.e. 'working under the influence of addiction to alcohol & substance abuse' for skilled coalmine workers is having positive correlation with respect to loss of weight and fatigue with a correlation of 0.67 and 0.25 which is significant at 0.05 probability level. The habit of working under the influence of addiction to alcohol & substance abuse is also having high positive correlation with respect to overstress and work related injuries at work place with a correlation of 0.50 and 0.40 respectively which are significant at 0.01 probability level. It indicates that the addiction to alcohol & substance abuse is linked with loss of weight and fatigue. On the other hand, the two variables i.e. overstress and fatigue are also responsible factors detrimental to the health status of the coalmine workers. Hence the addition of alcohol & substance abuse is undoubtedly responsible for accident, injuries' and ill-health of the coalmine workers.

The seventh item i.e. 'working under fatigue condition' for skilled coalmine workers is having positive correlation with thermal environment, addiction to alcohol & substance abuse and physical burnout with a correlation of 0.26, 0.25 and 0.26 respectively which are significant at 0.05 probability level. The item is also having high positive correlation with respect to humid condition of work, overstress and work related injuries with a correlation of 0.74, 0.64 and 0.73 respectively which are significant at 0.01 probability level. It indicates that workers working under thermal environment, influence of addiction to alcohol & substance abuse and physical burnout are correlated with working under fatigue. On the other hand the three variables i.e. working under humid condition, overstress and work related injuries are also responsible factors detrimental to the health of coalmine workers. Hence working under fatigue condition is undoubtedly indirectly responsible for accident, injuries and ill health of the workers.

The eighth item i.e. 'working under overstress' for skilled coalmine workers is having positive correlation with humid conditions of work, musculoskeletal disorders and physical burnout with a correlation of 0.84, 0.31 and 0.27 respectively which are significant at 0.05 probability level. The affect of overstress is also having high positive correlation with respect to working under thermal environment, addiction to alcohol & substance abuse, fatigue and work related injuries with a correlation of 0.81, 0.50, 0.64 and 0.84 respectively which are significant at 0.01 probability level. It indicates that the working under overstress is closely related with musculoskeletal disorders and physical burnout. On the other hand the five variables i.e. working under humid condition of work, thermal environment, addiction to alcohol & substance abuse, fatigue and work related injuries at work place are also responsible factors detrimental to the health status of the coalmine workers.

The ninth item i.e. 'musculoskeletal disorders' for skilled coalmine workers is having positive correlation with overstress and work related injuries with a correlation of 0.31 and 0.31 which are significant at 0.05 probability level. The musculoskeletal disorders is also having high positive correlation with respect to working under humid condition of work, thermal environment and physical burnout with a correlation of 0.41, 0.90 and 0.93 respectively which are significant at 0.01 probability level. It indicates that musculoskeletal disorders are positively associated with overstress of workers. The other three variables i.e. working under humid condition of work, thermal environment and physical burnout are also responsible factors detrimental to the health status of workers.

The tenth item i.e. 'working under work-related injuries' for skilled coalmine worker is having positive correlation with musculoskeletal disorders with a correlation of 0.31 which is significant at 0.05 probability level. On the other hand working under work-related injuries is also having high positive correlation with working under humid condition of work, thermal environment, addiction to alcohol and substance abuse, fatigue and overstress with a correlation of 0.99, 0.89, 0.40, 0.73, and 0.84 respectively which are significant at 0.01 probability level. It indicates that the work-related injuries is associated with musculoskeletal disorders. On the other hand, the five variables working under humid condition of work, thermal environment, addiction to alcohol & substance abuse, fatigue and overstress are also responsible factors detrimental to the health status of the coalmine workers.

The eleventh item i.e. 'working under the affects of physical burnout' for skilled coalmine worker is having positive correlation with working under thermal environment, inadequate living condition, experience of loss of weight, malnutrition, fatigue and overstress with a correlation of 0.26, 0.35, 0.85, 0.30, 0.26 and 0.27 which are significant at 0.05 probability level. The physical burnout of worker is also having high positive correlation with respect to musculoskeletal disorders with a correlation of 0.93 respectively which is significant at 0.01 probability level. It indicates that the physical burnout is correlated with working under thermal environment, inadequate living condition, and experience of loss of weight, malnutrition, fatigue and overstress. On the other hand musculoskeletal disorders are also responsible factors detrimental to the health status of the coalmine workers. Hence, working under physical burnout is undoubtedly responsible for accident, injuries' and ill health of the workers.

1.5 SUGGESTION AND CONCLUSION

Health status of unorganized workers is now considered as an indicator of development, rather than just a medical one. Making equitable and affordable medical care accessible to these unorganized coalmine workers remains a challenge. Health is a basic need along with food, shelter and education for productivity and growth. It has a major influence on the well-being of the worker. Health intervention can lead to economic growth. Ill-health and in access to health service are increasingly seen as major dimensions of poverty. The workers in coalmines are caught in vicious circle of poverty leading to ill health which ultimately results in indebtedness.

When an individual joins the coalmine, the risk of being afflicted by a disease increases significantly. As he works in the insanitary and unhygienic environment of coalmines, there is an onset of occupational health problems. Initially the disease does not create any major problem. However, as he continues to work in the mine, the disease assumes a chronic form leading to permanent disability or even death.

This indicates that for designing a health care policy it is necessary to first examine whether the risks of suffering from health problems increases significantly on joining the work force in coalmines. The results of this survey indicates that joining the coal mining sector indeed increases the possibility of being affected by any health disorder. Further lung and pain related disorders are the common diseases affecting most mineworkers. Thus, policy makers should give priority to these diseases in the health care policy. It is also necessary to identify the workers who are at risk, and the health problems commonly affecting them. If high-risk workers can be identified on the basis of factors like place of work, period of exposure to the mining environment, then special schemes can be introduced for such workers.

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A STUDY ON VODAFONE TAXATION – INDIA'S VIEW

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ABSTRACT

Pursuant to section 45 of the Income Tax Act, any gain arising from the transfer of a capital asset during a previous year is chargeable to tax under the head Capital gains. Pursuant to section 5(2)(b) read with section 9(1)(i) makes it clear that where an Indian asset has been transferred, the amount paid is deemed to have accrued or arise in India and therefore taxable in India. In May 2007, Vodafone bought Hutchison Telecommunications International Ltd's (HTIL) 66.98% stake in Indian telecom company Hutch Essar Ltd for \$11.2 billion (around Rs.52,300 crore today). , Vodafone should have deducted capital gains tax at source before paying HTIL. In this article the author discussed about the tax liability of Vodafone and the relevant issues in detail.

KEYWORDS

Capital Gains, Tax Liability, Direct Tax Code, Supreme Court, Land Mark Judgement.

INTRODUCTION

In May 2007, Vodafone bought Hutchison Telecommunications International Ltd's (HTIL) 66.98% stake in Indian telecom company Hutch Essar Ltd for \$11.2 billion (around Rs.52,300 crore today). Hutchison controlled its Indian telecom subsidiary through a CaymanIsland company called CGP. CGP's shares were sold to Vodafone, which consequently became majority owner of the Indian telecom firm.

Pursuant to section 45 of the Income Tax Act, any gain arising from the transfer of a capital asset during a previous year is chargeable to tax under the head Capital gains. If the shares/securities (assets) are held for more than 12 months immediately prior to its transfer, then it is long-term capital assets. Any profit arising from the transaction is called as long term capital gain.

According to tax department view, the overseas transaction was related to assets acquired in India and hence, Vodafone should have deducted capital gains tax at source before paying HTIL. As Long term capital gains tax is levied at the rate of 20 %, Vodafone will have to shell out \$1.7 billion as tax liability, a penalty of an equal amount and a tax on both sums at 18% per annum. The total outgo for Vodafone could exceed \$4 billion. Hence Vodafone was proceeded against under section 201(1) as assessee in default for failing to deduct taxes under section 195 of the Income Tax Act 1961.

Pursuant to section 5(2) (b) read with section 9(1) (i) makes it clear that where an Indian asset has been transferred, the amount paid is deemed to have accrued or arise in India and therefore taxable in India. Hence, in September 2007, the I-T department issued show cause notice to Vodafone asking why tax was not withheld. And in October 2007,

However Vodafone in its petition to the apex court contended that "Section 9 (1) of the Income Tax Act merely provides that income accruing or arising from the transfer of a capital asset situated in India shall be deemed to accrue or arise in India. There is no legal fiction deeming the transfer of a capital asset (taking place outside India) to take place in India". Further the company said that it had purchased the entire share capital of non-resident company CGP Investments (Holdings) from HTI Holdings, a foreign company having no presence in India. The entire consideration for the share capital purchase was paid outside India without deducting tax at source. Vodafone's contention all along has been that existing Indian law does not give Indian tax authorities jurisdiction over an overseas transfer of the kind it did. The tax authorities dispute the contention and say Vodafone should have deducted tax at source before paying Hutchison.

RELEVANT SECTION

Income deemed to accrue or arise in India.

(1) The following incomes shall be deemed to accrue or arise in India:-

(i) all income accruing or arising, whether directly or indirectly, through or from any business connection in India, or through or from any property in India, or through or from any asset or source of income in India, or through the transfer of a capital asset situate in India.

Explanation. For the purposes of this clause-

(a) in the case of a business of which all the operations are not carried out in India, the income of the business deemed under this clause to accrue or arise in India shall be only such part of the income as is reasonably attributable to the operations carried out in India;

(b) in the case of a non-resident, no income shall be deemed to accrue or arise in India to him through or from operations which are confined to the purchase of goods in India for the purpose of export;

(c) in the case of a non-resident, being a person engaged in the business of running a news agency or of publishing newspapers, magazines or journals, no income shall be deemed to accrue or arise in India to him through or from activities which are confined to the collection of news and views in India for transmission out of India;

(d) in the case of a non-resident, being-

(1) an individual who is not a citizen of India; or

(2) a firm which does not have any partner who is a citizen of India or who is resident in India; or

(3) a company which does not have any shareholder who is a citizen of India or who is resident in India, no income shall be deemed to accrue or arise in India to such individual, firm or company through or from operations which are confined to the shooting of any cinematograph film in India;

Vodafone challenged the I-T department's jurisdiction over the deal in Bombay High Court. Alleging that the I-T department had no jurisdiction over a deal between two parties incorporated overseas, the Netherland-based company's appeal said that "the high court appear to have rejected the contention of the department that there is a consequential transfer of control over an Indian company, the gain, if any, on the transfer of offshore shares between the offshore entities give rise to capital gains in India." It further said that "having held so, the high court, however, held that thereby certain contractual arrangement entered into which shows that the transaction was a composite transaction. On this basis, the high court has held that there was an independent transfer of certain capital assets that is rights in contractual arrangement and these capital assets are situated in India."

The provisions of taxability of the income on transfer of shares of an offshore company is still not clear are absent under the Income Tax Act, 1961. However under the proposed Direct Tax Code Bill tabled in parliament on 30 August, clearly identifies situations in which transactions of the Vodafone kind can be taxed. The scenario from 1 April 2012 (when DTC is likely to be introduced) will be completely different.

In December 2008, the Bombay High court rules in favour of the department and asked Vodafone to reply to the show cause notice. In June 2009, the matter reached the Supreme Court. It appreciated the following points into consideration:

HTIL has received dividend from HEL and on its account books filed with the authorities in HK, its own disclosures to its shareholders and to regulators across the world, it treats HEL as an Indian asset. When parties themselves understand the transaction to be one where an Indian asset is being transferred, why should they be permitted to avoid paying tax on it by adopting a different position before the tax authorities?

Tax planning may be legitimate provided it is within the framework of law. Colourable devices cannot be part of tax planning and it is wrong to encourage or entertain the belief that it is honourable to avoid the payment of tax by resorting to dubious methods. It is the obligation of every citizen to pay the taxes honestly without resorting to subterfuges.

Still legal issue raised in the case of Vodafone is not fully resolved. The Supreme Court has observed that the sale of shares involve not only transfer of asset but also bundle of rights such right to preferential allotment etc and has directed the department to work on the same.

The Income tax Department has taken another interesting stand that as to why Vodafone should not be treated as representative assessee of Hutchison under section 163 of the Income Tax Act, 1961. This has driven to file a writ petition before the High Court of Bombay.

The Supreme Court directed Vodafone to go back to the department. And in May 2010, the tax department issued an order affirming its jurisdiction and slaps a tax liability of Rs. 12,000 crore. Also in the month of June this year, Vodafone once again approached Bombay High Court but finally the court ruled in favour of the Income Tax department. The view is the courts have partially upheld the positions of both sides and the tax authorities have to unbundle the different rights conferred through the shareholding as per in Indian Taxation laws.

The case has significant in the sense that it decides on the question as to whether Indian government can extend its sovereign power of taxation to the transactions held outside its jurisdictions.

CASELAWS RELATING TO SECTION 9 OF THE INCOME TAX ACT

Explanation to section 9 inserted by Finance Act, 2007, with retrospective effect from 1-6-1970. Income actually received is outside the scope of deeming fiction.

TURNER MORRISON & CO. LTD. V. CIT

Where the income, profits and gains are actually received in India, it is no longer necessary for the revenue authorities to have recourse to the fiction.

CARBORANDUM CO. V. CIT

Actual accrual is different from deemed accrual - The concept of actual accrual or arising of income in the taxable territories, although not dependent upon the receipt of the income in the taxable territories, is quite distinct and apart from the notion of deemed accrual or arising of the income.

'Deemed' involves a number of concepts, like place, person and year -

CIT/CEPT V. BHOGILAL LAHERCHAND

The term 'deemed' brings within the net of chargeability income not actually accruing but which is supposed notionally to have accrued. It involves a number of concepts. By statutory fiction income which can in no sense be said to accrue at all may be considered as so accruing. Similarly, the fiction may relate to the place, the person or be in respect of the year of taxability.

G.V.K. INDUSTRIES LTD. V. ITO

It is not necessary that income falling in one category under any one of the clauses of section 9(1) should also satisfy the requirements of the other clauses to bring it within the ambit of the expression 'income deemed to accrue or arise in India'

Profits of PE must be computed as independent units -

CIT V. HYUNDAI HEAVY INDUSTRIES CO. LTD.

It is clear that under the Act, a taxable unit is a foreign company and not its branch or PE in India. A non-resident assessee may have several incomes accruing or arising to it in India or outside India but so far as taxability under section 5(2) is concerned, it is restricted to income which accrues or arises or is deemed to accrue or arise in India. The scope of this deeming fiction is mentioned in section 9. Therefore, as far as the income accruing or arising in India is concerned, an income which accrues or arises to a foreign enterprise in India can be only such portion of income accruing or arising to such a foreign enterprise as is attributable to its business carried out in India. This business could be carried out through its branch (es) or through some other form of its presence in India such as office, project site, factory, sales outlet, etc. [PE]. It is, therefore, important to note that under the Act, while the taxable subject is the foreign General Enterprise (GE), it is taxable only in respect of the income including business profits which accrue or arise to that foreign GE in India. The Act does not provide for taxation of PE of a foreign enterprise, except taxation on presumptive basis for certain types of income such as those mentioned under sections 44BB, 44BBA, 44BBB, etc. Therefore, since there is no specific provision under the Act to compute profits accruing in India in the hands of the foreign entities, the profits attributable to the Indian PE of foreign enterprise are required to be computed under normal accounting principles and in terms of the general provisions of the Act. Therefore, ascertainment of a foreign enterprise's taxable business profits in India involves an artificial division between profits earned in India and profits earned outside India. The Act is concerned only with the profits earned in India and, therefore, a method is to be found out to ascertain the profits arising in India and the only way to do so is by treating the Indian PE as a separate profit centre *vis-a-vis* the foreign enterprise. This demarcation is necessary in order to earmark the tax jurisdiction over the operation of a company. Unless the PE is treated as a separate profit centre, it is not possible to ascertain the profits of the PE which, in turn, constitute profits arising to the foreign GE in India. The computation of profits in each PE (taxable jurisdiction) decides the quantum of income on which the source country can levy the tax. Therefore, it is necessary that the profits of the PE are computed as independent units -

BUSINESS CONNECTION

There must be element of continuity as well as real and intimate connection -

CIT V. R.D. AGGARWAL & CO.

The expression 'business connection' undoubtedly means something more than 'business'. A business connection involves a relation between a business carried on by a non-resident which yields profits or gains and some activity in the taxable territories which contributes directly or indirectly to the earning of those profits or gains. It predicates an element of continuity between the business of the non-resident and the activity in the taxable territories. The expression 'business connection' postulates a real and intimate relation between trading activity carried on outside the taxable territories and trading activity within the territories, the relation between the two contributing to the earning of income by the non-resident in his trading activity

'Business' include profession, vocation and callings - The expression 'business' does not necessarily mean trade or manufacture only. It is being used as including within its scope profession, vocation and calling from a fairly long-time.

BARENDRA PRASAD RAY V. ITO

In the context in which the expression 'business connection' is used in section 9(1), there is no warrant for giving a restricted meaning to it excluding 'professional' connection, from its scope.

CIT V. FRIED KRUPP INDUSTRIES

Mere purchase abroad and use in India is not 'continuing business' - The term 'business connection' postulates a continuity of business relationship between the foreigner and the Indian. There is no question of continuing business relation when a person purchase the machinery or other goods abroad and uses them in India and earns profit.

ANGLO-FRENCH TEXTILE CO. LTD. V. CIT (NO. 2)

Isolated transactions are not covered - An isolated transaction between a non-resident and a resident in British India without any course of dealings such as might fairly be described as a business connection, does not attract the application of section 9, but when there is a continuity of business relationship between the person in British India who helps to make the profits and the person outside British India who receives or realises the profits, such relationship does constitute a business connection

LAND MARK JUDEMENT

The abstract of the Judement says that: In the instant case, indisputably, CGP share was transferred offshore. Both the companies were incorporated not in India but offshore. Both the companies have no income or fiscal assets in India, leave aside the question of transferring, those fiscal assets in India. Tax presence has to be viewed in the context of transaction in question and not with reference to an entirely unrelated transaction. As per Section 253 of the Income Tax Act.

Section 195 would apply only if payments made from a resident to another non-resident and not between two nonresidents situated outside India. In the present case, the transaction was between two non-resident entities through a contract executed outside India. Consideration was also passed outside India.

That transaction has no nexus with the underlying assets in India. In order to establish a nexus, the legal nature of the transaction has to be examined and not the indirect transfer of rights and entitlements in India.

Consequently, Vodafone is not legally obliged to respond to Section 163 notice which relates to the treatment of a purchaser of an asset as a representative assessee.

AMENDMENT PROPOSED (WITH RETROSPECTIVE EFFECT FROM 1 APRIL 1962) AND IMPACT ANALYSIS

◆ Finance Bill, 2012 ('the Bill') laid down before the Parliament seeks to tax indirect transfer of capital assets in India by inserting clarificatory explanations to Sections 2(14), 2(47), 9(1) and 195 of the ITA.

Definition of capital assets- Explanation to Section 2(14) of the ITA

◆ The Bill proposes to insert an explanation in Section 2(14) of the ITA in order to clarify that 'property' includes and shall be deemed to have always included any rights in or in relation to an Indian company, including rights of management or control or any other rights whatsoever.

◆ The insertion of the explanation widens the definition of capital asset and clarifies that the term 'property' includes and shall be deemed to have always included any rights in or in relation to an Indian company, including rights of management or control or any rights whatsoever.

◆ This amendment is also directed to overrule observation in the case of Vodafone (supra), wherein it has been held that the capital asset transferred were the shares of a foreign company and transfer of controlling interest is not a capital asset in itself but is incidental to transfer of shares.

◆ After the amendment, transfer of shares (at any level) which result in transfer of controlling interest of an Indian Company could give rise to a taxable event in India.

CONCLUSION

The amendment has nullified the decision of the Hon' ble Supreme Court in the case of Vodafone and as the amendments have been inserted as explanations this will affect all pending cases and also there is threat of re-opening of cases based on the amendment. This type of uncertainties in tax laws will have adverse effect in foreign investments. The Indian Government should have a broader view on this issue instead of looking at it as a revenue generating measure.

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APPLICABILITY OF FISHER HYPOTHESIS ON INDIAN CAPITAL MARKET

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ABSTRACT

This study empirically assesses the Fisher Hypothesis between closing price of sensex, a leading stock index of India and whole sale price index of India. The study has used cointegration test to check the relationship. The study has covered data from both pre and post reforms period of Indian economy and it has decomposed the whole sale price index into expected and unexpected parts. The study has proved that neither whole sale price index nor any of its form can influence the sensex price in any of the periods. Therefore Fisher hypothesis is not applicable at Indian Capital Market.

KEYWORDS

Expected and unexpected whole sale price index, integration test, Sensex and whole sale price index.

SECTION-1 INTRODUCTION

Investors at share market should be saved from inflation. Fisher (1930) hypothesis, in its most familiar version, states that “the expected nominal rate of return on stock is equal to expected inflation plus the real rate of return”, where the expected real rate of return is independent of expected inflation. Fisher hypothesis, therefore, predicts a positive homogenous relationship between stock returns and inflation. In other words, Fisher hypothesis implies that stocks offer a hedge against inflation. All researchers did not support Fischer hypothesis. After reforms security markets in India have made enormous progress by developing sophisticated instruments and modern market mechanisms. The key strengths of the present Indian capital market include a fully integrated and automated trading system on all stock exchanges, a wide range of products, a nationwide network of trading and strong regulation system. Around five thousand companies command a total market capitalization of USD 1.06 trillion as of May 15, 2012 at Bombay Stock Exchange and became world's number one exchange in terms of listed members and fifth most active exchange in terms of number of transactions handled through its electronic trading system. National Stock Exchange (NSE) of India is the 16th largest stock exchange in the world in terms of market capitalization and largest in India for daily turnover and number of trades. But this growth story was stayed along with high inflation.

Since July 2010, inflation in India remained stubbornly high at around 9-10 percent and was fairly broad-based. The rise in inflation started with food and later got generalized. Food inflation which has remained persistently high has become a major cause of concern. With the inflation remaining beyond the comfort level of Reserve Bank of India (RBI), the RBI continued to tighten its monetary policy through the year to arrest inflation, even in the face of a slowdown in economic growth. But it is still uncontrollable. Hence this has motivated the author to study whether Fisher hypothesis is fully applicable on Indian scenario.

Therefore this study has been organized as follows. Section II reviews the published literature pertinent to the topic. Section III mentioned the required data and their sources, Section IV outlines the methodology used, section V provides the empirical results and analysis and finally concluding remarks are given in section VI.

SECTION – II LITERATURE REVIEW

Adam and Frimpong (2010) studied the relationship of stock price and inflation for Ghana for the sample period 1991:1-2007:12. Cointegration analysis was employed and the findings showed strong support for Fisher hypothesis. Spyrou (2001) and Floros (2004) examined stock returns-inflation relation in Greece, using the Johansen cointegration test and they found that there is no significant long-run relationship between inflation and stock returns in Greece. Al-Khazali and Pyun (2004) investigated the statistical relationship between stock prices and inflation in nine countries in the Asia Pacific Basin. Using Johansen cointegration test and they concluded that stock prices in Asia reflect a time-varying memory associated with inflation shocks that make stock portfolios a reasonably good hedge against inflation in the long run. Spyrou (2004) examined the Fisher hypothesis for 10 emerging countries, namely, Chile, Mexico, Brazil, Argentina, Thailand, South Korea, Malaysia, Hong Kong, Philippines and Turkey. They found little evidence to support this hypothesis in these countries. Kim and Francis (2005) studied the Fisher hypothesis based on a wavelet multi-scaling method for US, for the period from 1926:1 to 2000:12. Their findings revealed that there is a positive relationship between stock returns and inflation in the shorter period, while a negative relationship is found in longer period. Ahmad and Mustafa (2005) studied the relationship for Pakistan, for the period from 1972 to 2002. Full Information Maximum Likelihood (FIML) method was employed. They divided the inflation into two parts – expected and unexpected. Results revealed that relationship between real returns and unexpected growth and unexpected inflation are negative and significant. Kim (2003) employed quarterly data of Germany for the period from 1971:1 to 1994:4. Symmetric and asymmetric Granger causality test was performed and results demonstrated the negative correlation between stock returns and inflation. Using the monthly data, Nelson (1976) studied the relationship for the US in the postwar period, (from 1953:1 to 1972:12). Box and Jenkins' ARIMA method was used to divide the inflation into expected and unexpected part. They found the stock returns were negatively related with both expected and unexpected inflation. Samarokoon (1996) and Jaffe and Mandelker (1976) used the same method on Sri Lanka and US data respectively and got the same result. Some of the studies had divided the study period into various zones and got various results. Kolluri and Wahab (2008) studied the relationship between stock returns and inflation through asymmetric test specification, which is capable to distinguish stock returns into high and low inflation period. The study period was from 1960:1 to 2004:12 and Findings of the study revealed that there was inverse relationship between stock returns and inflation during low inflation periods. On the contrary, positive relation is observed through high inflation periods. Lee (2008) analyzed the causal relationship in the UK, the sample period ranged from 1830 to 2000. The sample period was further divided into two sub-periods, 1830-1969 and 1970–2000. The empirical findings of the study reported that there is a significant negative correlation between unpredictable stock returns and inflation for the subperiod 1970-2000. However, unpredictable stock returns were hardly correlated to unpredictable inflation during the same subperiod. Employing the wavelet methodology Durai and Bhaduri (2009) examined the relationship between stock returns, inflation for the post-liberalization period in India. The study employed monthly data from 1995:1 to 2006:7. The wavelet analysis helped to decompose the inflation into expected and unexpected components. In short run, the expected component of inflation was insignificant, while in the medium and long run, the expected component was found to be negatively significant with the real stock returns. Therefore Fisher hypothesis is not unanimously applicable on all stock markets. Hence this study will investigate whether closing price of sensex is related to whole sale price index of India in both short and long period.

SECTION-III DATA

Some studies used Consumer Price Index (CPI) as inflation measure (Kumari 2011, Schwert 1989 and Alagidede 2009). Shanmugam and Mishra (2008) mentioned that there is not a single indicator of CPI in India. Four different variants of CPI are compiled on monthly basis that are designed for specific group of population with specific objectives. Therefore this study has taken Wholesale Price Index (WPI) as inflation measure. Monthly data covering period from April 1982 to March 2011 of WPI, and Sensex has been taken for analysis. This time period comprises of pre and post reforms phase of Indian Economy. Sensex data has been collected from Bombay Stock Exchange of India. The Ministry of Industry, Government of India is the sources for the WPI.

SECTION-IV METHODOLOGY

Auto-Regressive Integrated Moving Average (ARIMA) is not applicable on the WPI data because auto-correlation is not dying exponentially (Gujarati 1995). Hence Hodrick-Prescott (HP) filter is used to derive the expected and unexpected components of the inflation. This filter decomposes the inflation into its trend

and unexpected deviations from the trend. As suggested in Hodrick and Prescott (1980) for monthly data, ($\phi = 14400$) have been used as the value of the smoothing parameter. Cointegration method has been used to check the hypothesis.

EQUATION

$$SP_t = \beta_1 + \beta_2 WPI_t + \varepsilon_t \quad (1)$$

Wherein SP_t and WPI_t are the closing price Sensex price wholesale price index at t th period respectively. ε_t is the error term.

$$\varepsilon_t = SP_t - \beta_1 - \beta_2 WPI_t \quad (2)$$

Here both SP_t and WPI_t are nonstationary but to satisfy the cointegration ε_t needs to be stationary.

Relationship between Stock price and expected inflation

$$SP_t = \delta_1 + \delta_2 WPI_{Expectedt} + \phi_t \quad (3)$$

Wherein $WPI_{Expectedt}$ is the expected inflation at t th period and ϕ_t is the error term

$$\phi_t = SP_t - \delta_1 - \delta_2 WPI_{Expectedt} \quad (4)$$

Relationship between stock price and unexpected inflation

$$SP_t = \rho_1 + \rho_2 WPI_{unExpectedt} + v_t \quad (5)$$

$$v_t = SP_t - \rho_1 - \rho_2 WPI_{unExpectedt} \quad (6)$$

Wherein $WPI_{unExpectedt}$ is the unexpected inflation at t th period and v_t is the error term.

Data from April 1982 to March 2011, pre-reforms period (April 1982-Dec 1991) and post-reforms period (January 1991- March 2011) will be used in the above equations.

SECTION – V EMPIRICAL RESULTS

As noted earlier, the HP filter is employed to derive the expected and unexpected inflation. Then data has been separated between pre-reform and post-reform period.

THE TEST OF NONSTATIONARITY OF DATA

Data needs to be nonstationary before using for co-integration process (Gujarati 1995). Table 1 shows the Dickey Fuller test result for wholesale price index, daily closing price of sensex, expected and unexpected whole sale price index.

TABLE-1 DICKEY FULLER TEST RESULT

Total Data				
	Level		1 st difference	
Variable	Intercept	Trend and Intercept	Intercept	Trend and Intercept
Whole sale price Index	-1.992	-1.686	-8.168*	-8.247*
Sensex	-0.039	-1.944	-7.821*	-7.391*
Expected Whole shale price index	-1.904	-1.341	-2.339	-2.815
Unexpected Whole sale price index	-5.707*	-5.691*		
Pre Reforms Period				
Whole sale price Index	-2.815***	-0.007	-5.507*	-5.888*
Sensex	0.428	-1.806	-4.682*	-4.878*
Expected Whole shale price index	2.241	-0.526	-0.313	-0.724
Unexpected Whole sale price index	-3.261**	-3.497**		
Post Reforms Period				
Whole sale price Index	-1.839	-2.323	-6.802*	-6.856
Sensex	-0.446	-2.033	-6.068*	-6.125*
Expected Whole shale price index	-1.449	-2.958	-2.167	-2.421
Unexpected Whole sale price index	-4.733*	-4.713*		

*, **, *** Represents significance at 1%, 5% and 10% level respectively.

Whole sale price index, monthly closing price of sensex and expected wholesale price index are nonstationary at all stages i.e. in whole period (April 1982-March 2011), pre-reforms period (April 1982 – December 1991) and Post-reforms period (January 1992 – March 2011). ADF test value of whole sale price index is significant at ten percent significance level at pre-reforms period. Unexpected wholesale price index is significant at all stages. Hence it is not possible to use unexpected WPI data for cointegration process.

TABLE-2: ESTIMATION OF RESULT OF EQUATION 1, 3, AND 5 FOR THREE PERIODS

Whole data					
Constant	Whole sale price index	Expected Wholesale Price index	Unexpected Whole sale price index	R ²	d
1354.325 (1.6251)	16.734 (4.391)			0.528	0.0113
656.3575 (0.7314)		20.11236 (4.858)		0.0638	0.0093
4811.953 (17.158)			-1.1408 (-0.0911)	0.00002	0.0086
Pre reforms period					
-848.98 (-12.883)	9.907 (20.8126)			0.808	0.234
-834.399 (-13.553)		9.783 (22.0503)		0.825	0.274
489.4468 (21.1869)			-59.05370 (-4.516)	0.1653	0.1006
Post reforms period					
1059.73 (8.279)	-16.276 (-3.14)			0.039	0.015
11994.47 (8.084)		-22.468 (-3.677)		0.053	0.0131
6673.894 (19.774)			-1.908 (-0.1514)	0.000	0.0122

t value has been written in parenthesis.

Validity of the above table or cointegration between closing price of sensex and whole sale price index, expected whole sale price index and unexpected whole sale price index will be proved if Augmented Dickey-Fuller (ADF) test result of the error term in equation in 1, 3 and 5 i.e. ε_t , ϕ_t , and V_t , is significant.

TABLE 3: ADF TEST RESULT

	Whole period	Pre-reforms Period	Post-reforms Period
ε_t	1.045	-2.357	-0.291
ϕ_t	1.222	-2.438	-1.038
V_t	0.896	-1.049	0.267

Table 3 shows that none of the ADF result is significant at even ten percent level. As it is cointegration test therefore in place of ADF test augmented Engle-Granger (AEG) test will be used. At the time of ADF test in case of ε_t in equation one (when whole period's data was considered) the following equation was obtained-

$$\Delta \varepsilon_t = 0.0059 \varepsilon_{t-1}$$

$$t = 1.0278 \quad R^2 = -0.005641 \quad d = 1.499$$

This t is the τ in AEG test (Gujarati 1985). The critical τ value at one percent level is -2.5899. As the calculated τ value is positive hence the residuals received from regression between whole sale price index and closing price of sensex during April 1982 – March 2011 is not $I(0)$.

TABLE-4: AEG TEST RESULT OF RESIDUALS

	Whole period	Pre-reforms Period	Post-reforms Period
ε_t	1.0278	-2.37	-0.3045
ϕ_t	1.2026	-1.074	-0.1538
V_t	0.8763	-2.438	0.2477

None of the τ values are more negative than -2.5899. Hence it can be concluded that whole sale price index is not integrated with closing price of sensex in any period.

An alternative and quicker way to find out the cointegration between wholesale price index and closing price of sensex is Cointegrating Regression Durbin-Watson (CRDW) test (Gujarati 1985). Here the CRDW is the d value in table 1. The critical value of CRDW at one percent significance level is 0.511. Here all the d values are less than its critical value.

SECTION – V CONCLUSION

By using co-integration test the study has critically assessed Fisher Hypothesis between closing price of sensex and whole sale price index. Using Hodrick- Prescott (HP) filter the whole sale price index has been decomposed into expected and unexpected part. To be more affirmed about the behavior of the data the whole study period i.e. April-1982 to March 2011 has been separated into two parts i.e. pre-reforms period and post-reforms period of Indian economy. The result shows that closing price of sensex and whole sale price index in any time (both shorter and longer periods) were not cointegrated. Even expected part of whole sale price index also cannot explain the movement of sensex. Therefore Fisher Hypothesis is not valid in Indian Economy. This implies that stock price does not have any positive relationship with inflation. Structural reforms at Indian capital market also can not save the investors from inflation.

There are some more sophisticated methods to prove this relationship. These are out of the scope of this research work. Some more available Indian indices may be analysed before generalising of the result. Still the study can provide a clear idea about this.

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GLOBALIZATION AND CHANGING LIFE STYLE OF INDIAN MIDDLE CLASS

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ABSTRACT

Since 1991, India has been going through a continuing process of economic reforms and liberalization. The reforms have embraced almost all aspects of the country's economy. The massive change in the environment brought about by the country's reforms has direct impact on the consumer behavior and its spending pattern and life style. Purchasing branded products, visiting restaurants, beauty salons and personal care centres has become common phenomenon. Quite a lot of these changes in the middle class spending and consumption are propelled by his desire to join a new social class seeking a particular level of prestige in the society. His yesterday's purchases have become his today's necessities. The middle class is becoming the 'consumption community of the country. This research paper aims to study the impact of globalization on middle class families in India in respect to their residential status, education, their family system, possession of personal vehicles, investment preferences and decision making authority.

KEYWORDS

Globalization, Life style, Middle class.

INTRODUCTION

India is a culturally diverse country. Sixteen per cent of the world's population lives in the country. There are over 826 languages and thousands of dialects spoken. The difference in regions, topography and climate allow for different types of lifestyles and culture. On recent years, India has emerged as one of the fastest growing economies of the world, growing at an average rate of over 8 percent; where as the rate of growth was quite low before 1990. During 1970's and 1980's opportunities for higher growth were available, but the country remained insulated, to a large extent, from the rest of the world and followed an industrial policy, which was skewed against the private sector. But the story 1990's onwards has been quite different from that of previous few decades.

Since 1991, India has been going through a continuing process of economic reforms and liberalization. The reforms have embraced almost all aspects of the country's economy. Policies relating to industrial licensing, foreign trade and foreign investment have undergone major changes. The banking sector, insurance sector and capital markets have been major targets of the change. In nut shell, it has been a case of all round opening up of the country's economy, creating an environment for faster economic growth.

The massive change in the environment brought about by the country's reforms has direct impact on the consumer behavior and its spending pattern and life style. India is rapidly urbanizing with more than 225 cities with over 100,000 population, and at least ten cities alone with over a million people. India's middle class consumers constitute the real consumption community of the country and there has been a massive change in their spending behavior. This research paper aims to study the impact of globalization on middle class families in India in respect to their residential status, education and family system, possession of personal vehicles, investment preferences and decision making authority

GLOBALIZATION AND MIDDLE CLASS IN INDIA

The globalization is not a new, but an old age concept, which was first introduced by Adam Smith in the year 1776 through the book titled, "Wealth of Nation". The phenomenon of globalization has come to represent the major changes in the world economy. It refers to integration of nations through the process of cross national flows of goods, investment, production and technology. Globalization has affected all facets of the world economy. In India globalization has put a favorable impact in the economy of the country; there has been an improvement in the living standard of the people specially, the middle class.

Indian middle class is growing fast. It is not the same what it was just a decade back. Not anymore, India's middle class is now dynamic, educated, liberal and form the pillars of this vibrant Indian economy (due to their spending nature). A report by National Council for Applied Economic Research's (NCAER) Centre for Macro Consumer Research said by 2015-16, India will be a country of 53.3 million middle class households, translating into 267 million people falling in the category. As per the study, which uses 'household income' as the criterion, a family with an annual income between Rs 3.4 lakh to Rs 17 lakh (at 2009-10 price levels) falls in the middle class category. The report said a typical Indian middle class household spends about 50 per cent of the total income on daily expenses with the remaining goes into savings. Indian middle class, target consumers for many companies, is expected to swell up to 267 million people in the next five years, up 67 per cent from the current levels, thus providing a great market opportunity for firms, according to NCAER.

Indian households can be divided into five economic classes based on real disposable income as shown below:-

Global Indian	-	Rs. 10 lakh and above
Strivers	-	Rs. 5 lakh to 10 lakh
Seekers	-	Rs. 2 lakh to 5 lakh
Aspires	-	Rs. 90,000 to Rs. 2 lakh
Deprived	-	(less than Rs. 99000)

As per NCAER and McKinsey the strivers and seekers together constitute the middle class.

The middle class is becoming the 'Consumption Community' of the country. The number as well as spending power and pattern has been growing at a rapid pace. A major shift in spending pattern of Indian middle class consumer has been noticed during the past years. The share of spending on grocery has fallen significantly while that on clothing, personal care and eating out has risen significantly. It can be said that spending has shifted from conventional to aspirational. It is change in life style that has brought about the change in their consumption habits. Present day urban middle class is going after life style – oriented products and activities – items such as entertainment, clothes, eating out and vacations. Substantial sum of money is being spent in fitness centers, on skin care products and health food. Traveling and eating out have been a common phenomenon. Middle class prefer to shop at a super market instead of a local grocery shop and watch a movie in a multiplex rather than a cinema house of older type. The 'Shoppertainment' concept has spread all over India which confirms the new leisure – pleasure – shopping life style of the middle class. Interestingly, as per NCAER findings, the middle class that represents only 13.1 per cent of India's population currently owns 49 per cent of total number of cars in India, 21 per cent of TVs, 53.2 per cent of computers, 52.9 per cent of ACs, 37.8 per cent of microwaves and 45.7 per cent of credit cards.

They are buying/ building new modern and attractive homes or redesigning their existing houses with new and branded items. Everyone in the house wants his own personal conveyance. Changing home appliances after 4-5 years has become a common feature in Indian middle class.

Food habits of the middle class have also been changing. Ready to eat food, fast food culture has changed the eating habits of Indian middle class. The shift of joint families to nuclear families and women going to work, have contributed to this development. The nuclear families have their own criteria for making various types of decision. The decision making is more collective rather than by a single person.

Quite a lot of these changes in the middle class spending and consumption are propelled by his desire to join a new social class seeking a particular level of prestige in the society. His yesterday's purchases have become his today's necessities.

REVIEW OF LITERATURE

1. **Prof. Irina. I. Skorobogatybh, Peekhanov** Academy of Economics Russia concluded in his project on "Middle Class in Russian Federation: Style of living and consumption (1999) that the middle class representatives can recall main international brands more easily, that local or national brands, especially for electronics, automobiles cosmetics, clothes and shoes. But as far as brands for food products the main preferences are to the local brands. Middle class want a house with qualitative standards of construction but not so expensive as the highest level oriented to the highest class of society.

2. **Grishma Shah**, (Department of Management and Marketing, School of Business, Manhattan College, Riverdale, New York, USA) (2009) in her paper on "The impact of economic globalization on work and family collectivism in India", examine the impact of economic globalization on work and family collectivism for young middle class Indians. She found that in an increasingly globalizing India, young Indians will strive to preserve traditional values of collectivity when it comes to family, but will loosen their reins on work-place collectivism. This paper is limited to examining the educated middle class in India as they are at the forefront of globalization. The intention of the study is not to assess national culture as a whole, but to predict cultural shifts in India.

3. **Sudeshna Maitra** (Department of Economics, York University) in her paper "Who are the Indian Middle Class? A Mixture Model of Class Membership Based on Durables Ownership" concluded that the size and consumption habits of the Indian middle class have evoked considerable interest in the media in the past two decades. She used a mixture model of class membership to identify and estimate the size of the lower, middle and upper classes in urban India, based on their distinct durables ownership patterns.

4. **Deutsche Bank Research (February 10, 2010)** on "Middle class in India", concluded that the growth of middle class and the economic growth of India are in a virtuous cycle. Middle class grows and continues to increase domestic demand. It has also increased its share of capital for companies. In terms of consumption it is accounted for 55% of GDP and in terms of investment it is accounted for 35% of GDP.

OBJECTIVES OF STUDY

This research paper aims to study the impact of globalization on middle class families in India in respect to their residential status, education, their family system, possession of personal vehicles, investment preferences and decision making authority.

METHODOLOGY

The study is intended to analyze the impact of globalization on life style of middle class in India.

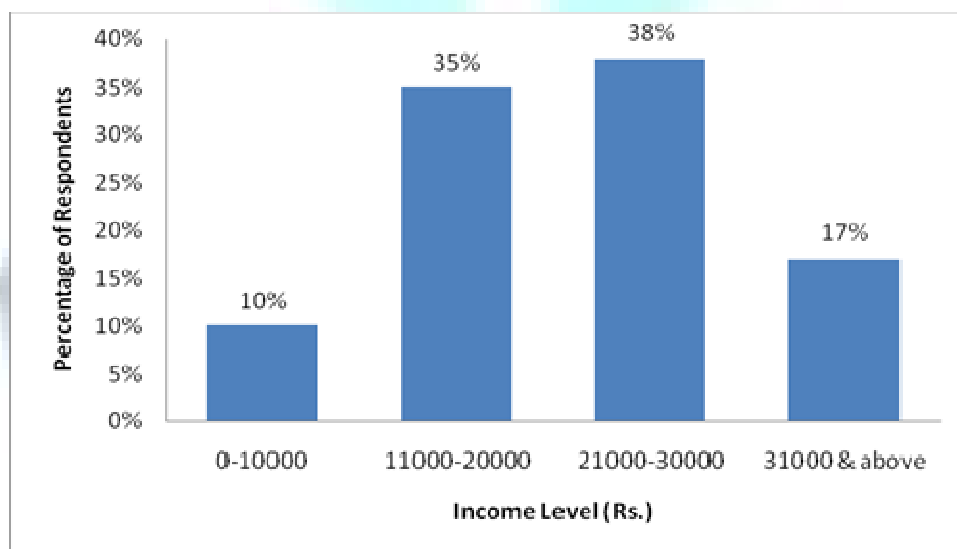
SOURCES OF DATA COLLECTION -: Data is collected from both primary & secondary sources. The data for the study, primary in nature, has been collected by using questionnaires. Secondary data is collected from journals, newspapers, books, business magazines and websites.

SAMPLING DESIGN -: The present study was carried by selecting the respondents from rural and urban areas. Sample of 100 respondents were selected for collecting primary data. The respondents taken for study belong to the age group of 40-60 because two decades ago, they were about 20-40 and lot of changes have been occurred in their living style due to globalization. To carry out the study in a more accurate and easier way, convenience sampling was adopted.

DATA ANALYSIS AND INTERPRETATION

TABLE 1: MONTHLY INCOME OF RESPONDENTS

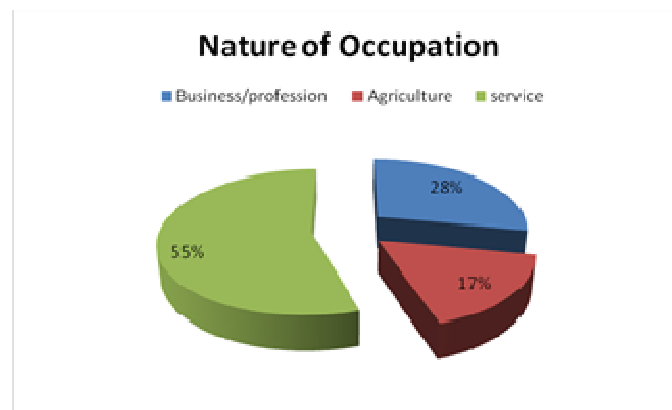
INCOME (Rs.)	RESPONDENTS(Percentage)
0-10000	10%
11000-20000	35%
21000-30000	38%
31000 & above	17%



It is observed that majority of respondents are in income bracket of Rs.21000-30000, followed by Rs. 11000-20000.

TABLE 2: OCCUPATION OF RESPONDENTS

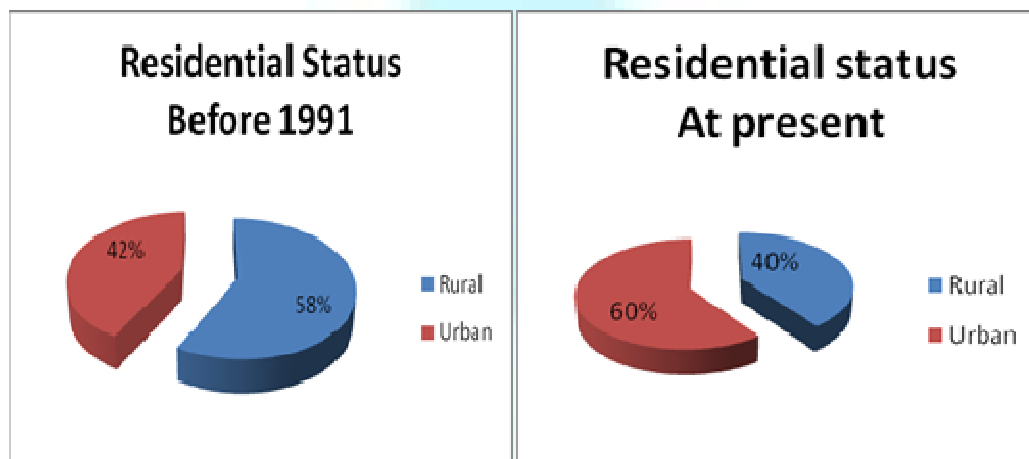
NATURE OF OCCUPATION	RESPONDENTS(percentage)
Business/profession	28%
Agriculture	17%
service	55%



The data is collected from 100 respondents out of which 28% are professionals or running a business, 17% are farmers and other 55% are working in service sector.

TABLE 3: RESIDENTIAL STATUS OF RESPONDENTS

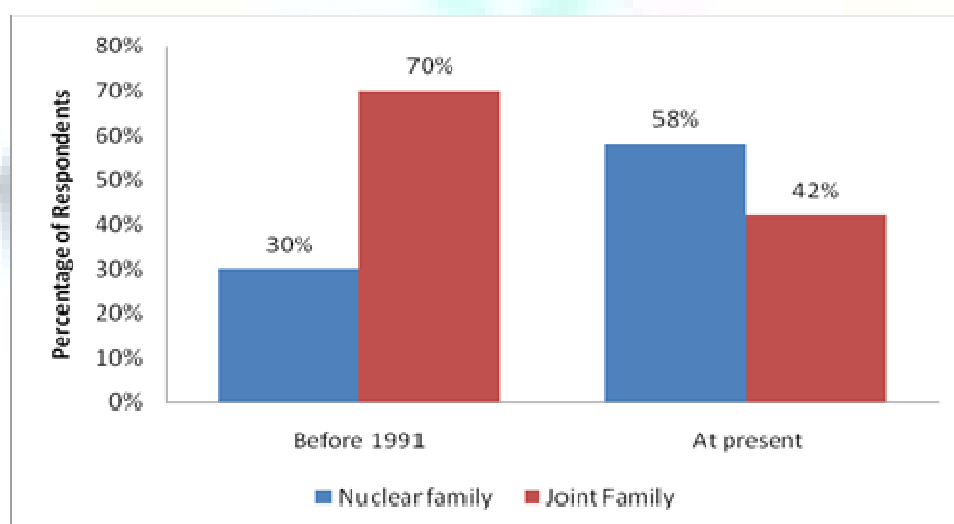
	Percentage of respondents	
	Before 1991	At present
Rural	58%	40%
Urban	42%	60%



The above table shows that before globalization there were only 42% respondents who were living in urban areas, while presently 60% are living in urban areas, which shows that globalization has led to urbanization.

TABLE 4: FAMILY SYSTEM OF RESPONDENTS

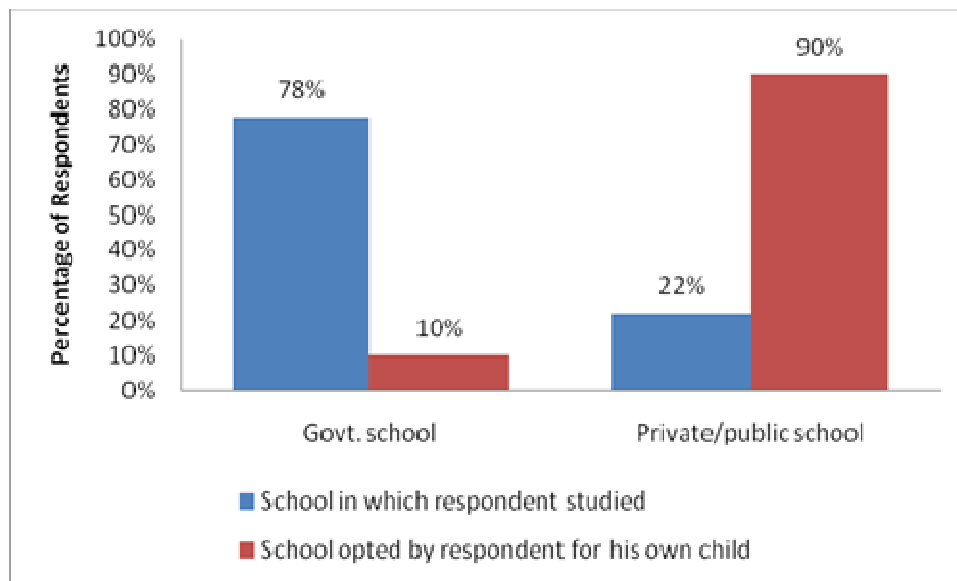
Family in which respondents were/are living	Percentage of respondents	
	Before 1991	At present
Nuclear family	30%	58%
Joint Family	70%	42%



The study shows that family system has also changed. Before globalisation there were 70% respondents who were living in joint family and 30% were living as nuclear family. But after globalisation, the percentage of joint family has come down to 42% while there are 58% respondents who are presently living as nuclear family.

TABLE 5: LITERACY STATUS

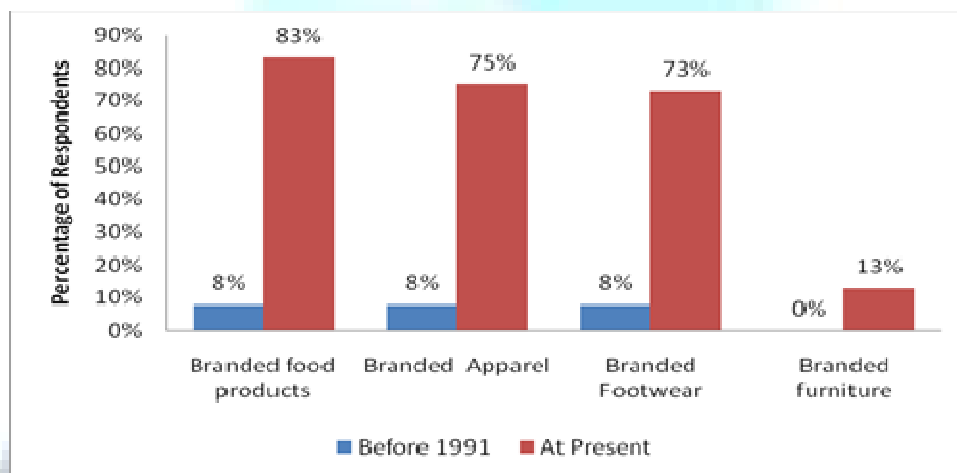
	Percentage of respondents	
	Govt. school	Private/public school
School in which respondent studied	78%	22%
School opted by respondent for his own child	10%	90%



The table shows that 78% respondents had their studies from Govt. schools, while presently there are only 10% respondents who have opted Govt. school for their children. 90% respondents were such who have opted private/public schools (preferably English medium schools) as their preference.

TABLE 6: PURCHASE PREFERENCE FOR BRANDED ITEMS

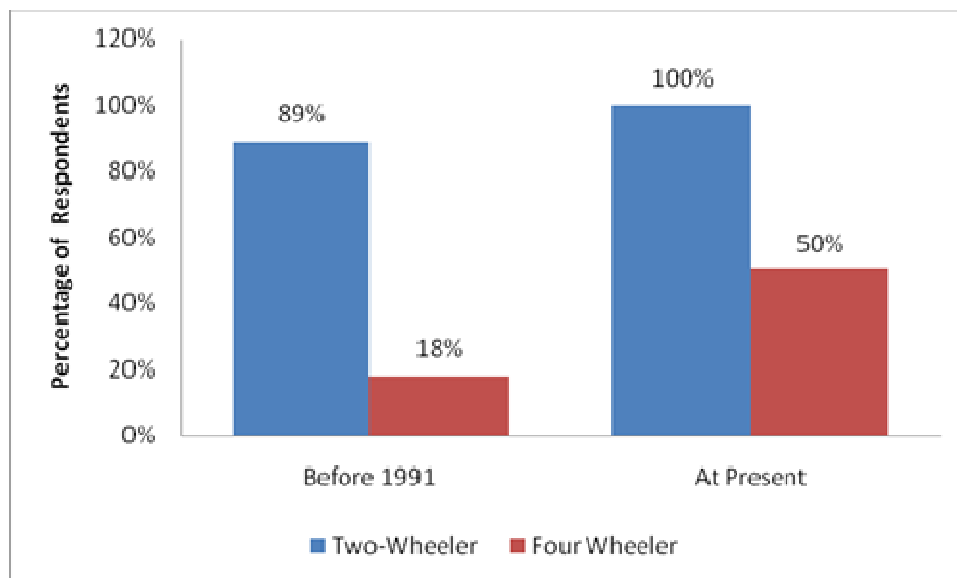
ITEMS	Percentage of respondents	
	Before 1991	At Present
Branded food products	8%	83%
Branded Apparel	8%	75%
Branded Footwear	8%	73%
Branded furniture	0%	13%



The table shows that middle class families now prefer to buy branded products. They are more inclined towards purchase of branded food items followed by branded apparel and footwear. But purchasing branded furniture is still not in the priority list of middle class families.

TABLE 7: POSSESSION OF PERSONAL VEHICLE

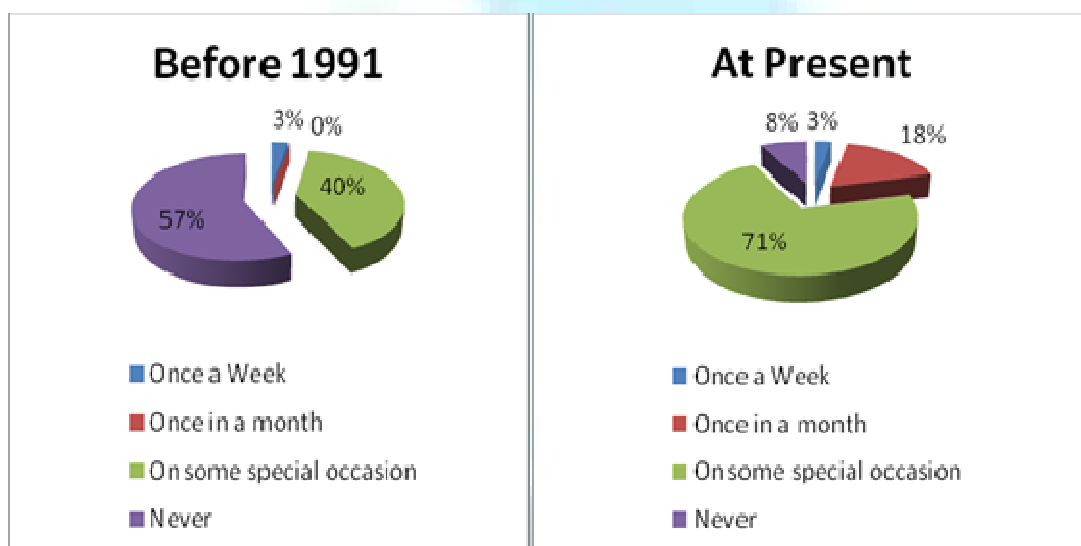
ITEMS	Percentage of respondents	
	Before 1991	At Present
Two-Wheeler	89%	100%
Four Wheeler	18%	50%



The chart shows that there were only 18% respondents who were having a car/jeep as personal vehicle while 89% were having a two wheeler. But after globalisation all 100% respondents are having a two wheeler as personal vehicle & 50% are having a four wheeler (car/jeep) also.

TABLE 8: VISIT TO HOTEL/RESTAURANT

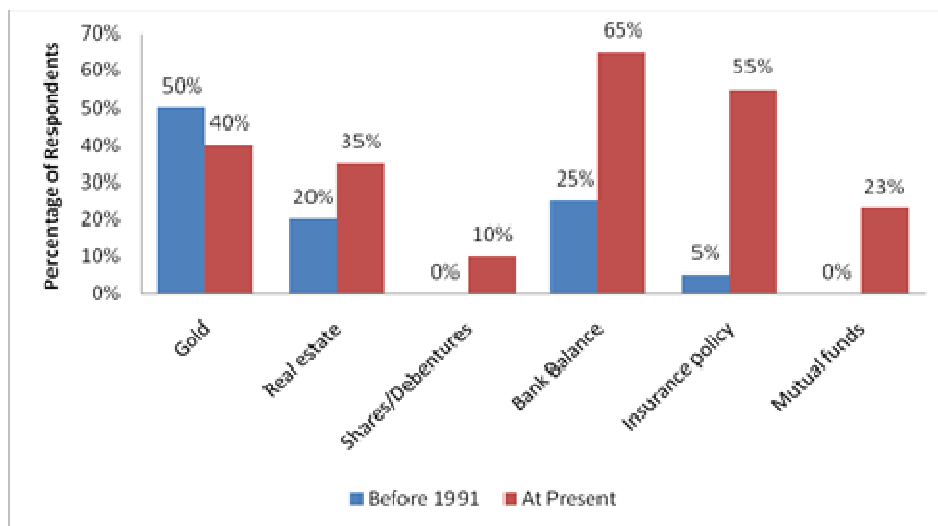
FREQUENCY OF VISIT	Percentage of respondents	
	Before 1991	At Present
Once a Week	3%	3%
Once in a month	0	18%
On some special occasion	40%	71%
Never	57%	8%



The above chart shows that percentage of respondents who never visited a hotel/restaurant before globalisation has come down from 57% to only 8% presently. There were only 40% respondents who visited hotels on some special occasion whereas now 71% respondents are such who visit hotel on a special occasion.

TABLE 9: INVESTMENT AVENUES

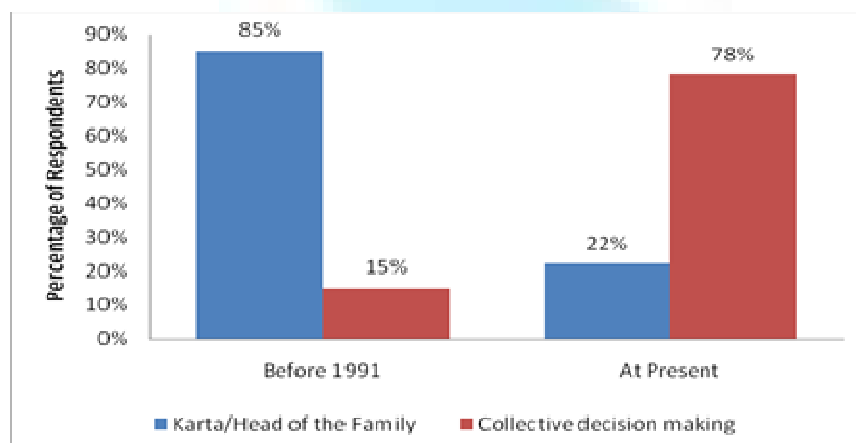
	Percentage of respondents	
	Before 1991	At Present
Gold	50%	40%
Real estate	20%	35%
Shares/Debentures	0%	10%
Bank Balance	25%	65%
Insurance policy	5%	55%
Mutual funds	0	23%



The chart shows the interest of respondents in making their investments. Before globalisation, 50% respondents were having investment in gold followed by 25% in bank deposits, 20% in real estate and only 5% were having insurance policies. But after globalisation, percentage of respondents investing in insurance policies has risen to 55%, real estate to 35% and also 23% are investing in mutual funds which was earlier nil.

TABLE 10: DECISION MAKING AUTHORITY AT HOME

	Percentage of respondents	
	Before 1991	At Present
Karta/Head of the Family	85%	22%
Collective decision making	15%	78%



The above chart shows that 85% respondents reply that decision was taken by head of the family before 1991, while at present only 22% respondents live in such families where decision is taken by head of the family. In rest of the families the decision making is collective.

FINDINGS OF THE STUDY

It is observed that globalisation has made the middle class families to migrate to urban areas. Before 1991 there were 58% respondents who were living in rural areas, but presently 60% respondents are living in cities and only 40% respondents are living in villages.

Family system has also changed. Concept of joint family system is vanishing with the passage of time. Before 1991, there were 70% respondents who were living in joint family, while presently only 42% are living in joint family and 58% are living in nuclear families which was 30% in 1991.

Although all the respondents are literate, but only 22% respondents are such who studied in public or private school, others had their study from the Govt. schools. But after globalisation, presently only 10% respondents are such who have opted Govt. school for their children because public or private school has become the first preference of the parents irrespective of their income.

Now a days purchasing branded products has become common phenomenon. Middle class families who were earlier not brand conscious, now prefer to buy branded food products, branded clothes as well as footwear. These are the choices of more than 70% of respondents, but still purchasing branded furniture is not on the priority list of majority of respondents.

Almost all the respondents are having their own personal vehicle, while only 18% were having a car/jeep before 1991, presently all the respondents are having a two wheeler (scooter/motor bike) and 50% are having a car/jeep.

Globalisation has changed the culture and life style of middle class families. There were 57% respondents who never visited a hotel/ restaurant but now this %age has come down to 8% while more than 70% are such who visit a hotel/ restaurant on some special occasion, such as to celebrate birthday, anniversary etc.

Majority of the respondents have the possession of mobile phones, colour T.V's at home, electronic gadgets in kitchen such as mixer grinder/ food processor, washing machines and cooler/ AC which shows that globalisation has a great impact on the life style of middle class families.

Gold is still a major investment avenue for middle class families. But the trend of investment has changed from traditional investment means investment in gold to other options available such as life insurance policies, mutual fund, real estate etc.

As the culture of joint family system is vanishing, so there has also been a change in the decision making authority. Now in more than 75% of families decision is taken by family members collectively which was 15% only before 1991.

CONCLUSION

In nutshell, it is concluded that globalization has totally changed the life style of Indian middle class families. The massive change in the environment has direct impact on the people of India. Now in middle class families, educated and employed woman is an innovative and active partner. She is not only a cashier and a budgeter, but also the image builder. Today, everything is available to middle class consumers on installment payments. The number as well as spending power and pattern has been growing at a rapid pace. Purchasing branded products, visiting restaurants, beauty salons and personal care centres has become common phenomenon. Education system has totally changed. Decision making has become collective in the families. And the middle class is becoming the 'consumption community of the country.

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PROBLEMS AND PROSPECTS OF POWERLOOM UNITS WITH SPECIAL REFERENCE TO SOMANUR CLUSTER IN COIMBATORE CITY

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ABSTRACT

The powerloom sector produces more than 60% of cloth in India and textile ministry's estimation says that more than 60% of the country's cloth exports originated from that sector. But modernization in looms is less and Indian industry still lags significantly behind US, China, Europe, Taiwan etc. (Texmin, 2005). There are less than 15,000 modern looms, whereas traditional looms are in large numbers. In Value addition and the manufacturing of fabrics according to customer's compliances, is not possible due to obsolete technology of looms. This study will therefore posit a discussion of problems and prospects of powerloom industry that may upgrade them up to the present global competition.

KEYWORDS

modern equipment, power cut, spare parts, warp stop, weaving.

INTRODUCTION

The Indian textile industry is one of the largest industries in the world with a massive raw material and textiles manufacturing base. Our economy is largely dependent on the textile manufacturing and trade in addition to other major industries. About 27% of the foreign exchange earnings are on account of export of textiles and clothing alone. The textiles and clothing sector contributes about 14% to the industrial production and 3% to the gross domestic product of the country. Around 8% of the total excise revenue collection is contributed by the textile industry. So the textile industry accounts for as large as 21% of the total employment generated in the economy. Around 35 million people are directly employed in the textile manufacturing activities. Indirect employment including the manpower engaged in agricultural based raw-material production like cotton and related trade and handling could be stated to be around another 60 million.

In the textile industry, the weaving sector has been identified as one of the poorest technological links in the value chain. What makes the problem more serious is that the decentralized sector, both the powerlooms and the handlooms, which are accounting for the production of 76% of our fabrics needs, is marked by an overabundance. The textile industry can be broadly classified into two categories, the organized mill sector and the unorganized decentralised sector. Being a controlled sector, the organized mill sector has a complete information base on the organizational set-up, machinery installation, production pattern, employment etc. However, information-base on the decentralized sector on the above parameters is inadequate and policy planning has so far been based on hearsay and rough indirect estimates.

The organized sector of the textile industry represents the mills. It could be a spinning mill or a composite mill. Composite mill is one where the spinning, weaving and processing facilities are carried out under one roof. On the other hand, the decentralized sector has been found to be engaged mainly in the weaving activity, which makes it heavily dependent on the organized sector for their yarn requirements. This decentralized sector is comprised of the three major segments viz., powerloom, handloom and hosiery. In addition to the above, there are readymade garments, khadi as well as carpet manufacturing units in the decentralised sector. In a country like ours where labour is abundant and the unemployment poses a serious threat to the economic growth of the country, there is always a controversy about the production technology to be adopted. The mill sector's competitiveness is at stake given the mushrooming of a large powerloom sector that has production-function advantages. The textile production in case of the later entrants like powerlooms has therefore upset the entire production scenario. The powerlooms and mills are able to go for mass production with better quality products.

In spite of the fact that the industry could assimilate high technology levels for better quality production in the market, it has never adapted to the modern technology and, therefore, has remained obsolete. In the advent of globalisation, the Government of India, as part of its modernization efforts, has decided to induct about 50,000 shuttles less looms and upgrade 2.5 lakh looms into automatic and semi automatic powerlooms and make it cost effective.

DECENTRALIZED POWERLOOM SECTOR

The decentralized Powerloom Sector plays a pivotal role in meeting the clothing needs of the country. The powerloom industry produces a wide variety of cloth, both grey as well as processed. Production of cloth as well as generation of employment has been rapidly increasing in the powerloom sector. There are 22.69 lakh powerlooms in the country as on 31.10.2010 distributed over approximately 5.11 lakh units. The powerloom sector contributes about 61% of the total cloth production of the country, and provides employment to about 56.64 lakh persons.

More than 60% of the cloth meant for export comes from the powerloom sector.

GROWTH IN THE POWERLOOM SECTOR

The estimated number of powerlooms in the decentralized sector in the country till 31st October 2010 were 22,69,469. The year-wise growth in the number of looms installed is given below.

Year	No. of Powerlooms	Growth %
2002-2003	16,92,737	-
2003-2004	18,36,856	8.5%
2004-2005	19,02,953	3.6%
2005-2006	19,43,892	2.2%
2006-2007	19,90,308	2.4%
2007-2008	21,06,370	5.8%
2008-2009	22,05,352	4.7%
2009-2010	22,46,474	1.9%
2010-2011 (Upto 31.10.2010)	22,69,469	1.02%

Source: Annual Report – Ministry of textiles, Government of India.

PRODUCTION OF CLOTH & EMPLOYMENT GENERATION

The weaving capacity in the organized sector, along with the number of composite textile mills, however, has stagnated, because the past Government policy permitted only marginal expansion in weaving capacity in the organized mill sector. Even after the removal of restrictions in the Textile Policy of 1985, weaving capacity have been consistently declining. This is attributable to the structural transformation in the industry, leading to the de-linking of weaving from spinning and the emergence of the decentralized powerloom sector. In the organized sector the loom age capacity has declined from 1.23 lakh in March, 2000 to 0.86 lakh in March, 2005, and to 0.56 lakh in March 2008 and the same marginally increased to 0.57 lakh in 2009 and there is no change in 2010. Over the years, production of cloth in the mill sector is showing a steady growth, since 2003-04 onwards and was 1961million sq. meter in 2009-10. The total production of cloth by all sectors i.e. mill, powerloom, handloom, hosiery and khadi, wool and silk has shown an upward trend in recent years. The cloth production during April-Oct (2010-11) showed an increasing trend by 1.90% (provisional).

Year	Total Production	Production on Powerloom	% of powerloom over total production
2004-2005	45378	28325	62%
2005-2006	49577	30626	62%
2006-2007	53389	32879	62%
2007-2008	56025	34725	62%
2008-2009	54966	33648	61%
2009-2010 (P)	59809	36644	61%
2010-2011 (April to Oct 2010)	35805	22067	62%

Source: Annual Report – Ministry of textiles, Government of India.

PRODUCT PROFILE

The Powerloom Sector produces a variety of fabrics for domestic as well as export markets, such as shirting, suitings, dress material, saree, dhoti, sheetings, towels, chaddar, furnishing, shawls, blankets, tweeds etc. made out of cotton, blended, synthetic, silk, wool etc.

PROBLEMS FACED BY THE DECENTRALIZED POWERLOOM SECTOR

- Technological obsolescence & small size of units with fragmentation
- High power tariffs with uncertain power supply
- Lack of credit availability & Poor marketability
- Low HRD skill levels and poor quality consciousness
- Globalization of the textile trade & threat of import penetration

SCHEMES BEING IMPLEMENTED FOR DEVELOPMENT OF DECENTRALISED POWERLOOM SECTOR

1. GROUP INSURANCE SCHEME TO THE POWERLOOM WORKERS

Government of India has launched a revised Scheme "welfare of Powerloom workers through Group Insurance Scheme" in association with LIC from 1st July 2003. In accordance with the XI Five Year Plan, the scheme has been modified by merging the existing Janashree Bima Yojana (JBY) Scheme and Add-on GIS w.e.f. 1st January 2008. As per the modified Scheme, the total premium is Rs.330/- out of which, Rs.150/- is to be borne by the Office of the Textile Commissioner, Government of India and Rs.100/- is being paid by the LIC from the social security fund of Government of India. Only a premium of Rs.80/- is to be paid by the powerloom weaver for getting the benefits under the said scheme.

In addition to the above, a worker under JBY will also be entitled the educational grant of Rs.600/- per child / per half year for two children studying in IX to XII standard for a maximum period of 4 years under Shiksha Sahayog Yojana (SSY). Under the said schemes, 8,15,877 powerloom workers have been insured so far involving GOI share of premium to the extent of Rs.832.80 lakh since July 2003 to November, 2010.

2. GROUP WORKSHED SCHEME

The Govt. of India has introduced a Group Workshed Scheme for decentralized Powerloom Sector on 29.7.2003, under the X five-year plan. The scheme aims at setting up of Powerloom Parks with modern weaving machinery to enhance their competitiveness in the Global Market and the same has been modified. As per the modified Scheme, subsidy for construction of Workshed would be limited to 40% of the unit cost of construction subject to a maximum of Rs. 160/- per sq. ft. whichever is less. Ordinarily, minimum 4 weavers should form a group each with 48 modern looms of single width or 24 wider width looms will be allowed to be installed. The maximum subsidy will be Rs.12 lakh per person. The scheme does not envisage more than 500 looms under one project proposal.

NEED FOR THE STUDY

The Indian textile industry is structurally flawed and its efficiency and growth depends upon the corrective measures and their effectiveness. This process of improving the structural aspects of the industry was initiated in the 1985 Textile Policy, which for the first time took a sectoral view of the industry. The government is spelling out the need for an integrated approach whereby all sectors will be modernised synchronously. This integrated approach is felt to help the textile industry to achieve a reasonable level of upgraded production technology and make it strong enough to face the changed competitive global scenario from the year 2005. In order to meet the changed competitive conditions due to globalisation and liberalisation of the economy, there is an urgent need for upgrading the technology levels currently prevailing in the weaving segment, particularly the powerloom sector. All these call for the preparation and implementation of proper action plan in which all the stakeholders i.e., the government, the weavers and the other interest groups get fully involved.

STATEMENT OF THE PROBLEM

The powerloom sector occupies a pivotal position in the Indian textile industry. However, its growth has been stunted by technological obsolescence, fragmented structure, low productivity and low-end quality products. The focus will therefore be on:

- ❖ Technology up gradation;
- ❖ Modernisation of Powerloom Service Centers and testing facilities;
- ❖ Clustering of facilities to achieve optimum levels of production;
- ❖ Welfare schemes for ensuring a healthy and safe working environment for the workers.

The powerloom units suffer a lot due to various problems which affect the production as well as their income. Therefore this study is conducted to find out the problems and also the prospects of powerloom units that may upgrade them up to the present global competition.

OBJECTIVES OF THE STUDY

- ❖ To study the performance of the powerloom units
- ❖ To study the problems faced by the powerloom units
- ❖ To study the opinion and satisfaction level of the powerloom owners towards textile owners
- ❖ To study the awareness level of the latest technological developments.
- ❖ To offer suggestions on the basis of the results of the study.

METHODOLOGY OF THE STUDY**RESEARCH DESIGN**

A research design is purely and simply the framework of plan for a study that guides the collection and analysis of data.

The research design is descriptive in nature.

AREA OF THE STUDY

Powerloom industry is the major industry next to agriculture in Somanur. Due to water shortage, entire agriculture suffered and alternatively powerloom industry was established and it has grown over the years. In the early stages, handloom weavers diverted to powerloom in the year 1940, then slowly increased up to 1982. At present there are about 50,000 powerlooms, 900 shuttle less looms and 4000 automatic looms working in this area. Further there is a good scope for modernization of looms by installing shuttle less weaving machines under TUFS.

In this area about 40 modern sizing units are working and providing sized beams to the powerloom industry. All the sizing units are working well. The small powerloom units (capacity ranging from 4 to 24 looms) are controlled by master weavers and they supply sized beams on conversion basis and market the fabric.

The total production of fabrics is about 35, 00,000 sq.m., per day, out of which 40% are utilized for local markets, 15% for direct exports, 25% for merchant exports and 20% processed and exported. All types of yarn are available to the powerloom industry in Somanur area. Hence the area of study refers to Somanur cluster in Coimbatore district.

PERIOD OF THE STUDY

Period for the study is 3 months i.e. August 2012 to October 2012

POPULATION

The population for this study is the powerloom cloth manufacturers in Somanur area.

SAMPLE SIZE

The sample size in this study is 100.

SAMPLING TECHNIQUE

Convenient sampling technique is used for the study.

METHODS OF DATA COLLECTION

The interview schedule method is used to collect data from the respondents.

SOURCES OF DATA

The study is based on primary data collection. The primary data has been collected from the powerloom units who undertake job work from the textile owners.

TOOLS FOR ANALYSIS

- ❖ Percentage analysis.
- ❖ Likerts Summated Scale.
- ❖ Chi – Square Test.

LIMITATIONS OF THE STUDY

- ❖ The study was confined to Somanur cluster only and hence the results cannot be generalized.
- ❖ Due to time constraints, the number of respondents taken for the study is limited to 100.
- ❖ The limitations of the sampling technique also form the limitations of the study.
- ❖ The internal prejudice of the respondents serves as a limitation.

HYPOTHESES OF THE STUDY

- ❖ Number of workers and income of the unit with meters of cloth produced are independent.
- ❖ There is no significant relationship between income of the unit and satisfaction level of market rate.
- ❖ There is no significant relationship between the experience of the powerloom owners and problems faced by them.
- ❖ Income of the unit, Investment pattern, Experience and Educational qualification of the powerloom owners with satisfaction level of latest technology are independent.

REVIEW OF LITERATURE

³Gurumurthy, G, "The Ministry of Textiles' sub-group on powerloom has sought to build an additional weaving capacity of 25 billion sq mtrs under the powerloom sector for the 11th Plan period. The decentralised powerloom sector, which accounts for 60 per cent of the total fabric production capacity in the country's textile sector, is currently vested with a weaving capacity equivalent of 29 million sq mtrs."

⁴Mathivanan, M.S, "The thrust given to modernization of powerloom sector under the policy should result in improving the sector's export capability through enhancement in quality fabric manufacture. The textile processing sector in the endeavour to achieve defect-free and colour fast processed fabrics would also benefit the powerloom sector."

⁵Mohapatra, S.B, "The powerloom sector stand to benefit by CENVAT, as it would enable them to get duty refunds. The Centre had conducted a study of powerloom sector in Tamil Nadu, which revealed that 77 per cent persons in the sector were workers and 15 per cent on "preparatory side", who were not required to register under CENVAT. The remaining eight per cent were powerloom owners, who have registered under CENVAT."

⁶Soundariya preetha, M, "The Hi-Tech parks for the decentralised powerloom sector are planned under the Technology Up gradation Fund Scheme, Textile Centre Infrastructure Development Scheme and the Group Work shed Scheme. Each park will get a subsidy of about Rs. 20 crores (from the Centre and the State governments). They will generate in total 6,000 job opportunities and almost Rs. 900 crores of annual turnover."

⁷Prabhakaran, O. M, "Handlooms are generally engaged in producing processed cloth to be sold to nearby shops, while powerlooms produce grey cloth which required further processing before it can be sold. A vast majority of handloom weavers who operate power-driven 'handlooms' were found to be economically better-off. They were seen in large numbers in Tamil Nadu, AP and Maharashtra, among other states. What they were using was not discarded machinery from the mills. These were, by tradition, expert handloom weavers and were producing the very same handloom products using the very same raw materials (i.e., dyed hanks) except that they were using speedier looms".

FINDINGS OF THE STUDY

- ❖ Majority of the powerloom owners are in the age group of 41 to 50 years
- ❖ Married male respondents run majority of the units.
- ❖ Majority of the units are run by the persons who educated higher secondary level.
- ❖ Majority of the powerloom owners have an unit income of Rs 50,000 to Rs 1, 00,000.
- ❖ Majority of the powerloom units are proprietorship concerns and in existence for a period of more than 10 years.

³Gurumurthy, G, "Sub – group on powerloom bets on adding capacity", The Hindu BusinessLine, September 1st, 2006.

⁴Mathivanan, M.S, "Powerloom sector hails textile policy", The Hindu BusinessLine, November 6th, 2000.

⁵Mohapatra, S.B, "Powerloom sector would benefit by CENVAT: Mohapatra", Express Textile, May 22nd, 2003.

⁶Soundariya Preetha. M s, "Work tarts for powerloom parks", The Hindu, February 3rd, 2006.

⁷Prabhakaran, O.M, "Handlooms and Powerlooms", EPW Letter to Editor, Economic and Political Weekly, January 25th, 2003.

- ❖ Most of the powerloom owners have invested their own funds for the establishment of the units between 7 and 10 Lakhs.
- ❖ Most of the powerloom units are weaving and owned 8 to 15 looms with 2 shifts per day and 2 to 5 workers employed per shift.
- ❖ Many of the powerloom units produce Gaada more than 30 meters of cloth per loom per shift
- ❖ Majority of the powerloom units facing labour problem which arises due to advance money and power cut.
- ❖ Majority of the powerloom units states that low quality weaving cloth are not accepted by the textile owners but few textile owners accept it by providing half rate only.
- ❖ Majority of the powerloom units gave training to the workers to improve the quality and quantity of cloth manufactured.
- ❖ Majority of the powerloom units are aware of latest technology but only few units are using latest technology developments like warp stop due to investment cost.
- ❖ Most of the units stated that performance of labour, environmental conditions, labour problems, electricity charges are unfavorable to the powerloom weavers.
- ❖ Majority of the powerloom owners are satisfied with market rates, introduction of latest technology, voltage of power, availability & quality of raw material and availability & price of spare parts.

CHI-SQUARE RESULTS

- ❖ Number of workers and income of the unit with meters of cloth produced are independent.
- ❖ There is no significant relationship between income of the unit and satisfaction level of market rate.
- ❖ There is no significant relationship between the experience of the powerloom owners and problems faced by them.
- ❖ There is a significant relationship between the investment and satisfaction level of latest technology.
- ❖ Income of the unit, Experience and Educational qualification of the powerloom owners with satisfaction level of latest technology are independent.

SUGGESTIONS FOR THE IMPROVEMENT

1. TECHNICAL UP GRADATION

Technical obsolescence is one of the main drawbacks of the powerloom industry. The powerloom units must come forward to break – down this hazard and adopt new and modern technologies, so that the quality and quantity of cloth produced are improved.

2. QUALITY OF THE CLOTH

The powerloom units must concentrate on the quality of cloth produced. They must ensure that high quality of cloth is manufactured using the latest technologies.

3. FINANCIAL ASSISTANCE

Finance is also another important problem of this industry. More finance is needed by the units for adoption of latest technologies. The banks and other financial institutions must come forward to advance loans to these units so that they can expand their factories and also implement the modern technologies.

4. ASSISTANCE FROM GOVERNMENT REGARDING POWER

The Government must take steps to reduce the frequent power – cuts, as they stop production and reduce the quantity of cloth produced, thus reducing the income of the units. The Government must also provide concession rates for the powerloom sector for the power consumed by the units.

SCOPE FOR FURTHER RESEARCH

This study in its usual course, offers scope for further research in the following areas: 1. Working Environment and Problems faced by the powerloom labourers. 2. Investment pattern in latest technology. 3. Women Workers Perception about Work Place in powerloom units. 4. An Analysis of performance of organized sector- Spinning mills. 5. An Analysis of growth & performance of Textile Industry.

CONCLUSION

The study has aimed at finding out the problems and prospects of the powerloom sector in Somanur cluster in relation to its production efficiency and capabilities with a view to speed up modernization of the powerlooms.

Though current growth of this sector has been restricted by technological obsolescence, fragmented structure, low productivity and low-end quality products, in future Technology would play a lead role in this sector and will improve quality and productivity levels. Innovations would also be happening in this sector, as many developed countries would be innovating new generation machineries that are likely to have low manual interface and power cost. Indian textile industry should also turn into high technology mode to collect the benefits of scale operations and quality. To reap benefits of these developments Indian powerloom industry has to prepare itself for drastic technological changes and will have to focus on area such as Technology upgradation, modernization of Power loom Service Centres and testing facilities, Clustering of facilities to achieve optimum levels of production and Welfare schemes for ensuring a healthy and safe working environment for the workers in future.

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WORK LIFE BALANCE OF WOMEN FACULTY WORKING IN EDUCATIONAL INSTITUTIONS: ISSUES AND PROBLEMS

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ABSTRACT

Work life balance is not a new phenomenon. It takes into account the four quadrants like work, family, community/friends and self. To make one's life happy it is important in today's world to maintain a right balance of all these four quadrants. As there is more development in the educational field women are showing more passion and interest towards the education field and they are in a position that they are unable to balance the personal life and professional life. In this context, the paper analyses the work life balance issues and problems being faced by women working in educational institutions and suggests measures to overcome work life imbalance by using secondary data.

KEYWORDS

Work life balance, Issues, Problems, and Measures.

INTRODUCTION

The expression 'work life balance' was first used in United Kingdom in the late 1950's to describe balance between individuals work and personal life. Work life balance is a concept which is capable of making miracles in the life of many. Work life balance is a major concern now-a-days. The term work life balance is used to refer to the policies that strive to achieve a greater balance between work and home responsibilities. It is the most important critical factor for getting individual as well as organizational success. Women faculty working in educational institutions faces a major problem of work life imbalance. Creating and managing a balance between work and personal life is considered as a work life balance issue. Personal life and professional life are interdependent and interconnected. In this interdependence and interconnection many problems are being faced by women employees.

REVIEW OF LITERATURE

A.K.M.Mominul Haque Talukder (2011) studied work life balance in service context and made attempts to identify how employees are balancing their work life by considering variables such as work culture, job satisfaction, employee benefits, work environment, flexible work time, work load and discrimination. He identified that work life balance is influenced by all these variables.

Anna Beninger worked(2010) on 80 academic women working at US, UK, Australia and Sweden and revealed that female academicians are experiencing a series of universal challenges to work life balance despite radically different government policies and cultural attitudes towards work. Women's ability to cope up with the challenges varies cross culturally with the degree of support provided by formal policies and social norms.

A.G.V.Narayanan & R.Lakshmi Narayanan(2012) worked, on 200 human resources working in Tamilnadu IT organizations and found that work timings, excess work load, long travel, routine meetings, work on holidays are strongly influencing work life balance of employees.

Duxbury and Higgins (2007) found that women are more likely than men to report high levels of role overload and caregiver strain. This is because women devote more hours per week than men to nonwork activities such as child care, elder care and more likely to have primary responsibility for unpaid labour such as domestic work.

Fisher (2001) work life balance comprises of four components. The first component is time, i.e., howmuch time is spent at work, and compared to how much time is spent engaged in otheractivities. The second component is related to behavior, such as, work goalaccomplishment, as work life balance is based on ones' belief that he is able toaccomplish what he would like at work and in his personal life. Two additional issues or components are Strain and Energy.

Haruko Noguchi (2009) explored the effects of work life balance measures and work place flexibility on female workers choice and timing of being reinstated after first child birth.

Hill et al (2001) A study conducted on 6,451 employees of IBM in USA observes how perceived flexible work timings and location of work place impact work-life balance. The study showed that individuals with the same workload and with perceived job flexibility enjoy good work-life balance and are capable of working longer hours before workload negatively impacts their work-life balance.

Rana Zehra Masood & Seema Mahalwat (2012) worked on 300 employees working in different banks and insurance companies in Haryana region and suggested that work place flexibility, reduction of work time, leave and benefits, dependent care initiatives and work life stress management reflect the importance of nurturing a supportive culture in terms of embarrassing work life balance concepts. They also advised that the organizations which neglect the recent trends and changes regarding demographic variables related to employee work life balance will end up with employee lower productivity.

Santha Lakshmi.k &Dr.N.Santhosh Kumar (2011) studied 250 women employees at SRM University and found that working women undergo severe stress as they try to balance their domestic life and professional life. They revealed that continued work under pressure would result in poor performance at the institution as well as domestic life.

Suchet and Barling (1986) in a study of interrole conflict, spouse support and marital functioning found that support from one's husband may assist employed mothers cope with their own interrole conflict, as husbands' supportive behavior and attitude might help in reducing the opposing role demands on, and unrealistic role expectations of employed mothers.

Zimmerman (2003) studied the strategies that dual earner couples adopt in balancing family and work. In a study of 47 middle-class, dual earner couples with children, who see themselves as successful in balancing family and work, their thought is classified into six general partnership themes such as shared housework, mutual and active involvement in childcare, joint decision making, equal access to and influence over finances, value placed on both partners work life goals and shared emotion work. Couples who are successful tend to share housework and emotion work. Naturally wives perform slightly more childcare and are primarily responsible for organizing family life. Further Zimmerman notes that wives perceive that husband's careers are slightly more prioritized.

OBJECTIVES OF THE STUDY

1. To know the work life balance issues and problems of women faculty working in educational institutions.
2. To suggest measures for reducing work life balance issues and problems of women faculty working in educational institutions.

METHODOLOGY

The secondary data in a published form in various forms is used to trace the issues and problems of work life balance of women faculty in educational institutions.

WORK LIFE BALANCE – ISSUES TO CONSIDER

- 1. EMPLOYEE BENEFITS AND FACILITIES:** Positive emotions are central to an individual's growth and development enabling the people to become more proactive. Work life benefits and facilities include that sending a message that the institution cares about its employees, enough to provide a benefit package that they use or value and that contributes to the positive attitude at the work place.
- 2. DISCRIMINATION:** One common threat in work life balance conversation is discrimination. Work place discrimination refers to a work environment that creates differences among the employees. The discrimination factors could be gender, marriage, disability, race, color, nationality, religion and so on. But the gender discrimination and the status discrimination are the most common in many organizations. Often due to discrimination employees cannot balance their work life.
- 3. BALANCE BETWEEN TEACHING AND RESEARCH:** Some of the employees in the educational institutions irrespective of their job want to improve their career. During this process they go for higher education or they go for research activities. Balancing both teaching career and educational career is a little bit difficult task. They need to put more efforts on both the aspects which disturbs work life balance.
- 4. WORK ENVIRONMENT:** work environment refers to the social-psychological characteristics of work settings. It includes employee-employer relationships, motivation and advancement, job demands, social support and so on. so the environment which can provide a good balance of all the factors is said to be a good environment. A poor work environment is associated with reduced job satisfaction, absenteeism, somatic complaints, burn out and depression.
- 5. FLEXIBLE WORK TIME:** Flexible working hour's means flexibility to use small amounts of time to meet the demands of events and emergencies for work and family. The more the flexibility to work the more will be the satisfaction levels in the employees. Flexible work arrangements include flextime, reduced hours, compressed work weeks, job sharing and compressed work weeks. Flextime gives benefits to the employees as well as to the employers.
- 6. WORK LOAD:** There will be negative relationship between work load and organizational commitment. Long work hours increases work family conflict, psychological distress, health problems and so on. The more the work load the more will be the work to family interference. This creates dissatisfaction in the employees mind which results in poor performance in the classroom.
- 7. PRESSURE OF ACCREDITATIONS:** Now-a-days many of the educational institutions are striving to get accreditations of AICTE, NACC, UGC e.t.c and in order to get that the institutions are pressuring the employees to put more and more efforts, work overtime, take the academic work to home. This decreases the time to spend with the family members.
- 8. GOAL OF HIGHER EDUCATION:** At present women inspite of multichallenges at family and at work place they are setting the goals of higher education. In order to reach those goals women needs to sacrifice or give break to either the personal life or professional life which automatically causes disturbance to the work life balance.
- 9. JOB SATISFACTION:** Work life balance has a direct relationship with the job satisfaction. If a particular employee is going to have a good atmosphere at the work place and in the family she will be able to put maximum efforts at the personal jobs and as well as at the professional jobs. Ultimately there will be atmost satisfaction in her life.
- 10. CARE GIVER STRAIN:** Women need to take care of their children and dependents. She needs to give high priority for them. While prioritizing their needs there may be disturbance to the work or less time may be allotted to the profession. She needs to manage all her total family needs and strive hard to satisfy them which obstruct the professional life.
- 11. ROLE OVERLOAD:** Role overload means having over burden in the work place or at the family. Many times when one role becomes excess it shows its effects on the other roles. It causes disturbance to the personal and professional life.
- 12. ORGANISATIONAL CULTURE:** Organizational culture includes the rules and regulations, policies and procedures, work atmosphere, superiors' cooperation and so on which focus on the work life balance of the employees. When individuals perceive that their superiors are unsupportive over their efforts to balance work and family responsibilities, they perceive that there is work family interference and leads to work family conflict.
- 13. MULTIPLE ROLES:** Women need to perform multiple roles such as the role of wife, daughter, daughter-in-law, mother, as an employee to her employer. She tries to satisfy everyone with atmost care and concern. While managing these multiple roles sometimes priority may not be equally distributed to everyone. Due to this there will be disturbance in the work life balance of women.
- 14. FINANCIAL PROBLEMS:** Financial problems are more closely related to the personal life. If women want to join in an educational institution due to financial problems in her family or if the husband's income is not sufficient to the family needs, she cannot balance her personal and professional life as the priority is given to the personal needs only. Irrespective of financial problems there should be zeal and passion towards the work life of an individual towards her profession in order to have an effective work life balance.
- 15. FAMILY COMMITMENTS:** Family commitments of women include taking care of children, managing disabled persons in the home, focusing on aged persons and so on. When women are more committed to the family she cannot put maximum efforts at the work place. Due to this quality guidelines cannot be given to the students.

WORK LIFE BALANCE – PROBLEMS TO CONSIDER

- 1. PROBLEMS RELATED TO HEALTH:** Work life balance causes severe health problems to women. The health problems may be long term or short term. Long term health problems include cardiac problems, high blood pressure, diabetes and psychiatric problems. Short term health problems include headache, gastritis, body ache and so on.
- 2. PROBLEM OF OCCUPATIONAL MOBILITY OF SPOUSE:** In traditional India as the husband moves from one location to another location due to his occupation women needs to go along with him. During this movement women employee face severe psychological and physiological stress which leads to work life imbalance.
- 3. PROBLEM OF SOCIO-PERSONAL ASPECTS:** Socio-personal aspects may include managing domestic commitments, child care support, old caring, maintaining good relations at the work place, support from superiors, and cooperation of peer's e.t.c. If any of these things don't run in a proper way it deviates the mood of the employee.
- 4. PROBLEM OF REACHING TARGETS OF THE INSTITUTION:** Whenever the institutions sets stiff targets, vision, mission, and goals to reach, it pressurizes women to put additional effort at work place. Women need to work with more efforts and work over time which cause discomfort to the personal life.
- 5. PROBLEM OF MEETING SCHEDULES:** Institutions have strict time tables and schedules. On violation of these schedules there will be extra rules imposed on the employees, sometimes reduction in the salaries, demotion can be experienced which leads to distress in the employees.
- 6. PROBLEM OF CHILDCARE:** Whenever the institutions are not providing any policies and practices towards the child care facilities at the work place, the women faculty members cannot concentrate on the work. Due to this they cannot put maximum efforts in the classroom to educate the students.
- 7. PROBLEM OF HARRASEMENTS:** Women faculty feels harassed at the work place by the superiors or by the opposite gender peers. There may be ill-treatment of women employees, lack of proper support from them, treating them as inferior which leads to work life imbalance.

8. LACK OF FAMILY SUPPORT: If there is lack of mother-in-law's or parents or husband supports then she cannot do her professional work in a pleasant mood which decreases her efficiency at the work place.

9. LACK OF MATERNITY LEAVE: Many mothers are forced to return to the work only weeks after having given birth to children, missing out important bonding time with their child. Often children are sent to day cares or being cared by non family members. This disturbs the mental stamina of women.

10. LACK OF EMOTIONAL STABILITY: Women are so sensitive that they will get disturbed to small problems even though they can be able to handle that problem. Due to this her concentration will be deviated which leads to reduced job satisfaction and productivity.

TIPS/MEASURES TO HAVE EFFECTIVE WORK LIFE BALANCE

1. USE YOUR CALENDER: Fix a time table for your personal and non personal activities. By this you will be committed to your schedule and follow through that only.

2. GIVE RELAXATION TO MIND: Everyone needs to relax and enjoy the time fully. For this the activities include playing sports, meditation, fishing, swimming, sitting in your yard, watching the birds which refresh your mind. By this your mental and physical stamina enhances. It creates space for problem solving and creativity.

3. REDUCE FAMILY TIME STRESS: Spending time with your family is not a complex thing. There are many ways to spend with your family like playing with your children, having a ride with your partner, going to a restaurant with your friends, cooking a special dish for your ones.

4. BE GENTLE, DON'T GET DISAPPOINTED BY FAILURES: If you set a new goal in your work or family, work out to get success. If failure occurs don't get disappointed by that. Try it once to get success.

5. BALANCE UNEXPECTED SITUATIONS: Try to have a stamina and will power to balance the unexpected situations that comes to your rescue.

6. WORK OUT TO REDUCE STRESS: Do meditation, yoga or go for a morning walk in order to overcome stress which helps in reducing your tensions and makes your work go in a pleasant way.

7. PROGRAMS AND INITIATIVES BY THE EMPLOYEES: Employers need to take the initiatives like flexible working arrangements, compulsory leave, maximum hours, foster an environment that encourage employees not to continue work after working hours.

8. EXTENSION OF THE EMPLOYEE BENEFITS: New benefit programmes have to be added by the management like paid parental leave, domestic partner benefits and so on.

9. ONSITE CHILD CARE FACILITIES: Provide facilities like onsite crèches, medical facilities, seasonal child care programmes in order to make the women employees feel comfort and dedicated to the work place.

10. FLEXIBLE WORK ARRANGEMENTS: Provide flexible working hours to the women employees especially to the women who has a new born child.

11. CHOOSE PART-TIME WORK: Part time work is beneficial for those employees who are the parents for younger children, who has to take care of elders and who want to spend less time on their work.

RESULTS

Results out of this discussion are:

1. Working women undergo severe stress as they try to balance their domestic life and professional life. Continued work under pressure would result in poor performance in the institution as well as domestic life.

2. Working women is striving to improve the life of both their family members as well as their students. In this task, if they are neglecting their health and mind, both the family as well as the institution will suffer.

3. Time management is one of the best solutions which can help to reduce the imbalance between the personal and the work life of the employees.

4. Prioritizing the tasks and planning the activities can help to take out some free time which can be utilized for other purposes.

5. Taking some time out for hobbies and leisure activities, spending time with loved ones can help to beat the stress and manage perfect work life balance.

CONCLUSION

From the above discussion, it is clear that the obligations towards the families and expectations of the institution and constant struggle to maintain a balance of work can have serious implications on the life of an individual. Work and personal life conflict occurs when the burden, obligations and responsibilities of work and family roles become incompatible. Therefore, it is important for employees to maintain a healthy balance between personal and their professional lives. This will help them achieve their personal and professional goals as well the organization they are working for. Therefore it is reasonable to conclude that the modern organizations, especially educational institutions, should address the Work Life Balance related issues and problems among their staff, specifically women & take a holistic approach to design and implement policies to support the teaching staff to manage their work life balance which would add to the performance of these staff members.

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GEMS AND JEWELLERY: THE DARK HORSE OF INDIAN EXPORTS

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ABSTRACT

Gems & Jewellery has had an important place in the Indian society ever since civilization dawned on the Indian soil. It is a promising sector which is poised to contribute substantially to foreign exchange coffers of the country. The present study is an attempt to illustrate the export figures of Indian Gems and Jewellery as well as its major export destinations. The study also throws some light on the prospects of this sector. The information for the research enquiry has been collected from secondary sources covering a period of 12 years from 2000-01 to 2011-12. The export figures of Gems and Jewellery has been depicted in the form of tables.


JEL CODE

F14.

KEYWORDS

brand India, export destinations, foreign exchange, gems and jewellery, prospect.

INTRODUCTION

 Gems & Jewellery has had an important place in the Indian society ever since civilization dawned on the Indian soil. Traditionally, Gems and Jewellery in India served as an economic store of value for investment and trade, and at the same time as a fashion and style accessory. Gems and precious metal have a great astrological and religious significance also. From ages they have been used as an integral gift and acquisition items for special occasions such as weddings and ceremonies.

The global market for Gems and Jewellery today is over \$100 billion with jewellery manufacturing dominated by a handful of countries like Italy, China, Thailand, USA and India. India's Gems and Jewellery industry is a bright star of the economy and one of the important foundations of the country's export-led growth. It is a leading foreign exchange earner and one of the fastest growing sectors accounting for around 14% of the India's total merchandise exports during the financial year 2011-12. The industry has registered a remarkable growth over the last four decades with exports growing from \$28mn in 1966-67 when the Gems and Jewellery Export Promotion Council was established to \$42.84bn in 2011-12. India has established itself as the world's largest manufacturing sector for cut and polished diamonds, contributing nearly 60% of the world's supply in terms of value and 80% in terms of volume.

The industry enjoys significant strengths and advantages, such as, availability of raw materials, labour, domestic market and supportive government policies. The industry is also undergoing transformation, with an increasing number of MNCs establishing their presence to leverage India's potential. While the structure is characterised by small scale powered unorganised players, attractive government policies and increasing commitment of players across the value chain has led to the growth of vertically-integrated large-scale units as well.

OBJECTIVES

After considering the aforesaid matters, we now lay down the objectives of the present study:

1. To illustrate the export figures of Gems and Jewellery during the study period from 2000-01 to 2011-12.
2. To illustrate the major export destinations of Indian Gems and Jewellery.
3. To evaluate the prospects of the Gems and Jewellery sector.

METHODOLOGY

- **SOURCE OF DATA:** In order to conduct the study, information has been gathered from secondary sources, government publications and websites. Reports of various agencies like DGCI&S, The Economic Survey of India, the EXIM Policy Statement and the Export Import Manual have been considered besides browsing various related websites.
- **PERIODICITY:** The present study covers the period from 2000-01 to 2011-12 covering a time period of 12 years.

LIMITATIONS OF THE PRESENT STUDY

- The basic limitation of the present study is that it has been conducted based on secondary data.
 - Considering the short time dimension and it being a research paper only and not a doctoral thesis, a survey of primary sources could not be conducted.
- After considering the objectives, methodology and limitations of the present study, we may now have an overview of the Gems and Jewellery industry.

GEMS AND JEWELLERY – ITS COMPOSITION

As per the Export Manual of the Government of India, Gems and Jewellery includes the following items:-

- Cut & Polished Diamonds
- Rough Diamonds
- Coloured Gem Stones
- Gold Jewellery
- Non-Gold Jewellery
- Pearls

- Synthetic Stones and
- Costume Fashion Jewellery

The Gems and Jewellery is a promising sector which is poised to contribute substantially to foreign exchange coffers of the country. The country consumes around 800 tonnes of gold annually of which nearly 600 tonnes is used for jewellery making. India's gold consumption accounts for nearly 20 % of the global gold consumption. It also contributes to over 15 % of the total exports of the country and provides employment to 1.3 million people directly and indirectly. The bulk of the domestic Gems and Jewellery industry is concentrated in the unorganized sector employing around 2 million workers, serving over 1,00,000 gold jewellers and 8,000 diamond jewellers.

India is the world's largest diamond processing country with around 1 million processors treating over 57 % of the world's rough diamonds. 11 out of 12 diamonds set in jewellery are cut and polished in India. Processing is done on rough diamonds in a complete range of sizes and qualities, including stones larger than 10 carats. In terms of carat, India's contribution in this sector is about 80 % of the global market.

Although India is the global factory of cutting and polishing diamonds, the trading hubs are located in the byelanes of Antwerp and Belgium where this trade is shared by Jews and Gujaratis. The setting up of the Diamond Bourse in Mumbai which is one of the largest bourses in the world, at par with international standards, is expected to ensure India's strategic shift as a leading diamond trading market in Asia. The vision is to make India the Global Jewellery Hub and a one stop destination for diamonds, gems, gold and jewellery.

It may also be emphasized that although India is the forerunner in processing of Gems and Jewellery, but the domestic production of gold and diamonds is very negligible. As a corollary, the Indian jewellery industry has to depend entirely on imported raw materials. India produces a meager amount of around 2 tonnes of gold annually against the import of around 1000 tonnes. The quantum of gold import crossed 1000 tonnes in 2011-12. It was 1067 tonnes which was higher than 969 tonnes in 2010-11 and 850 tonnes in 2009-10. Though India is the largest consumer of gold in the world, the per capita consumption is almost 1/10th that of any matured market.

Indian jewellery pieces are mostly manufactured in certain pockets of the country like Kolkata, Mumbai, Ahmedabad, Surat, Jodhpur, Jaipur, Bangalore, Bhubaneswar and Cuttack which bears the stamp of artistic touch of the Indian goldsmith. Each of these pockets is reckoned for its distinct design and craftsmanship, e.g., the colour stone industry at Jaipur. The skills of Indian artisans are esteemed high worldwide. The exquisiteness and uniqueness of the Indian jewellery pieces enable them to maintain a steady demand in the global market.

The government, recognizing the inherent strengths of this sector in terms of its employability potential has taken major initiatives to strengthen institutional linkages to enhance the skill levels of the workers commensurate to the industry requirements. Two such centers have been set up at Domjur in West Bengal and Khambhat in Gujarat. The sector is also well supported by Government policies and the banking sector, with around 50 banks providing about US\$ 3 billion credit to the Indian diamond industry. Moreover, the relentless efforts of Indian entrepreneurs and the strong financial base of the industry have given it a facelift.

The Gems & Jewellery Export Promotion Council (GJEPC) established by the Ministry of Commerce and Industry, Government of India, in 1966, being the apex institution for Gems & Jewellery in the country has been playing a significant role in the development of the industry by effectively coordinating the scattered efforts of individual exporters into a powerful engine driving the country's export led growth in association with the World Crafts Council. Efforts made by GJEPC are usually in the form of participating and holding fairs and exhibitions both at national and international levels, buyer - seller meets, etc.

After having an overview of the industry, we shall now lay down the exports of Indian Gems and Jewellery in consonance with Objective No.1.

EXPORT OF GEMS AND JEWELLERY

Gems & Jewellery has played a crucial role in beautifying the Indian women from time immemorial. It has a place of pride in defining the wealth, prosperity and accumulations of an individual. Indian customs and traditions also require the acquisition of Gems and Jewellery. Besides the ornamental value, it is contributing substantially to the country's exchequer.

The two major segments of the Indian Gems and Jewellery industry are gold and diamonds. The contribution of gold jewellery is about 80 % of the total jewellery market, with the balance comprising fabricated studded jewellery, which includes diamonds as well as gemstone studded jewellery.

A major chunk of gold jewellery manufactured in India is for domestic consumption, whereas a major portion of polished diamonds or finished diamond jewellery is exported. The hub of India's jewellery industry is Mumbai that receives majority of the country's gold and rough diamond imports. Around 90% of the diamonds set in jewellery worldwide are processed in India, mainly around Mumbai, Surat, Jaipur, Bhavnagar, Ahmedabad and Bhuj. Mumbai has a considerable number of modern, semi-automatic factories and laser-cutting units. The majority of these modern units are located in the Special Economic Zone. The Special Economic Zone in Mumbai alone accounts for about half of the country's Gems and Jewellery exports.

Table 1 furnished hereunder highlights the export figures of Gems and Jewellery vis-à-vis the total national exports of India.

TABLE 1: VALUE OF GEMS AND JEWELLERY EXPORTS DURING THE STUDY PERIOD (in million)

YEAR	TOTAL NATIONAL EXPORTS (Rs.)	EXPORT OF GEMS AND JEWELLERY(Rs.)
2000-01	2013560	352730
2001-02	2090180	358630
2002-03	2551370	442320
2003-04	2933670	556840
2004-05	3753400	618340
2005-06	4564830	687530
2006-07	5717790	722950
2007-08	6558640	792280
2008-09	8407550	1285750
2009-10	8455340	1375680
2010-11	12157453	1957350
2011-12	13300195	2048230

Source: Self computed from the figures available from DGCI&S

The Gems and Jewellery sector has witnessed colossal growth in terms of production, consumption and exports during the study period as may be discerned from Table No.1. As is evident from Table 1, Gems and Jewellery exports has increased from Rs. 3,52,730 million in 2000-01 to Rs. 20,48,230 million in 2011-12 which implies a growth of around 4.8 times in terms of export volume. The sector has made brilliant strides, particularly in 2008-09 and 2010-11. The market of Indian Gems and Jewellery has grown significantly in the last decade, driven primarily by their value proposition, marketing innovations and contemporary designs. The gold jewellery segment registered an exponential increase of 30% in financial year 2011-2012. Its exports grew from US\$ 12695 million (INR 57747.67 crores) in 2010-2011 to US\$ 16517 million (INR 79430.26 crores) in 2011-2012. The exports of coloured gemstone also witnessed an increase of 9.10% in dollar terms with the segment recording growth from US\$ 314.20 million in 2010-2011 to US\$ 342.80 million in 2011-2012.

Having considered the exports of Gems and Jewellery, we now lay down the percentage of its exports to national total as well as the percentage change in its exports as compared to the previous year in Table 2.

TABLE 2: PERCENTAGE CHANGE IN EXPORT OF GEMS AND JEWELLERY DURING THE STUDY PERIOD

YEAR	EXPORT OF GEMS AND JEWELLERY AS A % TO NATIONAL TOTAL	% CHANGE OVER THE PREVIOUS YEAR
2000-01	17.5	0.3
2001-02	17.1	1.7
2002-03	17.3	23.3
2003-04	19.0	25.9
2004-05	16.4	26.1
2005-06	15.1	12.8
2006-07	12.6	5.2
2007-08	12.1	9.6
2008-09	15.3	62.3
2009-10	16.3	7.0
2010-11	16.1	42.3
2011-12	15.4	4.6

Source: Self computed from the figures available from DGC&S

As is apparent from the Table 2, export of Gems and Jewellery has maintained a steady rate averaging over 15% to the national exports during the study period. However, the growth of Gems and Jewellery export has not been a steady one. In 2000-01, the growth in its export has been as low as 0.3% as against 2008-09 when the growth has been the maximum (62.3%). In most of the years, however, Gems and Jewellery exports have maintained a high growth rate. But in spite of such a high growth, the export of Gems and Jewellery as a percentage to national total has remained more or less the same.

After considering the exports of Gems and Jewellery, we now undertake to highlight the major destinations of Indian Gems and Jewellery in consonance with Objective No.2.

MAJOR DESTINATIONS OF INDIAN GEMS AND JEWELLERY

The increase in purchasing power of the people and their swelling income levels have resulted in remarkable growth in the consumption of Gems and Jewellery worldwide. Gems and Jewellery offers multiple utilities - it is most often used for decorative purposes as well as an item of store of value for future security and safety. Moreover, the significant appreciation in the prices of Gems and Jewellery in the recent years makes them a very rewarding and lucrative option of investment and wealth accumulation.

Indian Gems and Jewellery are mainly exported to rich countries like USA, UK, Japan, Israel, Belgium and Switzerland, trading nations like Hong Kong and Singapore, and also newly industrialised countries like Thailand. UAE is also a significant consumer of Indian Gems and Jewellery. The major destinations of Indian Gems and Jewellery exports have been categorized in the form of the following Table No.3.

It is evident from the table that the OECD, OPEC and the developing countries are the major importers of our jewellery, consuming around 93.5% of our exports. These markets have a strong demand of our products and thus a bright potential to contribute significantly to our foreign exchange earnings. Hence, these markets should be further tapped and harnessed.

TABLE 3: MAJOR DESTINATIONS OF GEMS AND JEWELLERY EXPORT

MAJOR DESTINATIONS		Percentage shares	
		2010-11	2011-12
I.	OECD Countries	33.2	33.8
	EU	18.3	17.2
	North America	10.6	11.9
	US	10.1	11.3
	Asia and Oceania	2.8	3.0
	Other OECD Countries	1.5	1.6
II.	OPEC	21.3	19.0
III.	Eastern Europe	1.1	1.1
IV.	Developing Countries	38.2	40.7
	Asia	27.9	29.6
	SAARC	4.6	4.3
	Other Asian Developing Countries	23.3	25.3
	People's Republic of China	6.2	5.9
	Africa	6.3	6.7
	Latin America	4.0	4.4
V.	Others	6.2	5.4

Source: Self computed from the figures available from DGC&S

Having considered the export and export destinations of Gems and Jewellery, we now undertake to study the prospects of the sector in consonance with Objective No. 3 of this study.

PROSPECTS OF THE SECTOR

The jewellery business is reckoned as a big business globally as margins are high compared to diamonds and branding can bring higher premiums. There is huge potential of the Gems and Jewellery products of India in the global market as the Indian jewellery pieces offer differentiated styles at reasonably good prices. India was a late entrant to the global jewellery market and its industry grew only after establishment of the export processing zones in 1990s.

The sector is highly labour intensive as skilled manpower is required throughout the value chain for retailing, designing, jewellery manufacturing, raw material processing and mining. Therefore, the sector has been one of the biggest employers to the economically weaker sections of the society. The abundant supply of manpower in our country has ensured cost and skill advantages, thus making Indian jewellery more competitive in the global market.

The acceleration of this market is mainly driven by the growing spending power of the consumers and a shift in consumption basket of consumers from the basic products to more aspiring ones such as Gems & Jewellery. The future growth of Indian jewellery industry lies in finding new markets and in adding value and depth to the existing markets. Moreover, growth in the business can be induced by increased exports to the US and other rich markets, apart from a surge in domestic consumption.

With the onset of organised retail in the last decade, many new players have entered the market. The major national players are Tanishq, Gitanjali, Intergold and Rajesh Exports. Besides these there are many large regional players as well, such as B. C. Sen in East, P.P. Jewellers, Mehra Sons, Bhola Sons in North, TBZ, Chintamani in West and Ganjam, C. Krishnia Chetty & Sons in South. A few Indian jewellery houses have marked their global footprints, having entrenched themselves in the domestic market. The last few years has also seen the entry of international luxury jewellery brands in India such as Cartier and Tiffany's. The

increase in the organized retailing of Gems and Jewellery has increased the volume of trade – both in the domestic and international fronts. The further development of this market is very crucial for sustenance and growth of the industry.

However, the development of branded jewellery is still in its rudimentary stage. The hallmarking of jewellery introduced by the BIS to institutionalize global benchmarking in quality assurance will facilitate the building of a reliable 'Brand India'. To make the industry more viable and vibrant, it has to revamp itself to retain and improve their existing client base. Keeping in mind the increase in global prices of gold and gems, the jewellery makers have to create affordable jewellery which suits the wallet. This necessitates the creation of very light weight contemporary jewellery. There is another golden rule – the jewellery pieces should be unique in terms of designs, materials used, etc.

To make the most of the opportunities and overcome the challenges a set of recommendations have been formulated:

- To make the most of the opportunities and overcome the challenges a set of recommendations have been formulated:
- Assessment of the varied consumer needs.
- Invest in Retailing and Brands.
- Enhance product designs and quality standards.
- Co-operative use of technology and marketing to bring down cost of operation and investments.
- Government and apex bodies could act as facilitators in adjusting with the changing scenario both in the domestic and international fronts.
- Creation of Design Centers or Studios.
- Holding more exhibitions and fairs.
- Establishment of Gold Exchanges.
- Establishment of more Special Economic Zones and Export Processing Zones.
- Establishment of Special Notified Zones for import and trading of rough diamonds.
- Establishment of Special Fund by the RBI for refinance of borrowing to exporters.
- Reduction in Gold Import Duty which has been hiked to 6%.
- Imposition of simplified tax regime to boost diamond trade.
- Duty free import quota for cut and polished diamonds.

CONCLUSION

The Indian Gems and Jewellery industry is at a very significant point of its development. The last few decades have witnessed an incredible increase in exports, besides adoption of modern technologies. It has been increasingly accorded the status of a world trading hub for Gems and Jewellery. The volume of exports of the industry is both deepening and broadening. The exports of this sector play an important role in earning foreign exchange and providing employment to large numbers. With intense competition in market, maintaining the position which India has earned over the years and climbing up the ladder further will largely depend on the industry's cost efficiency and marketing efforts.

The Gems and Jewellery industry has indeed a bright prospect in the future. However, to fulfill the dream of being in the No. 1 position, the industry has to renovate itself in accordance to the changed lifestyles and changing expenditure patterns through refurbished products, outlooks and business practices. The socio-economic conditions are conducive for the same as the economy as well as the population of the country has realized the significance and potential of this sector in bringing about the much needed economic impetus.

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AN IMPACT OF FINANCIAL DERIVATIVES ON INDIAN STOCK MARKET

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ABSTRACT

The emergence of the market for derivative products, most notably forwards, futures and options, can be traced back to the willingness of risk-averse economic agents to guard themselves against uncertainties arising out of fluctuations in asset prices. By their very nature, the financial markets are marked very high degree of volatility. It is generally accepted that the introduction of financial derivatives that facilitate hedging is an important step in the development of stock markets. However, financial derivatives can potentially increase volatility in the underlying cash market, which might be detrimental to the development of the stock market itself. Using data from India, we examine one possible route through which derivatives trading can increase cash market volatility.

KEYWORDS

Financial derivatives, Indian stock market.

INTRODUCTION

Derivative is a product whose value is derived from the value of one or more basic variables, called bases (underlying asset, index, or reference rate), in a contractual manner. The underlying asset can be equity, forex, commodity or any other asset. In the Indian context the Securities Contracts (Regulation) Act, 1956 (SC(R) A) defines "derivative" to include- A security derived from a debt instrument, share, and loan whether secured or unsecured, risk instrument or contract for differences or any other form of security. A contract, which derives its value from the prices, or index of prices, of underlying securities

Derivatives are the securities under the SC(R) A and hence the trading of derivatives is governed by the regulatory framework under the SC(R) A. Derivatives are used by banks, securities firms, companies and investors to hedge risks, to gain access to cheaper money and to make profits Derivatives are likely to grow even at a faster rate in future they are first of all cheaper to world have met the increasing volume of products tailored to the needs of particular customers, trading in derivatives has increased even in the over the counter markets.

PARTICIPANTS IN THE DERIVATIVES MARKET

The following three broad categories of participants who trade in the derivatives market:

1. Hedgers
2. Speculators and
3. Arbitrageurs

HEDGERS

Hedgers face risk associated with the price of an asset. They use futures or options markets to reduce or eliminate this risk.

SPECULATORS

Speculators wish to bet on future movements in the price of an asset. Futures and Options contracts can give them an extra leverage; that is, they can increase both the potential gains and potential losses in a speculative venture.

ARBITRAGEURS

Arbitrageurs are in business to take advantage of a discrepancy between prices in two different markets.

FUNCTIONS OF THE DERIVATIVES MARKET

The derivatives market performs a number of economic functions. They are:

- Prices in an organized derivatives market reflect the perception of market participants about the future and lead the prices of underlying to the perceived future level.
- Derivatives, due to their inherent nature, are linked to the underlying cash markets. With the introduction of derivatives, the underlying market witnesses higher trading volumes because of participation by more players who would not otherwise participate for lack of an arrangement to transfer risk.
- Speculative trades shift to a more controlled environment of derivatives market. In the absence of an organized derivatives market, speculators trade in the underlying cash markets.
- An important incidental benefit that flows from derivatives trading is that it acts as a catalyst for new entrepreneurial activity.
- Derivatives markets help increase savings and investment in the long run. Transfer of risk enables market participants to expand their volume of activity.

TYPES OF DERIVATIVES

The most commonly used derivatives contracts are forwards, futures and options. Here various derivatives contracts that have come to be used are given briefly:

1. Forwards
2. Futures
3. Options
4. Warrants
5. LEAPS
6. Baskets
7. Swaps
8. Swaptions

1. FORWARDS

A forward contract is customized contract between two entities, where settlement takes place on a specific date in the future at today's pre-agreed price

2. FUTURES

A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. Futures contracts are special types of forward contracts in the sense that the former are standardized exchange-traded contracts.

3. OPTIONS

Options are of two types – calls and puts

- Calls give the buyer the right but not the obligation to buy a given quantity of the underlying asset, at a given price on or before a given future date.
- Puts give the buyer the right, but not the obligation to sell a given quantity of the underlying asset at a given price on or before a given date.

4. WARRANTS

Options generally have two lives of up to one year; the majority of options traded on options exchanges having a minimum maturity of nine months. Longer-dated options are called warrants and are generally traded over-the-counter.

5. LEAPS

The acronym LEAPS means Long-term Equity Anticipation Securities. These are options having a maturity of up to three years.

6. BASKETS

Basket options are options on portfolios of underlying assets. The underlying asset is usually a moving average of a basket of assets. Equity index options are a form of basket options.

7. SWAPS

Swaps are private agreements between two parties to exchange cash flows in the future according to a prearranged formula. They can be regarded as portfolios of forward contracts. The two commonly used swaps are:

- **Interest rate swaps:** These entail swapping only the interest related cash flows between the parties in the same currency.
- **Currency swaps:** These entail swapping both principal and interest between the parties, with the cash flows in one direction being in a different currency than those in the opposite direction.

8. SWAPTIONS

Swaptions are options to buy or sell that will become operative at the expiry of the options. Thus a swaption is an option on a forward swap. Rather than have calls and puts, the swaptions markets has receiver swaptions and payer swaptions. A receiver swaption is an option to receive fixed and pay floating. A payer swaption is an option to pay fixed and receive floating.

OBJECTIVES OF STUDY

1. To study the role of derivatives in Indian financial market.
2. To identify investor objective constraints and performance, that helps to formulate the investment policy.
3. To find out transfer of risk enables market participants to expand their cash market volatility.

NEED OF THE STUDY

✚ Different investment avenues are available investors. Stock market also offers good investment opportunities to the investor alike all investments, they also carry certain risks.

✚ The investor should compare the risk and expected yields after adjustment off tax on various instruments while taking investment decision the investor may seek advice from expertly and consultancy include stock brokers and analysts while making investment decisions.

The objective here is to make the investor aware of the functioning of the derivatives.

✚ Derivatives act as a risk hedging tool for the investors. The objective is to help the investor in selecting the appropriate derivatives instrument to attain maximum risk and to construct the portfolio in such a manner to meet the investor should decide how best to reach the goals from the securities available.

DERIVATIVES INSTRUMENTS IN INDIA

The first derivative product to be introduced in the Indian securities market is going to be "INDEX FUTURES". In the world, first index futures were traded in U.S. on Kansas City Board of Trade (KCBT) on Value Line Arithmetic Index (VLA) in 1982.

Organized exchanges began trading options on equities in 1973, whereas exchange traded debt options did not appear until 1982, on the other hand fixed income futures began trading in 1975, but equity related futures did not begin until 1982.

CONTRACT PERIODS

At any point of time there will always be available near three months contract periods. For e.g. in the month of June 2012 one can enter into either June Futures contract or July Futures contract or August Futures Contract. The last Thursday of the month specified in the contract shall be the final settlement date for that contract at both NSE as well BSE. Thus June 29, July 27 and August 31 shall be the last trading day or the final settlement date for June Futures contract, July Futures Contract and August Futures Contract respectively.

When one futures contract gets expired, a new futures contract will get introduced automatically. For instance, on 30th June, June futures contract becomes invalidated and a September Futures Contract gets activated.

CONDITIONS TO BE FOLLOWED WHILE TRADING DERIVATIVES

- Trading should take place through an on-line screen based trading system.
- An independent clearing corporation should do the clearing of the derivative market.
- The exchange must have an online surveillance capability, which monitors positions, price and volumes in real time so as to deter market manipulation price and position limits should be used for improving market quality.
- Information about trades quantities, and quotes should be disseminated by the exchange in the real time over at least two information-vending networks, which are accessible to investors in the country.
- The exchange should have at least 50 members to start derivatives trading.
- The derivatives trading should be done in a separate segment with separate membership; That is, all members of the cash market would not automatically become members of the derivatives market.
- The derivatives market should have a separate governing council which should not have representation of trading by clearing members beyond whatever percentage SEBI may prescribe after reviewing the working of the present governance system of exchanges.
- The chairman of the governing council of the derivative division / exchange should be a member of the governing council. If the chairman is broker / dealer, then he should not carry on any broking or dealing on any exchange during his tenure.
- No trading/clearing member should be allowed simultaneously to be on the governing council both derivatives market and cash market.

LITERATURE REVIEW

Daniel Heller and Nicholas Vause(2012) points out that derivatives must be cleared with central counterparties (CCPs). In this paper, we estimate the amount of collateral that CCPs should demand to clear safely all interest rate swap and credit default swap positions of the major derivatives dealers. Our estimates are based on potential losses on a set of hypothetical dealer portfolios that replicate several aspects of the way that derivatives positions are distributed within and across dealer portfolios in practice. Our results suggest that major dealers already have sufficient unencumbered assets to meet initial margin requirements, but that some of them may need to increase their cash holdings to meet variation margin calls. We also find that default funds worth only a small fraction of dealers' equity appear sufficient to protect CCPs against almost all possible losses that could arise from the default of one or more dealers, especially if initial margin requirements take into account the tail risks and time variation in risk of cleared portfolios. Finally, we find that concentrating clearing of OTC derivatives in a single CCP could economise on collateral requirements without undermining the robustness of central clearing.

Afsal and Mallikarjunappa (2007) attempted to study the volatility implications of the introduction of futures for the stock market in India by using market returns of nine individual stocks for the period October 1995 through June 2006. The study finds persistence and clustering of volatility in general and little or no impact of the futures trading on the market volatility in majority of the cases. But the volatility is found mean reverting in all the stocks examined.

Owing to the aforementioned deliberations, it can be concluded that the impact of introduction of equity derivatives trading has been different in different markets with respect to different span of time. And, it is difficult to arrive at a consensus with respect to the impact of equity derivatives introduction on the volatility. Particularly in Indian context, different studies show different conclusions. Further, the two studies have been done by taking a very small sample and do not test for asymmetric response.

Samanta and Samanta (2007) analyzed the impact of introducing index futures and stock future on the volatility of underlying spot market in India. He considered S&P CNX Nifty, Nifty Junior and S&P 500 and used GARCH model for the study. He found that there is no significant change in the volatility of spot market, but the structural changes in the volatility to some extent. He also found mixed result in spot market volatility in case of 10 individual stocks.

Vipul (2005) points out that data on 14 equity shares to examine expiration day effects in the Indian stock market. The underlying stocks are selected in a manner that reflected a range of different liquidities for the associated derivative products; the ratio of turnover in the derivatives market to turnover in the underlying cash market ranged from 55 percent to 344 percent. Thereafter, the price, volatility and volume of the underlying shares in the cash segment of the exchange 1 day prior to expiration (of derivatives contracts), on the day of expiration and 1 day after expiration are compared with the corresponding values of these variables 1 week and 2 weeks prior to the expiration days, using the Wilcoxon matched-pairs signed-rank test. The study concludes that prices in the cash market are somewhat depressed a day before the expiration of the derivatives contracts, and they strengthen significantly the day after the expiration. However, for most of the shares, this does not tantamount to price reversals. Finally, volumes are higher on expiration days than on the benchmark non-expiration days.

Calado, Garcia and Pereira (2005) used data for eight derivative products to study the volatility effect of the initial exchange listing of options and futures on the Portuguese capital market. They did not find significant differences in the unadjusted and adjusted variance and beta for the underlying stocks after the listing of derivatives. However, some of the underlying stocks taken individually have experienced significant increases or decreases in variance after derivatives listing. Finally, they concluded that the introduction of a derivatives market in the Portuguese case has not had the average stabilisation effect on risk as detected in other markets.

Taylor (2004) the study describe determinants of trading intensity in futures markets. In particular, the time between adjacent transactions on the FTSE 100 index futures market was modelled using various augmentations of the basic autoregressive conditional duration (ACD). As predicted by various market microstructure theories, he found that the bid-ask spread and transaction volume have a significant impact on subsequent trading intensity. However, there was evidence that a large (small) difference between the market price and the theoretical price of the futures contract, which is known as pricing error, leads to high (low) levels of trading intensity in the subsequent period.

Poshakwale, Sunil (2002) examined the random walk hypothesis in the emerging Indian stock market by testing for the nonlinear dependence using a large disaggregated daily data from the Indian stock market. The sample used was 38 actively traded stocks in the BSE National Index. He found that the daily returns from the Indian market do not conform to a random walk. Daily returns from most individual stocks and the equally weighted portfolio exhibit significant non-linear dependence. This is largely consistent with previous research that has shown evidence of non-linear dependence in returns from the stock market indexes and individual stocks in the US and UK.

This study seeks to examine the volatility of the spot market due to the derivatives market. Whether the volatility of the spot market has increased, decreased or remained the same. If increased then, what extent it is due to futures market. We use Autoregressive framework to model returns volatility. To measure volatility in the markets, the VIX (Volatility Index) computed by the National Stock Exchange is used. To eliminate the effect of factors other than stock index futures (i.e., the macroeconomic factors) determining the changes in volatility in the post derivative period, the model is used for estimation after adjusting the stock return equation for market factors. The studies in the Indian context have evaluated the trends in NSE and noton the Stock Exchange, Mumbai (BSE) for the reason that the turnover in NSE captures an overwhelmingly large part of the derivatives market. We use Nifty Junior as surrogate indices to capture and study the market wide factors contributing to the changes in spot market volatility. This gives a better idea as to whether the introduction of index futures in itself caused a decline in the volatility of spot market or the overall market wide volatility has decreased, and thus, causing a decrease in volatility of indices on which derivative products have been introduced. The volumes on NIFTY also has a large impact on the volatility, thus in the model to measure volatility volumes are also considered as a factor. We seek to compare this volatility with the volatility prevailing in the market before the index futures (i.e. Nifty futures) and check if it is statistically significant.

DATA METHODOLOGY

METHOD OF DATA COLLECTION

PRIMARY SOURCES

Primary data is the first hand information that a researcher gets from various sources like respondents, analogous case situations and research experiments. Primary data is the data that is generated by the researcher for the specific purpose of research situation at hand.

For this project the primary data will be collected from the personnel. This data can also be obtained through a questionnaire, based upon which some statistical techniques are applied

SECONDARY SOURCES

It is the data which has already been collected by some one or an organization for some other purpose or research study. The data for study has been collected from various sources:

- Books
- Journals
- Magazines
- Internet sources.

LIMITATIONS OF STUDY

LIMITED RESOURCES

Limited resources are available to collect the information about the commodity trading.

VOLATILITY

Share market is so much volatile and it is difficult to forecast anything about it whether you trade through online or offline

ASPECTS COVERAGE

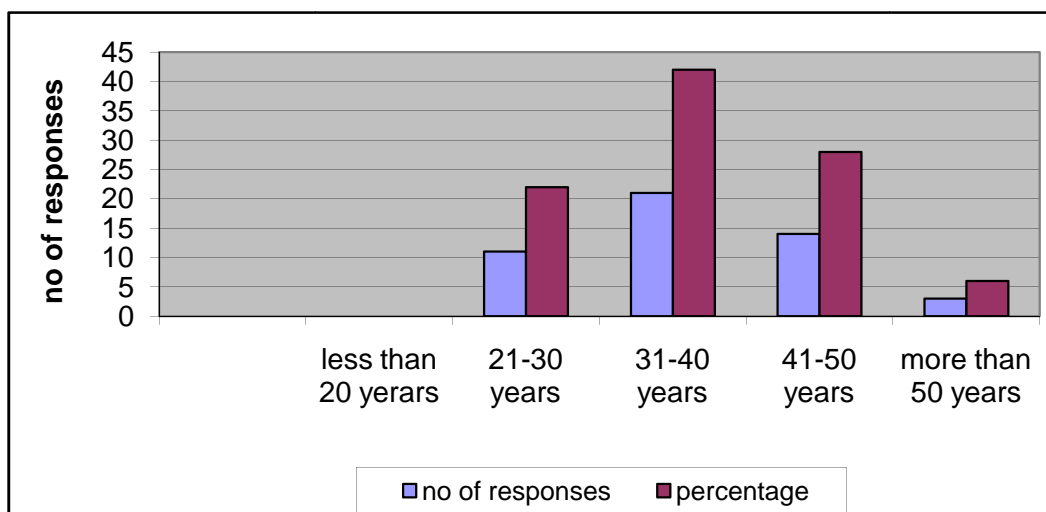
Some of the aspects may not be covered in my study

1. AGE GROUP

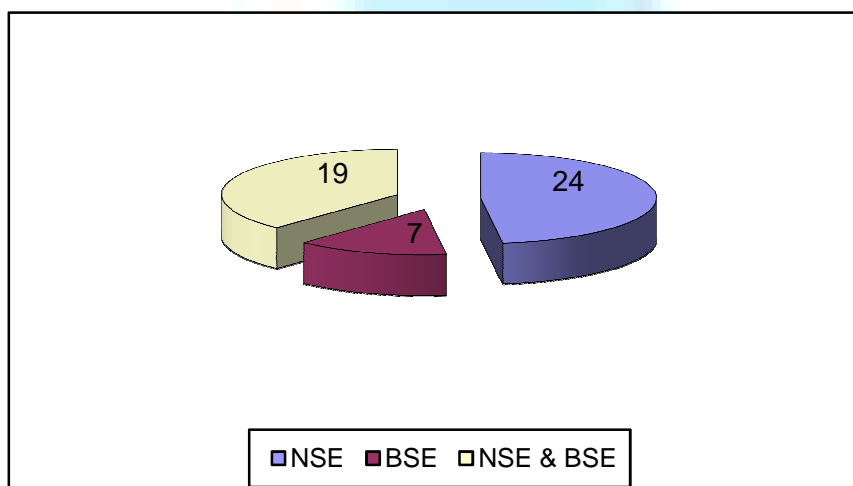
AGE Particulars	LESSTHEN20 YEARS	21-30	31-40	41-50	50-Above	TOTAL
No. Of responses	NIL	11	22	14	3	50
Percentage	NIL	22%	44%	28%	6%	100%

INTERPRETATION

Age of the traders play an important role in their trading decision and outlook. Most of the traders lie in the middle-age between 31-40 and 41-50, which is 44% and 28% respectively. The market improves if the awareness is created well among the age group 21-30, the market may improve due to rapid speculation of that age grouped people.

**2. EXCHANGE**

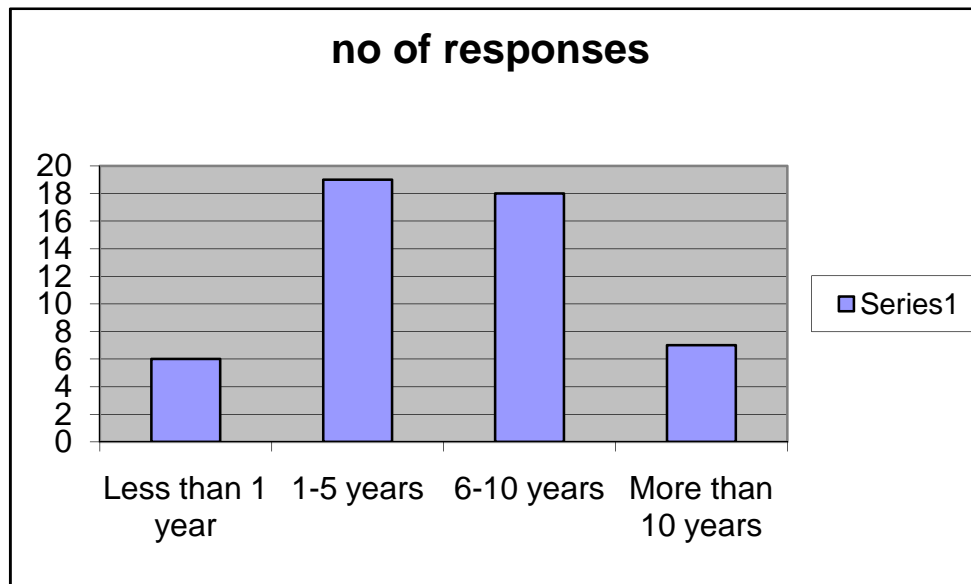
Particulars	N0. Of Responses	Percentage
NSE	24	48%
BSE	7	14%
NSE & BSE	19	38%
Total	50	100%

**INTERPRETATION**

The percentages of investors investing in NSE is 48% while that of BSE is only 14%, which shows the growing popularity of the NSE since its inception and its advantage of being the national stock exchange. The popularity and fame of the stock exchanges play a vital role. Here most of the investors are towards NSE than BSE. The reason may be all the derivative strategies are followed by the organization are NSE's.

3. EXPERIENCE OF INVESTORS

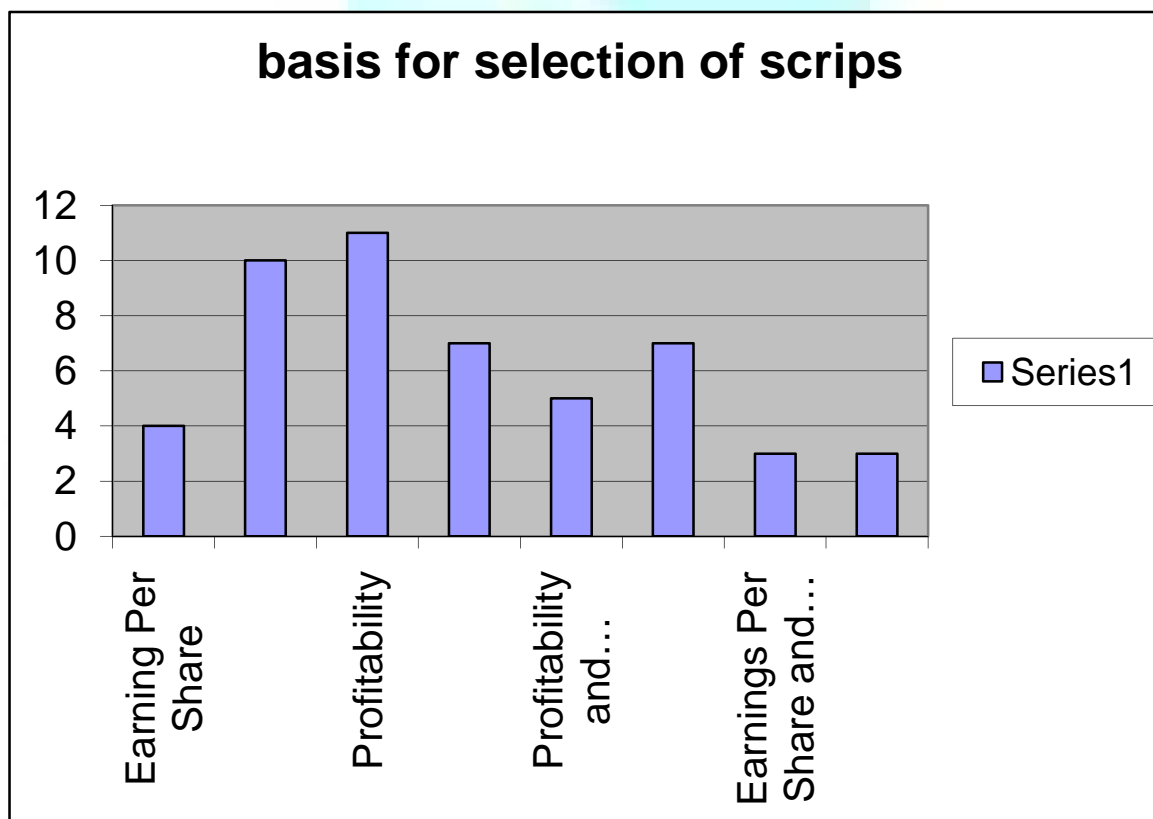
Particulars	No. Of responses	Percentage
Less than 1 year	6	12%
1-5 years	19	38%
6-10 years	18	36%
More than 10 years	7	14%
Total	50	100%

**INTERPRETATION**

The study reveals the only 12 % of its clients have joined in the past 1 year. Hence the marketing activities of the company have to be more aggressive to widen its clients in the wake of new brokers and sub brokers coming up in the city. Aggressive publicity has to be done in order to stand against the new coming brokers.

4. BASIS FOR SELECTION OF SCRIPS

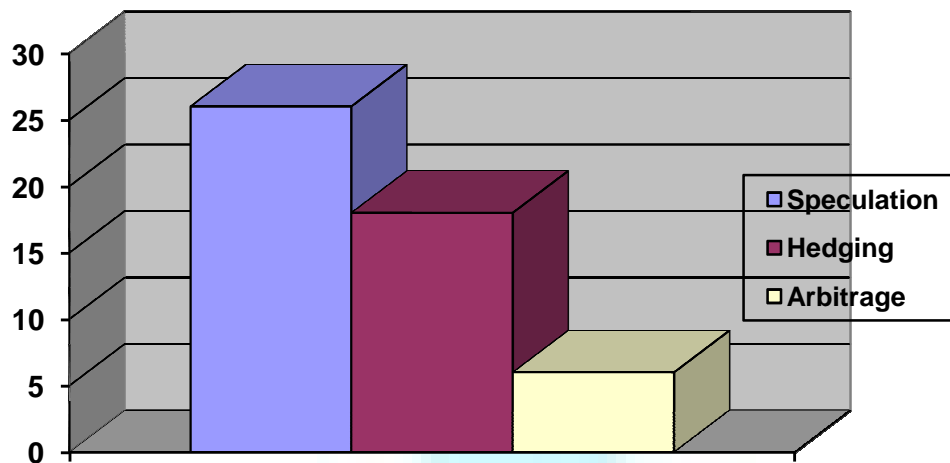
Particulars	No. Of responses	Percentage
Earning Per Share	4	8%
Company Image	10	20%
Profitability	11	22%
All Three	7	14%
Profitability and Company Image	5	10%
Earnings Per Share And Image	7	14%
Earnings Per Share and Profitability	3	6%
P/E Ratio	3	6%
Total	50	100%

**INTERPRETATION**

The study reveals that investors use varied parameters to make their investment decisions, profitability and image of the company are the two prominent parameters used by most investors. The investors also use a combination of more than one parameter. Mostly one can rely on company image along with profitability but in order to be updated with the latest information one has to follow the media, which gives the exact information time to time.

5. PURPOSE OF USE

Particulars	No. Of responses	Percentages
Speculation	26	52%
Hedging	18	36%
Arbitrage	6	12%
Total	50	100%

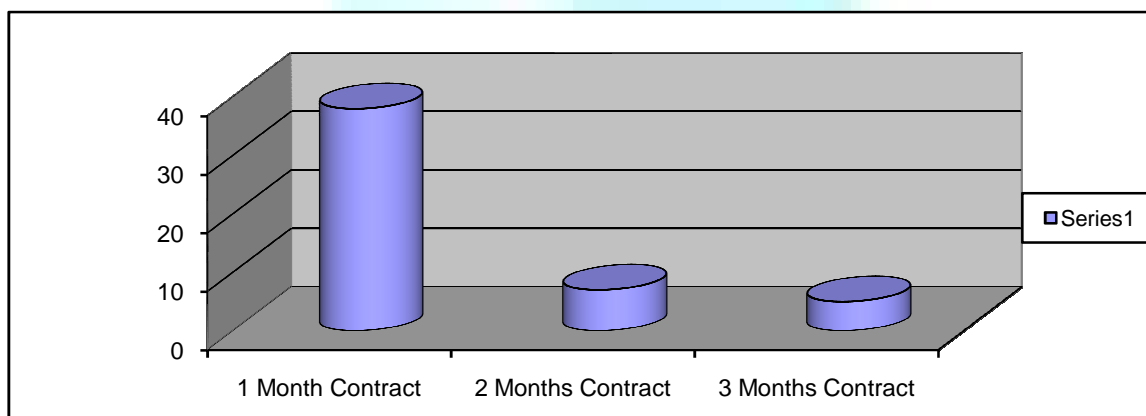


INTERPRETATION

Derivatives are primarily used for speculation, hedging and arbitrage. The most popular use of derivatives is speculation with more than 52% of the traders speculating in the markets using futures and options. While only 36% of the traders used derivatives for hedging their risk of cash market and 12% traders using it for arbitrage to profit from the different market segments. Due to lack of knowledge in arbitrage people are not able to participate actively. Though the hedging is bit better, that also as very little people who does hedging

6. CATEGORY OF CONTRACT

Particulars	No. Of responses	Percentages
1 Month Contract	38	76%
2 Months Contract	7	14%
3 Months Contract	5	10%
Total	50	100%

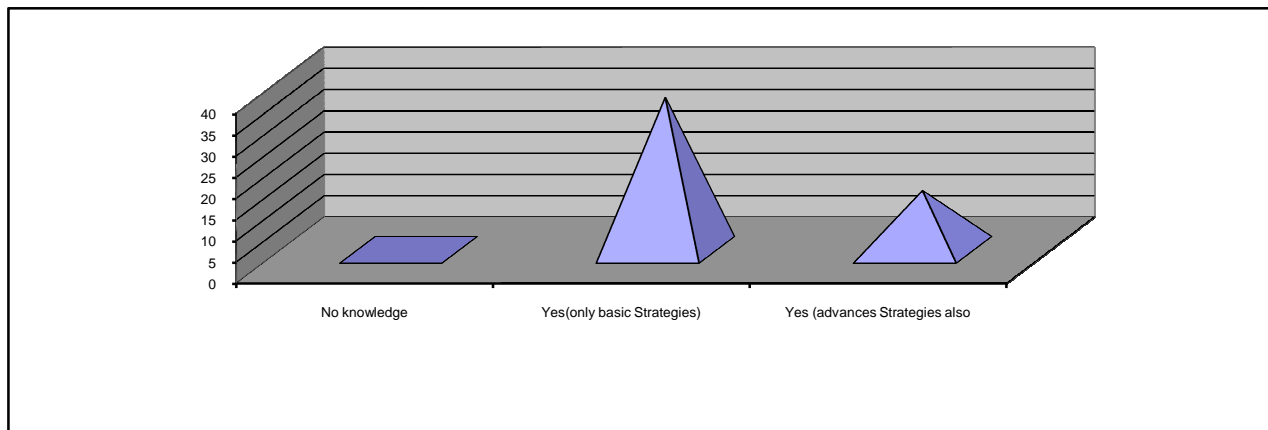


INTERPRETATION

Trading in futures and options is done in contracts with three different expiry dates. Out of which trading in one-month contracts are more popular because of the relatively predictable fluctuations of the near future. It is very difficult to speculate on prices two months and three months later, which accounts for the low percentages of trades of 14% and 10% in these contracts. One-month contracts works out well here as everything closes in one will know their status in that particular area. So, one-month contracts are in well used. Two month and Three month are also good but risk is involved which most of the clients do not want to face.

7. KNOWLEDGE OF STRATEGIES

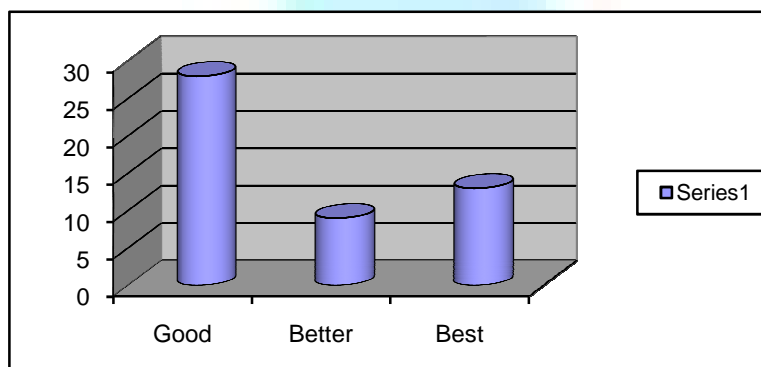
Particulars	No. Of responses	Percentage
No knowledge	0	0%
Yes (only basic Strategies)	36	72%
Yes (advances StrategiesAlso)	14	28%
Total	50	100%

**INTERPRETATION**

Knowledge of trading strategies of futures and options is very important for profitable trading in this segment. 72% people have knowledge on only the basic strategies, which are easy to understand, and implement of which 28% have the knowledge of the more complex and advanced trading strategies. With the basic knowledge people are speculating well, if they are given a better training classes by Share khan for the advanced strategies they will go in deep further strategies.

8. INVESTOR RATING

Particulars	No. Of responses	Percentage
Good	28	56%
Better	9	18%
Best	13	26%
Total	50	100%

**INTERPRETATION**

People are Very happy with the performance of Share khan. They say it is good at most of the times and best at times. If follows some new strategies like maintenance of the people which means the operator should have not more 4-5 people so that everyone can involve easily in speculation. And some new counters where the clients can take the help in the areas they are uneducated. New counters to explain and understand the strategies etc.

CONCLUSION

Derivatives markets provide a mechanism for those who buy and sell the actual asset to hedge themselves against unfavorable price movement and spreads risk across a large number of investors, the risk is transferred away from those hedging spot position to professional speculators who are willing and able to bear it. The availability of risk transference afforded by the derivatives market reduces the spot price volatility because it eliminates the need to incorporate risk premium in the spot market transaction to compensate the risk of price fluctuations. Finally, derivatives trading might attract more traders to spot market and thereby making it more liquid and less volatile. However, the effect of equity derivatives trading can be further refined with the use of participant-wise high frequency data on stock market.

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NEW HORIZON IN MANAGEMENT EDUCATION: AN INVESTIGATION INTO THE ROARING NEED OF PHILANTHROPY MANAGEMENT COURSES IN INDIAN MANAGEMENT INSTITUTES

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ABSTRACT

Although from 1900s onwards, India saw big industrialists and well to do households, leading the way in reinventing philanthropy in the modern age. They have set up many kinds of institutions; they've supported many kinds of social development movements across India. Present study taking into consideration opinion of management academicians, investigates the need of philanthropy and acceptability of philanthropy management education in the developing economy. The study also tried to find out the needy areas in which philanthropy is badly required. With the help of questionnaire and telephonic interviews conducted all over India the researcher also listed proposed contents of the said course.

KEYWORDS

curriculum, per capita income, Philanthropy.

INTRODUCTION



Philanthropy has a very long tradition in India, and the concept of *Dana* works across religions and cultures in India. People in India donate not to bring social change but to conceal sins committed by them. There is a great trend of offering cash and kind to temples in this country instead of donating to the needy people.

Rohini Nilekani^[8] (A great philanthropist) once said "in any society where such creation of wealth is allowed, it is obviously because that society believes that that wealth in the hands of people, rather than taxed by governments, is actually going to serve society *at least* as well as if it were taxed and in the hands of government". People distrust government for utilizing their money for public good. At the same time it is also equally true that there is a dearth of proper knowledge about the concept and importance of philanthropy.

THE NEED AND IMPORTANCE OF THE STUDY

Poverty is widespread in developing countries and India is no exception to it, with the nation estimated to have a third of the world's poor. According to a 2005 World Bank^[8] estimate, 41.6% of the total Indian population falls below the international poverty line of US\$ 1.25 a day (PPP, in nominal terms ₹21.6 a day in urban areas and ₹14.3 in rural areas). A recent report by the Oxford Poverty and Human Development Initiative states that 8 Indian states have more poor than 26 poorest African nations combined which totals to more than 410 million poor in the poorest African countries. According to a new UN Millennium Development Goals Report, as many as 320 million people in India and China are expected to come out of extreme poverty in the next four years, while India's poverty rate is projected to drop to 22% in 2015. The report also indicates that in Southern Asia, however, only India, where the poverty rate is projected to fall from 51% in 1990 to about 22% in 2015, is on track to cut poverty in half by the 2015 target date.

The 2011 Global Hunger Index (GHI) Report ranked India 45th, amongst leading countries with hunger situation. It also places India amongst the three countries where the GHI between 1996 and 2011 went up from 22.9 to 23.7, while 78 out of the 81 developing countries studied, including Pakistan, Nepal, Bangladesh, Vietnam, Kenya, Nigeria, Myanmar, Uganda, Zimbabwe and Malawi, succeeded in improving hunger condition.

The Arjun Sengupta Report (from National Commission for Enterprises in the Unorganized Sector) states that 77% of Indians live on less than ₹20 a day (about \$0.50 per day). The N.C. Saxena Committee report states that 50% of Indians live below the poverty line.

A study by the Oxford Poverty and Human Development Initiative using a Multi-dimensional Poverty Index (MPI) found that there were 645 million poor living under the MPI in India, 421 million of whom are concentrated in eight North Indian and East Indian states of Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal. This number is higher than the 410 million poor living in the 26 poorest African nations. The states are listed below in increasing order of poverty based on the Multi-dimensional Poverty Index.

DISTRIBUTION OF WEALTH IN INDIAN ECONOMY

As per the data revealed by the planning commission^[5] implicit price indices (Fisher Price Index) have been computed from the 66th Round NSS (2009-10) data on Household Consumer Expenditure Survey. There has been no uniform measure of poverty in India. The Planning Commission of India has accepted the Tendulkar Committee report which says that 29.8% of people in India live below the poverty line.

As per Tendulkar Committee recommendations, the state wise urban poverty lines of 2004-05 are updated for 2009-10 based on price rise during this period using Fisher price indices. The state wise rural-urban price differential in 2009-10 has been applied on state specific urban poverty lines to get state specific rural poverty lines.

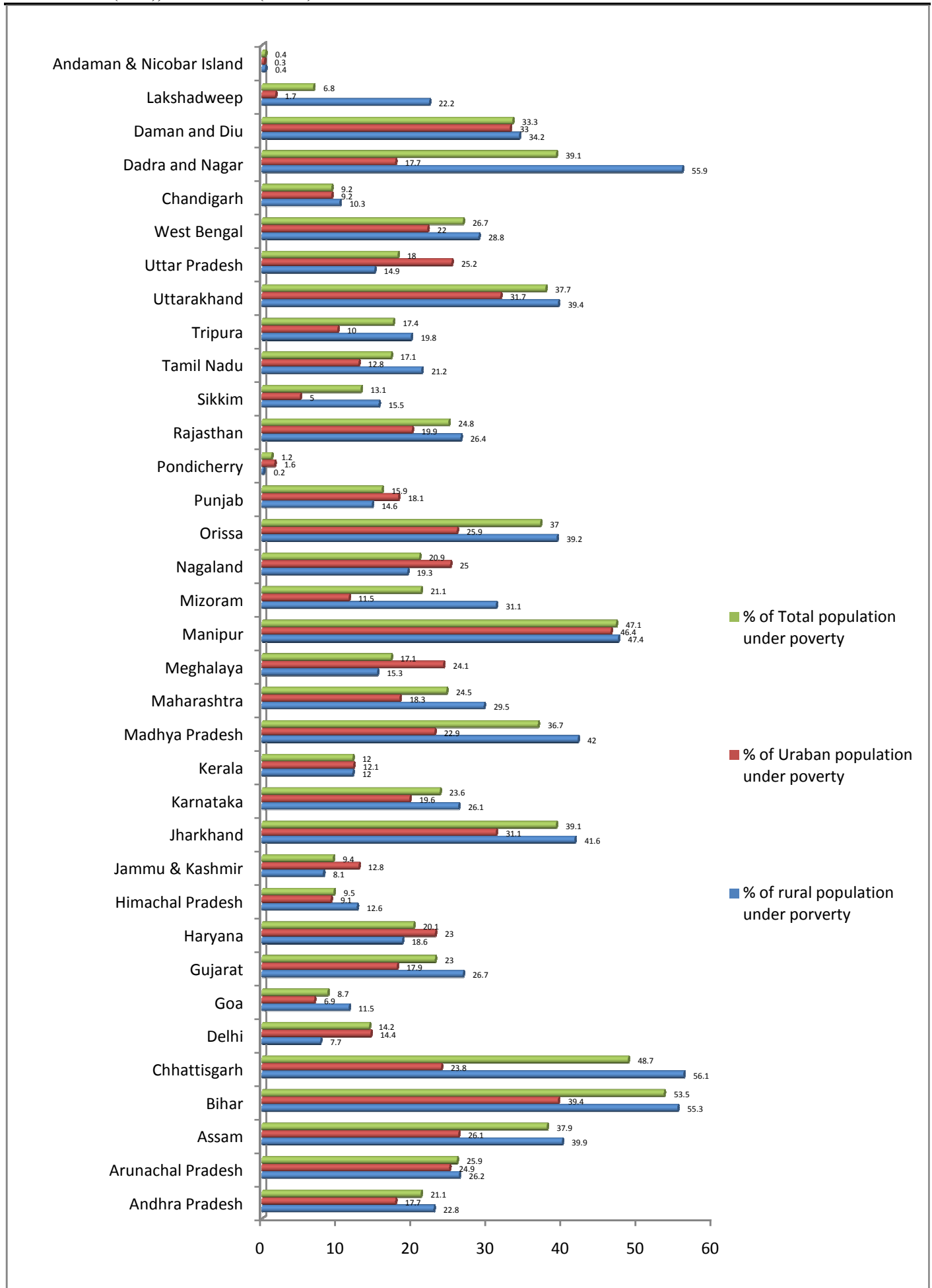
NOTES

1. Population as on 1st March 2010 has been used for estimating number of persons below poverty line. (Interpolated between 2001 and 2011 population census)
2. Poverty line of Tamil Nadu is used for Andaman and Nicobar Island.
3. Urban Poverty Line of Punjab is used for both rural and urban areas of Chandigarh.
4. Poverty Line of Maharashtra is used for Dadra & Nagar Haveli
5. Poverty line of Goa is used for Daman & Diu.
6. Poverty Line of Kerala is used for Lakshadweep.

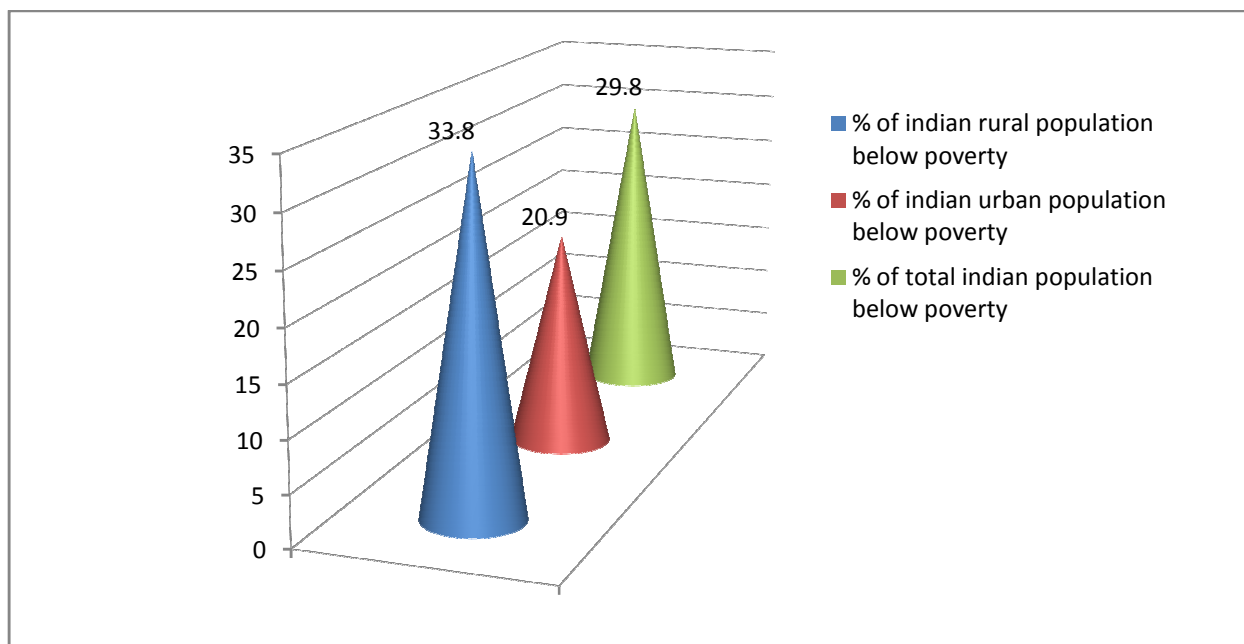
(Tendulkar Methodology)

NUMBER AND PERCENTAGE OF POPULATION BELOW POVERTY LINE BY STATES - 2009-10

S. No.	States	RURAL		URBAN		TOTAL	
		% age of Persons	No. of Persons (lakhs)	% age of Persons	No. of Persons (lakhs)	% age of Persons	No. of Persons (lakhs)
1.	Andhra Pradesh	22.8	24.9	17.7	48.7	21.1	73.6
2.	Arunachal Pradesh	26.2	2.7	24.9	0.8	25.9	176.6
3.	Assam	39.9	105.3	26.1	11.2	37.9	116.4
4.	Bihar	55.3	498.7	39.4	44.8	53.5	543.5
5.	Chhattisgarh	56.1	108.3	23.8	13.6	48.7	121.9
6.	Delhi	7.7	0.3	14.4	22.9	14.2	23.3
7.	Goa	11.5	0.6	6.9	0.6	8.7	1.3
8.	Gujarat	26.7	91.6	17.9	44.6	23.0	136.2
9.	Haryana	18.6	30.4	23.0	19.6	20.1	50.0
10.	Himachal Pradesh	12.6	5.6	9.1	0.9	9.5	6.4
11.	Jammu & Kashmir	8.1	7.3	12.8	4.2	9.4	11.5
12.	Jharkhand	41.6	102.2	31.1	24.0	39.1	126.2
13.	Karnataka	26.1	97.4	19.6	44.9	23.6	142.3
14.	Kerala	12.0	21.6	12.1	18.0	12.0	39.6
15.	Madhya Pradesh	42.0	216.9	22.9	44.9	36.7	261.8
16.	Maharashtra	29.5	179.8	18.3	90.9	24.5	270.8
17.	Meghalaya	15.3	3.5	24.1	1.4	17.1	4.9
18.	Manipur	47.4	8.8	46.4	3.7	47.1	12.5
19.	Mizoram	31.1	1.6	11.5	0.6	21.1	2.3
20.	Nagaland	19.3	2.8	25.0	1.4	20.9	4.1
21.	Orissa	39.2	135.5	25.9	17.7	37.0	153.
22.	Punjab	14.6	25.1	18.1	18.4	15.9	43.5
23.	Pondicherry	0.2	0.0	1.6	0.1	1.2	0.1
24.	Rajasthan	26.4	133.8	19.9	33.2	24.8	167.0
25.	Sikkim	15.5	0.7	5.0	0.1	13.1	0.8
26.	Tamil Nadu	21.2	78.3	12.8	43.5	17.1	121.8
27.	Tripura	19.8	5.4	10.0	0.9	17.4	6.3
28.	Uttarakhand	39.4	600.6	31.7	137.3	37.7	737.9
29.	Uttar Pradesh	14.9	10.3	25.2	7.5	18.0	17.9
30.	West Bengal	28.8	177.8	22.0	62.5	26.7	240.3
31.	Chandigarh	10.3	0.03	9.2	0.92	9.2	0.95
32.	Dadra and Nagar	55.9	1.02	17.7	0.25	39.1	1.27
33.	Daman and Diu	34.2	0.22	33.0	0.54	33.3	0.75
34.	Lakshadweep	22.2	0.03	1.7	0.01	6.8	0.04
35.	Andaman & Nicobar Island	0.4	0.01	0.3	0.004	0.4	0.01
	All India	33.8	2782.1	20.9	764.7	29.8	3546.8



Percentage of Population below poverty line by states - 2009-10



Percentage of total Population below poverty (all India) - 2009-10

More than one third of Indian rural population is poor. Nearly 30% of India is inhabited by poor. This sad state of economy demands balancing of income distribution which is not an easy task to achieve in shorter period of time.

On one hand where poor India is struggling for its two time meals there are billionaires in India's industrial houses. Here is the list of billionaires released by Business Today^[2]

TOP 10: RICHEST PEOPLE IN INDIA

S. No.	Name of the Person	Net Worth (2012)
1.	Mukesh Ambani	\$ 22.6 billion during this fiscal year
2.	Lakshmi Niwas Mittal	\$19.2 billion
3.	Azim Premji	\$13 billion
4.	Vijay Mallya	more than \$10 billion
5.	Savitri Jindal	\$10.9 billion
6.	Shashi and Ravi Ruia	\$10.2 billion
7.	Sunil Mittal	more than \$8.8 billion
8.	Kumar Manglam Birla	about \$ 7.7 Billion
9.	Anil Ambani	\$7.8 billion
10.	Adi/Parmeshwari Godrej	more than \$5 billion

So many billionaires in India sounds like the gala of developing India. Claiming the 4th rank in the world in the number of billionaires after the US, Russia and Germany and being ahead of China, UK, Japan and France shows the Indian is taking steps heading towards the big shoes to become one of the world's superpowers. Sunil Mittal, Mukesh and Anil Ambani, Azim Premji, K. Birla and many more adding up the glory to India's present. Huge inflow of FDI, ever-increasing market competition, Government support for entrepreneur development, mall culture, increasing tourism are all showing the bright side of the coin. But what about the bleak side? India is a huge market, full of potential for growth on which many giant countries have an eye. Countries want to work hand in hand with India; they are investing heavily in metros and building their market which is further widening the income gap among Indians. Such a situation will only worsen the condition in times to come.

India, which is suffering from Problems like malnutrition, infant mortality, drinking water scarcity illiteracy and many more, neo liberal policies which favor the rich are the prime culprit for such economic division. To a great extent IT revolution has also accounted for the wealth division. Failure to deliver social justice and development to India's poorest regions is also a cause. It's not that income level of lower and middle class is not rising. But the concern is that the richer are becoming rich at a higher pace.

The wealth of the top billionaires exceeds the income of 800 million poor, rural population and slum workers. On one hand when the ordinary man is striving for his bread and butter for one time a day, the rich are enjoying the lavish lifestyle of mall culture. Looking at two far distant sides of rich and poor rather very poor India, philanthropy seems to be a short cut to bridge the gap between the two so as to smoothen the growth story of the great India.

Further ethically speaking is it not the responsibility of richer to share their wealth with those who are needy (which is very integral part of our culture). Were the culture of donating to poor has taken a pace in many developed countries; it is still at the commencement stage in India. Last spring, Bain & Co., released their report titled "State of Philanthropy in India" and estimated that philanthropic donations amount to 0.6% of India's GDP. While this is better than Brazil (0.3%) and China (0.1%), it is low compared to the U.S. (2.2%) and U.K. (1.3%). The report also stated that individual and corporate donations in India make up only 10% of charitable giving, while in the U.S., they are responsible for 75%. Not only this, the western world has already started properly designed university courses in the area to boost philanthropy.

UNIVERSITIES OFFERING COURSES IN PHILANTHROPY: Business week^[7] reports that there are approximately 100 course offerings in philanthropy in U.S. schools. Several top schools such as Columbia Business School, Kellogg School of Management and Stanford are teaching dedicated subject courses & programs on philanthropy. In India only Indira Gandhi National Open University (IGNOU) is offering course in MSW, Philanthropy (as per researcher's information)

RESEARCH METHODOLOGY

The study was based on the primary data collected through telephonic interview of people working in deferential positions in management institutes and a small questionnaire developed for the purpose.

NO. OF INTERVIEWS CONDUCTED: 12

SELECTING INTERVIEWEES

To select interviewees, questionnaire was mailed to highly qualified professors and Directors of Management institutes in cities known for management education. We then reached out to a few high-level individual involved in those efforts to get insight into the subject and its requirement in management education. A few renowned names are:

Dr. J. P. Sahu

Ex. Director: Institute of Professional Education and Research Bhopal

Dr. Asha Nagendra

Prof and Ex Director: Symbiosis school of management Noida Campus

Dr. L. K. Tripathy

Director: Sai Balaji International Institute of Management, Pune

He is also running an charitable school and an NGO in Orissa

Dr. Mamta Mohapatra

Professor: International Management Institute Delhi

ANALYZING INTERVIEW RESPONSES

After each interview, the notes were reviewed for responses that addressed the research questions. Notes were organized in an Excel spreadsheet broken into, interview type, allowing us to identify commonalities among opinion of different management stalwarts and overall trends. The findings of the study were based on the responses given.

RESEARCH QUESTIONS

To meet the objective of understanding the need and acceptability of courses in Philanthropy in the field of management education following questions were framed.

1. To what extent, do you approve the need of adding up a recognized course of philanthropy in the field of management?
2. Will such a course can help in improving the present state of Indian Economy, if yes how, if no why not?
3. What should be the priority sectors for philanthropy keeping in mind the Indian scenario?
4. What type of university pattern will be feasible for such course?

To answer the research questions, the researcher conducted telephonic interviews with 12 management professionals at professor level or above.

RESULTS AND DISCUSSION

In the west many universities are running such courses successfully for years, and is resulted in emergence of new philanthropists. There is no harm in doing the experiment at least. In India only IGNOU is offering a course but it also does not have many buyers. Reasons for limited interest in the field may ranges from little awareness of the field to taking the area as unimportant.

Moreover parting the hard earn money in itself is very painful. Thus funds are utilized in the right direction for the betterment of the society at large could be a source of great satisfaction and gratitude to many.

FINDINGS

S. No.	Question	Findings
1	To what extent, you approve the need of adding up a recognized course of philanthropy in the field of management?	<ul style="list-style-type: none"> Looking at the wide gap of income disparities such a course can change the entire picture, If not at least people will know about the concept. The purpose should not be to sell the course but to change the mindset of people. There is no such need existing, those who have wealth knows very well how to manage it, further many wealth management organizations are there to help them out.
2	Will such course can help in improving the present state of Indian Economy, if yes how, if no why not?	<ul style="list-style-type: none"> It will surely augment the Indian rich culture of daan (donation) to the needy ones. When we have courses in insurance, banking, agriculture promote these sectors a course in philanthropy if strategically designed can do wonders by showing the correct path to the flow of income and to keep a proper vigil on the utilization part of such donations. It's not going to change anything, thanks to our education system which only work for money, not for a social cause
3	. What should be the priority sectors for philanthropy keeping in mind the Indian scenario?	<ul style="list-style-type: none"> Priorities should be given to basic needs of the poor like housing sanitation clean drinking water A few respondents supported the environment to be saved by investing in this direction Providing efficient and affordable medical services to the needy poors.
4	What type of university pattern will be feasible for such course?	<ul style="list-style-type: none"> A two year program of current pattern of semester system could be a good idea, or it can also be added as an specialization area. For such a sensitive area first government institutes should come forward. Instead of charging heavy course fees, A summer internship program for designing and donating for a cause should be included in the curriculum so as to get the practical exposure.

The study team spoke with a dozen management academicians working with different management institutes all over the country. Interviewee responses to the research questions outlined above are the gist of the entire study. Below are the key findings in each of the question asked. Finally, all except 2 of the respondents stressed that, inevitably, some projects will fail, so it is essential to establish a separate governing body for keeping a vigil on the working of institutes offering such courses. Despite the risks, however, everyone the researcher spoke to agreed that a university course in philanthropy could prove a viable tool for changing the status quo of Indian economy if offered with a clear vision.

Except a few (2 respondents) doesn't felt the need of inculcating any subject like this in the curriculum. One of the respondents (on condition of not publishing name) said that in the corrupt education system this course will only become the source of earning.

We are in the economy where "money pulls money", such a course can help in bridging the gap of income level although it could also happen that poorer will not work as they get donations without cost, there are also a fair chances of middlemen misusing the funds.

The fair share of priorities were given to, housing, agribusiness, sanitation, education and environment protection. A few respondents also showed inclination towards education and safeguarding of woman child and human trafficking.

Academicians supported the present MBA pattern for the new course and also (6 respondents) advocated distance learning arrangements to publicize the course.

The interviewer also asked respondents about the contents of the curriculum of the subject. Major contents as suggested by the respondents are sequentially listed as follows:

- 1) Choosing the type of investment;
- 2) Deciding what to target;
- 3) Identifying potential areas for investment;
- 4) Selecting grantees;
- 5) Defining and measuring results; and
- 6) Extending impact beyond grant making.

Note: the word investment is used here as it is expected to give some return in form of economic development

CONCLUSION

It will take some time for philanthropic markets to mature, and India still has a long way to go. The number of wealthy in India has been growing manifold after the economic reforms in the early 1990s. Many with new wealth have not until recently begun letting go of their hard-earned wealth. However, this does not mean that Indians do not give. Families such as the Tatas, Birlas, Nilekanis and Bajajs are a part of India's rich history of philanthropy. In addition, an abundant collection of stories exists but many Indians prefer to be silent benefactors.

There is a great need of a university course existed in the niche area of philanthropy. Such a course can be seen as a hope for equalizing Indian wealth distribution. Moreover if such course can channelize even 10% of the extra money laying in the economy it would be a great help for economic development.

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THE ROLE OF HOME-BASED ENTERPRISES (HBES) IN DEVELOPMENT OF ENTREPRENEURSHIP IN SONITPUR DISTRICT OF ASSAM

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ABSTRACT

Home-based Enterprises (HBES) play a crucial role in the development of entrepreneurship in Sonitpur District in particular and in Assam in general. These enterprises help to show the local talent with available local resources at very minimum cost of capital. These enterprises belong to the micro enterprise category. The HBES generate employment opportunities and promote self-employment by boosting entrepreneurial activities. Generally, HBES are run by the family members from their home for meeting local requirement. Government of India included 112 types of home-based/service industries and 9 special types of home-based industries for Rural India under list of Group-A and Group-A (1) respectively for the Master Plan 2021. This paper makes an attempt to study the employment opportunities provided by HBES, various types of HBES performing in Sonitpur Districts, training facilities provided by various government agencies and NGOs, financial assistance provided by government and other financial institutions and the earning of HBES. 150 HBES were selected as a sample to study the different types of HBES of the District. It has been found that majority of the HBES of Sonitpur District suffer from manpower, marketing and financial problems and lack of knowledge about the govt. plans and policies. Therefore, government should support these types of industries by providing easy documents free loans, marketing facilities; NGOs should provide basic trainings and awareness programmes for the development of HBES.

KEYWORDS

Home-based Enterprises, Micro-enterprises, Entrepreneurship.

1.1 INTRODUCTION

Development of entrepreneurial talent is one of the key factors to economic growth of a region. It is the back-bone of industrial revolution of developing countries. Especially in the case of Assam and other NE States, development of entrepreneurial approach and micro enterprises has a very crucial role to solve the various inherent problems of the region. These problems are neither solved by the large scale enterprises nor medium scale enterprises. India is a labour abundant country, where micro enterprises are considered to be one of the major sources of employment generation. These types of enterprises use more employment per unit of capital compared to any other enterprises. As per available statistics of 4th Census of MSME (Micro, Small & Medium Enterprises) sector that MSMEs provide employment to 60 million persons through 26 million enterprises and add 45% manufactured national output and 40% of national export. Moreover, these enterprises also contributed 8% to the country's GDP i.e. 308.96 billion dollars out of total 3,862.009 billion dollars in 2010 (based on PPP-Purchasing-Power-Parity) as per statistics compiled by International Monetary Fund (IMF).

The Development Act 2006 defines a micro enterprise as where the total investment in plant and machinery in manufacturing sector does not exceed Rs. 25 lakhs and in the case of the enterprise providing or rendering services, where the investment of equipment does not exceed Rs. 10 lakh.¹

Entrepreneurship is the process of identifying opportunities in the market place, assemble the resources required to pursue these opportunities and investing the resources to exploit the opportunities for long term gains. It involves creating wealth by bringing together resources in new way to start and operate an enterprise. It is the set of activities performed by an entrepreneur.² Home-Based Enterprises provide the scope to exploit the opportunities of the entrepreneurs.

1.2 CONCEPTUAL FRAMEWORK OF HOME-BASED ENTERPRISES (HBES)

The Home-Based Industries (HBIs), Home-Based Business (HBB) Household Industries (HIs) are all synonymous and these types of Industries belong to micro Industries, where total investments are not less than Rs.25 lakhs. These Industries are based on locally available resources, more particularly in the rural and semi-urban areas, which have employment potential at low capital cost. Generally, HBIs are run by the members of the family for meeting local requirement. Low income group of the society is generally associated with this type of enterprises because it can be started with a minimum capital without any specialized knowledge.

Despite regulation to the contrary in many countries, the home is commonly used as a workshop. In pre-industrial societies, the Industrial Revolution in Britain was marked by the move from home-based to factory-based manufacture. It would be continued until the dominant role of recent sophisticated and complex production and distribution system.³

Census definition of 'Household Industry' (Home-Based Industries) provides that as an industry conducted by the head of the household himself/herself and/or by the members of the household at home or within the village in rural areas, and only within the precincts (campus) of the house where the household is in urban areas. Home-based Industries cover artisans, skilled craftsmen and technicians who can work in their own houses if their work requires less than 300 square feet space, less than k.w. power, less than 5 workers and no pollution is caused. Handicrafts, toys, dolls, small plastic and products, electronic and electrical gadgets are some examples of these Industries but exclude pleader, doctor, barber, musician, dancer, dhobi, astrologer.²

1.3 SIGNIFICANCE OF HOME-BASED INDUSTRIES

A major portion of the population of Assam lives in villages but employment opportunity in villages is low. Under such circumstances home-based industries playing a vital role by **exploiting the local resources and local talent**, can come to the rescue of the villagers in producing gainful employment. At the same time, development of such industries will stop **migration of labour to urban areas**.

Business from dwelling greatly increases the employment opportunities for low-income households especially for women. Because women are traditionally homebound in India; they are very much security concerned. The HBIs provide a great opportunity especially to the rural women to earn for their family from the home itself. Thus, it helps in **women empowerment**.

A home-based industry also **saves the capital cost of the building**; it occupies the part of the home as business purposes and members of the family can engage themselves in the various activities of the business according to their willingness.

Home-Based Enterprises are **employment oriented**. These Enterprises not only provide self-employment but also create jobs for others. These Industries create job opportunity at a minimum cost of capital compared to large Industries. The Industrial Policy of Assam 2003 also focused on generating employment and increase income by encouraging the establishment of micro enterprises.⁴

Home-based industries are **sustainable in nature** because power and fuel consuming plant and machineries are hardly used in these category industries. The Industrial Policy of Assam 2003 identified thrust areas, which are labour intensive and require less power. The Industrial Policy of Assam 2008 also listed the names of non-polluting industrial activities such as Tailoring/garment making, Handloom weaving, Furniture (wooden & steel), Assembly of domestic electrical and electronic appliances/equipment, Candles, Carpentry (excluding saw mill), Manufacture of steel trunks and suit-cases in Annexure – III which are basically home-based industries.⁵

These types of industries **utilize locally easily available resources** such as bamboos for various bamboo products, waste cotton for making dolls, agro-based products for food processing etc.

1.4 TYPES OF HOME-BASED INDUSTRIES

The government of India includes 112 types of home-based/service industries and 9 special types of home-based industries for village abadi (population) under the list of **Group-A** and **Group-A-1** respectively as per the master plan 2021. Out of these, some industries are very much common in the case of NE India. These are Ayurvedic /Homeopathic / Unani medicines, Atta chakkies, biscuits, cakes and cookies making, Bookbinding, Choir and Jute products, Cardboard boxes, Candles, Carpentry, Dhari and carpet weaving, Dairy products e.g. cream, ghee, paneer etc., Embroidery, Jewellery items, Photostat & cyclostyling, Pan-masala, Repair of bicycles, Rubber stamps, Tailoring, Toys and dolls making, wool knitting (with machine), cane & bamboo products, pottery industry etc.⁶

SOME POPULAR HOME-BASED INDUSTRIES OF SONITPUR DISTRICTS

Various types of home-based industries are found in the districts, out of which following industries are very popular in the district.

1.4.1 FOOD PROCESSING INDUSTRY

The Government of India has approved for setting up a Food Processing Industrial Park at Chaygaon near Guwahati in Kamrup District.⁷ Different types of locally available raw-materials help to boost food processing industry for example pickle from fruits and vegetables, juice, jams, traditional cake (Laru & Pitah) etc. Now a day the 'Laru & Pitah' (typical Assamese cake) become very popular and demandable items. These items are not only demanded at the seasonal festival but also for different types of occasions like meeting, conference, seminar, work-shop, marriage party etc.

1.4.2 CANE AND BAMBOO INDUSTRY

Assam has the highest concentration of bamboo having high potential for commercialization. The region has approximately 60% of the total bamboo of the country.⁹ Sonitpur district is rich in sylvan resources and most of its forests are richly stocked with canes and bamboos of various species. One of the most famous bamboo products of the Sonitpur District is 'Japi'. 'Japi' is a traditional head-cup of Assamese society, which helps one to protect from sun and rain. Decorative Japi is treated as a symbol of respect in Assamese society and it also serves as an item of drawing-room decoration. There is a village named 'Japi-Xojia' in Sonitpur, which is very famous for Japi-making and almost all the villagers are engaged in this profession.

1.4.3 JUTE BASED INDUSTRY

Sonitpur district is one of the major jute growing areas of the state. There are some cottage and home-based industries which are very much famous for jute products like jute-bags, jute-carpet, wall-hanging etc. Various shops of home-based industries of jute products are available on the road side of NH-52.

1.4.4 CUTTING, TAILORING & EMBROIDERY (GARMENT MAKING) INDUSTRIES

It is a popular home based enterprise of the districts and more than 80 percent women are engaged in this sector. Moreover, various ethno-cultural groups in Assam make different types of cotton garments with unique embroidery designs and wonderful colour combinations.⁸

1.4.5 WEAVING INDUSTRIES

Before the Industrial Revolution, weaving was a manual craft and wool was the principal staple. In the great wool districts a form of factory system had been introduced but in the uplands weavers worked from home on a putting-out system.⁹ Handloom weaving is very famous among the people of Assam, especially among women. In earlier days Assamese girls were not married if, they do not know how to weave.

1.4.6 WOOD CRAFTING INDUSTRIES

India has been a traditional producer of wood carving for ages. In Sonitpur district, the wood-work industries are well known for skill artisans. Varieties of wood are available in the near forests to develop the wood-craft in the district. Various types of wooden animals, birds, monuments etc. are made from the bansoom-wood, gomari-wood, teak etc.

2.1 REVIEW OF LITERATURE

Following literatures are studied to find out the role of Home-based Enterprises in the development of Entrepreneurs:

Strassmann W. Paul, 1980 studied on "Home-Based Enterprises in Cities of Developing Country" and examined the role of HBEs in employment generation, reducing cost of residential space, extended frangibility senses, income and housing together. In his study he also recommended the Government to frame policies and scheme to develop HBEs by providing extended roads, drainage system, water pipes and sewers to new areas.¹⁰

Graham Tittle referred that HBEs are very important for income generation, especially for women. He has done a comparative study of HBEs of Bolivia, India, Indonesia, South Africa. The HBEs' establishment improves incomes, and access to jobs, goods and services within a settlement and can, therefore, be regarded as upgrading. The case studies of the paper reflected most HBEs impose more than moderate increases in demand for services in their neighbourhoods.³

A. K. Jain recommended that it was necessary to adopt a comprehensive approach towards Home Based Enterprise which provides a scope for development of entrepreneurs. Planning provisions by the government authorities were not adequate to promote the HBE. There was a need to link the HBE policy with related Acts, taxation and licensing system and simplify the procedures. This would also largely obviate (remove) the need of inspections and thus harassment to the small entrepreneurs and corruption.¹¹

Atanu Baruah (1998) stated that educated youth in the region prefer white collared jobs rather than entrepreneurship as a career. He has also mentioned that entrepreneurs in the region are still ignored by the industrial sector, which is one of the employment contribution sectors of other parts of the country. The study is designed to focus on more areas of sustainable small enterprises development and to adopt strategic management comprehensive policy framework.¹²

2.2 STATEMENT OF PROBLEM

Assam has been considered as an industrially "A" category backward state of India.¹³ The existing industrial profile of Assam gives very a lopsided picture. There is less than 2 percent of country's large and medium scale industries and less than 1 percent of the country's small enterprises in Assam. Assam has about 26 lakhs unemployed persons, 54 percent of whom are educated, which causes a serious problem of insurgency in the state.⁸ Generally speaking "empty mind is the devil's workshop", educated unemployed youth prefer to earn easy money, where government policies have already failed to provide any avenue for such youth.

There are lacking in infrastructure facilities like communication and credit. Priority sector includes agriculture, micro enterprises, the total assistance by banks and financial institutions in NE states till 2009 was Rs.2,460.5 crores, which was only 0.58 percent of the loans sectioned in the country. It reveals that in post-nationalization period, the per capital bank assistance was far too short of requirement to accelerate the growth of micro enterprises.¹⁴

The industrial estate, area and growth centre are located mostly in the area where communication is a big problem and those institutions are far from commercial activities which reduce their utility.

Management is one of the major problems of home-based enterprises. The head of the enterprise, generally head of the family has to take all the decisions like purchasing of raw-materials, production, and marketing. The industrially developed countries came to look upon managerial skills as a key in economical success. In India human resources are perhaps the least developed of all economic resources. There are millions of unemployed and under trained people whose

talents lie idle or undiscovered. Managerial, professional and skill of labour can be improved. A country with relatively poor natural resources can have a high growth if it has good managers.

This would also be helpful in either revision of the existing policies or formulating new policies for the development of HBEs in Sonitpur District in particular and Assam in general. This study, therefore, may prove to be highly interesting to the planners, administrators and policy makers for the implementation of programme for promotion of HBEs not only in the region but also in other under developed parts of the country.

3.1 OBJECTIVES OF THE STUDY

The prime objective of the study is to assess the role of home-based enterprises in the development of entrepreneurship in Assam in general and in Sonitpur districts in particular.

To obtain main objective of the study following secondary objectives have been formulated.

1. To analyse the types of viable home-based enterprises of Sonitpur Districts.
2. To examine the ownership pattern of the HBEs.
3. To examine training and guidance provided by the Govt. and other agencies to HBEs.
4. To examine the financial assistance provided by the Banks and financial agencies to HBEs.
5. To examine the amount of monthly income generated from HBEs. by the entrepreneur/ owner.
6. To examine the employment opportunities offered by the HBEs.

3.2 TEST OF RELATIONSHIP

1. To find out the relationship between the ownership patterns and type of HBEs.
2. To find out the relationship between qualification of proprietors and earning:

4. METHODOLOGY OF THE STUDY

(A) SAMPLING

(i) **Sampling Frame:** The study is empirical in nature and based on primary and secondary data. The primary data are collected through sample survey. The identified & viable HBEs in the district are selected after the scrutiny of information collected from DIC office and other reliable sources. As per the convenience of the study and on the basis of majority of numbers found in the study, the home-based units are classified into three groups namely **Food processing, Garment and Artisan** home-based enterprises. Food processing industry covers all types of agro-based food-processing units such as pickle-making, Ladu & Pitha making, jam & juice making, tomato or vegetable-sauce making industries etc. Garments industry covers cutting, tailoring, embroidery, weaving etc. Artisan covers those units which are not covered by the Food processing and Garment industries. For example those units which are based on inherent skill and artisan such as wood-carving, metal works, jewelry, doll-making, cane and bamboo products making etc.

The secondary data have been used to establish the authenticity of the study.

(ii) **Sampling Methods:** Quota and Convenience Sampling method has been used in collecting data.

(iii) **Sample Size:** In selecting the samples, the total number of selected units is 30 percent (around 150 units) of the total registered and unregistered units existed in Sonitpur district.

TABLE 4.1: DISTRIBUTION OF SAMPLES

Sub-division	Frequency	Percentage
Tezpur	75	50
Biswanath Charali	50	33
Gohpur	25	17
Total	150	100

(B) DATA COLLECTION

Primary Data: The primary data are obtained through personal interview schedule and questionnaire from the respondents. The schedules were adopted for 100 convenient units. Remaining primary data were collected through questionnaires. Personal interviews of some owners were taken for details observation of the units in qualitative manner.

Secondary Data: The secondary data are collected from internet, news-papers, magazine, editorials, and register of banks for MSME, register of DIC of Sonitpur District, NGOs' Annual Reports, government rules and regulation on MSME, National Small Industries Corporation (NSIC) Guwahati, Director of Industries (DI) Guwahati, Indian Institute of Entrepreneurship (IIE) Guwahati etc.

(C) DATA ANALYSIS

The collected data are analysed with suitable statistical tools like mean, percentage, pie-diagram, bar-diagram for better analysis and presentation of data. SPSS package is also used so far to do cross tabulation, Chi-square test, test of significance and ANOVA test to find out the relationship of different variables.

(D) PERIOD OF THE STUDY

The study was conducted from Jan 2011 to Dec 2011.

(E) LOCATION OF THE STUDY

The study has been conducted on Home-based industries of Sonitpur District. Entire three subdivisions viz Tezpur, Biswanath Charali and Gohpur of Sonitpur District.

5. MAJOR FINDINGS OF THE STUDY

5.1. There was highest number of Food-processing enterprise i.e. 66 units (44 percent) which was followed by 48 unit (32 percent) Garments enterprise and 36 units of Artisan (24.0 percent) out of 150 HBEs surveyed in the Districts of Sonitpur.

5.2. Maximum numbers of HBEs' owner were women i.e. 108 (72 percent) units were run by women out of the total sample units. Only 42 units of HBEs were run by men, which was 28 percent of total sample units.

5.3. It has been found that 96 (64 percent) HBEs had got training from various institutions whereas only 54 (36 percent) HBEs were running their business without any formal training.

5.4. DIC provided training to the highest no. of HBE's owners, i.e. 38 sample HBEs (25 percent of the total HBEs with or without training) and is followed by NGOs, who provided training to 23 sample HBEs (15 percent), IIE provided training to 20 sample HBEs (13 percent) and other institutions provided training to 17 sample HBEs (12 percent). Remaining 52 units (35 percent) do not take any training from any institution.

5.5. Out of the 150 sample HBEs of Sonitpur districts only 84 HBEs (56 percent) had taken loan from any financial institutions.

5.6. State Bank of India provides financial assistance to highest number of HBEs i.e. 33 units and 22 percent of total sample units. Apex Bank Ltd. was in the second position by providing financial assistance to 30 units i.e. 20 percent, Assam Gamin Vikash Bank in the third position by providing loans to 18 units i.e. 12 percent and UCO Bank provides loan to 6 units only i.e. 4 percent of the total sample units. Interestingly, 63 (42 percent) HBEs had not taken any loan from any financial institutions.

5.7. Highest numbers of HBEs i.e. 39 (26 percent) had taken loan of Rs.50,000 or less than Rs.50,000 from the financial institutions; only 36 (24 percent) HBEs had taken loan in between Rs.50,000 to Rs.1,00,000; only 3 (2 percent) sample units had taken loan between 1,00,001 to Rs.1,50,000 and 9 (6 percent) HBEs had taken loan in between Rs. 1,50,001 to Rs.2,00,000. No sample HBEs has taken loan more than Rs.2,00,000.

5.8. The Average Monthly Earning of 42 (28percent) units earned below Rs.5,000 per month; 66 (44 percent) sample units were between Rs.5,001 to Rs. 10,000 per month; 30 (20 percent) units earned in between Rs. 10,001 to Rs. 15,000 per month and only 12 (8 percent) units earned above Rs. 15,000 but not more Rs. 20,000 per month by any unit. Average monthly income of 150 sample units is Rs.7,860 per month.

5.9. 57 (38 percent) HBEs generated minimum 3 employment opportunities whereas only 6 (4 percent) HBEs generated minimum 8 employment opportunities in each unit. The average employments opportunities created by 150 sample HBEs is 3 (2.77 mean) persons in each unit.

5. 10. The Food Processing industries generated more employment i.e. 44 percent of the total employments created by 150 sample HBEs. These industries generated employment opportunities up to 8 persons in each unit. 32 percent employments were generated by Garments industries and 24 percent was generated by Artisans.

6.1 TEST OF RELATIONSHIP BETWEEN OWNERSHIP PATTERNS AND TYPES OF INDUSTRIES

Null Hypothesis, H_0 : There is no association between the ownership patterns and the type of HBEs.

Alternative Hypothesis, H_1 : There is an association between the ownership patterns and the type of HBEs.

The value of chi-square test, $p=0.000$ which is less than 0.005, therefore, null hypothesis is rejected and alternative hypothesis is accepted.

The contingency coefficient= 0.579 which more than 0.5. This indicates that there is high level of association between the two variables.

Therefore, it has been found that there is a relationship between ownership patterns and type of HBEs and the relationship is strong.

6.2 TEST OF RELATIONSHIP BETWEEN EARNING AND QUALIFICATION BY ONE-WAY ANOVA TEST

Null Hypothesis: There is no difference among the mean earning of owners with different educational qualifications:

H_0 : $\epsilon_1 = \epsilon_2 = \epsilon_3 = \epsilon_4$

Where,

ϵ_1 = Average earning of below HSLC

ϵ_2 = Average earning of below HS

ϵ_3 = Average earning of below Graduate

ϵ_4 = Average earning of Graduate

Alternative Hypothesis, H_1 : There is difference among the mean earning of owners with different educational qualifications:

H_1 : $\epsilon_1 \neq \epsilon_2 \neq \epsilon_3 \neq \epsilon_4$

Analysis: One-way Anova results shows that the value of $p=0.000$ which is lower than table value of 0.05 at 95% confidence level. Hence, null hypothesis is rejected and alternative hypothesis is accepted.

Post-hoc test reveals that there is significant difference in earning of all categories of educational back ground of proprietors.

Therefore, it has been found that there is a significant difference among the mean earning of owners with different educational qualifications. The qualification of owners below HS level had good prospect in HBEs i.e. mean of 2.44 in comparison to below graduate which mean value was 1.10.

7. PROBLEMS FOUND

7.1. FINANCIAL PROBLEM

The entrepreneurs would not in a position to offer sufficient security to get loan from the bank. Though State Bank of India and Apex Bank Ltd. had taken the leading part in loan disbursements to the HBEs; but borrowers still have some inherent problems like bank formalities, delay in granting loans. Majority of the borrowers faced the problems like bribe, security, marginal money and so on. Pertaining to problem of managing financial resources, majority of them are lacking professional expertise, incurring expenditure lavishly without proper budgeting and not maintaining proper accounts may be the possible reasons for the problem of finance. Submitting improper financial statements to the financial institutions for getting credit was found to be a common practice followed by most of the units under the study.

7.2 MARKETING PROBLEM

Majority of the respondents sold their products within their locality. It is surprising to note that some units of HBEs supplied their products to foreign markets. Though number is poor, it has some significance to encourage entrepreneurs of this region.

7.3 RAW-MATERIALS PROBLEM

Generally, Home Based Industries are using locally available raw-materials, which are abundant in that area. But there were some kinds of raw-materials which are seasonally available and some are perishable in nature. For example 'Gaaz Pickle' (Bamboo Shoots) has great demands in all seasons but bamboo shoots are available in the monsoon season only. Improper planning of raw materials was another serious factor for scarcity of some important materials for HBEs' products such as teak and bansoom wood for wood crafts, Muga and silk yarns for weaving of Assamese Traditional Dresses, which have great demand in the domestic market as well as in foreign market. Due to the insufficient and seasonal availabilities of raw-material compelled to close-down some HBEs in the districts.

7.4 MANPOWER PROBLEM

Home-based Industries are always labour intensive in nature. Though the Assam Economy is a labour surplus economy, it is revealed that only 4 percent of working population was engaged in micro industries.¹⁵ HBEs of Sonitpur District always suffered from scarcity of skilled and semi-skilled labours, which cause serious problem in production as well as supply of products in time as per the demand received from the various consumers. The cost of the unskilled labours was also increase due to the Government Programme like NREGA, which created a habit to earn at less physical labour. Though products like 'Japi', traditional cake like 'Ladu-pitha' had great demand in the market but could not be supplied in proper time due the scarcity of labour force.

8. SUGGESTIONS

- (1) Government's support to HBEs: To get the real success of HBEs, a very powerful support from the government system is needed. Since, analysis of primary data reveals that food processing industry (agro-based industry) has a great prospect in the districts; hence the government may frame plans and policies to uplift the food processing sector in Sonitpur District; like Food Processing Industrial Park of Chaygaon, Kamrup District.
- (2) Professional training to the Producers: As per the study, there is a direct relationship between training and earning of the HBEs. But there are still 36 percent HBEs fail to get training facilities. Therefore DIC, IIE and NGOs may try to cover all the HBEs of the region. So that, the owners of HBEs become self-reliance in maintaining quality and marketing of their products. Training facilities in the rural areas are more important because most of the HBEs are located in the rural areas as per the study.
- (3) Large scale production: It has been noticed that most of the HBEs are run by individuals. As a result the production is very less. It is suggestible if the production be done in group form by making cooperatives or by forming Self-Help Groups(SHG), the productivity will be in large scale and profitability will be high. Besides that, in group they will be able to have banks loans easily and take advantage of the schemes of Cooperative bodies, NABARD, and other Govt. Institutions. On the other hand financial institutions will get more securities regarding repayment of loan.
- (4) Guidance and awareness: NGO or govt. organization may provide guidance or awareness to the owners of HBEs regarding various schemes and policies of Government time to time so that, they can benefit from these schemes. Besides that, they can also have the understanding of marketing and financial matters of HBEs.
- (5) Developing proper distribution channel for the products of HBEs: During the observation it has been found that selling of the products of HBEs is the biggest hurdle for the producers. Hence, importance may be given in establishing a strong distribution and marketing channel for the HBEs. Industrial Estates may be utilized for the true purposes and should be established in the convenient places for easy communication and marketing. National and International level of exhibitions may conduct to uplift the marketing of HBEs' products.
- (6) Soft loan: To start any business the financial back up is very much required. As per the study only 58 percent sample HBEs have taken loan for the banks and financial institutions. Though the State Bank of India has done quite a good job but Assam Gramin Vikash Bank is far away from their achievement. As

we know that majority of the owners of HBEs are women, therefore, if they can get financial loan to build up HBE, it will give high success rate in the sector. Moreover, financial institutions may be minimised the margin money, documentation etc.

- (7) Continuous Monitoring and Feedbacks: Continuous monitoring and feedback of the HBEs are very essential elements for developing HBEs. District Industry Center, Indian Institute of Entrepreneur and NGOs should keep continuous contact after providing trainings; similarly banks and other financial institutions may get continuous feedback after granting loans to them, so that the benefits of trainings and loan can be availed by the HBEs in true sense.

9. CONCLUSION

The Industrial Policy of Assam 2003 and 2009 had specially emphasised on the development of small and micro enterprises in the state. Various policies had been formulated to encourage the entrepreneurs to develop MSMEs in the state. Therefore, following few recommendations are put forwarded, which could be helpful to formulate new policies to improve Home-based Enterprises as well as micro enterprises in the state.

The trust areas identified in the new policy include food processing industry, agro-based industry, natural gas based industry, traditional industries like handloom, textiles, cane and bamboo products. Keeping in view the employment potentiality the state government would give top priority to setting up of industries in the small scale and tiny sector. In this connection, the government has underlined the need to strengthen the DICs in view of the vital roles played by these in the growth of small-scale industrial sector.

No doubt, the home-based enterprises are labour incentive in nature and it reduces unemployment problem in Assam upto an extent. Since, the big industries cannot develop in Assam because of inherent problems and it is not necessary to import raw materials and technology from other places for HBEs, locally available raw-materials and local talent can be properly utilised without consuming power and fuel.

From the study, it is clear that there are different types of HBIs in Sonitpur District, which are viable and provide bread and butter to the people of the region and also helps to provide scope for the entrepreneurs of region. Therefore, it can be concluded that Home-based enterprises can boost the development of entrepreneurship in Sonitpur district in particular and in Assam in general.

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EMPLOYEE GRIEVANCE REDRESSAL PROCEDURE IN INDIAN ORGANIZATIONS

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ABSTRACT

The personnel or industrial relations department of the organization is responsible for maintaining peace and harmony among employer and employee. The healthy relations between employer/management and employee/worker can be achieved through the agreed solutions for different problems. A worker who is dissatisfied may not work at full capacity and cause significant loss of production. Grievances are the expressed complaints about working conditions and environment in which employee work. It is related with day to day work. Grievances emerge out of the dissatisfaction of workers it may be as an individual or as a group. Thus, management strive hard to resolve workers complaints and grievances. Effective grievance handling is an essential part of cultivating good employee relations and running a fair, successful, and productive workplace. This paper examines nature and reasons of employee grievances, illustrate grievances handling procedure, and comprehend consequences of mishandling grievances at the workplace.

KEYWORDS

Employer, Grievance handling procedure, Grievance handling machinery, Worker.

INTRODUCTION

The personnel or industrial relations department of the organization is responsible for maintaining peace and harmony among employer and employee. Grievances emerge out of the dissatisfaction of workers it may be as an individual or as a group. A worker who is dissatisfied may not work at full capacity and cause significant loss of production. Thus, management strive hard to resolve workers complaints and grievances. Grievances are the expressed complaints about working conditions and environment in which employee work. It is related with day to day work.

A just and prompt redressal of employee complaints is essential. Nature of grievance may be at individual or at group level, immediate attention and patient hearing from superior is required for amicable industrial relations. Effective grievance handling is an essential part of cultivating good employee relations and running a fair, successful, and productive workplace.

The healthy relations between employer/management and employee/worker can be achieved through the agreed solutions for different problems. This can be achieved through bipartite arrangements which will be an important step toward building a stable, workable relationship.

OBJECTIVES

The study has following objectives as framework for assessing grievance redressal procedure in Indian organizations.

1. To understand grievances and reasons of employees grievances
2. To Explain nature of common grievances
3. To Explain grievances handling procedure at the workplace
4. To Develop an effective grievance-handling procedure
5. To Comprehend consequences of mishandling grievances
6. To Establish company's grievance-handling procedure

MEANING OF GRIEVANCE

A grievance is "the representation by a worker, a group of workers or their unions to the management relating to the terms and condition of the employment, breach of freedom of association or the provisions of the standing orders or non-implementation of the government orders, conciliation agreements or adjudicator's awards."

GRIEVANCE REDRESSAL

The two aspects of handling industrial relations includes Individual relations, and

a) Collective relations

Industrial relations are primarily collective relations. Now, we will examine grievance handling procedures which fall under the category of individual relations.

There are two types / nature of individual grievances, which includes:

- 1) Technical, i.e., incidental to the work at the shop floor; and
- 2) General, i.e., in respect of service conditions, wage payment, welfare facilities.

They may also arise from the various other sources, such as:

1. Service conditions
2. Permanency
3. Promotions
4. Working conditions
5. Overtime
6. Work assignment
7. Work load
8. Shift change
9. Wage payment
10. Deductions
11. Less payment
12. Welfare facilities
13. Canteen
14. Transport facilities, etc.

GRIEVANCE REDRESSAL PROCEDURE

A well-designed and a proper grievance procedure provide:

1. A channel or avenue by which any aggrieved employee may present his grievance;
2. A procedure which ensures that there will be a systematic handling of every grievance;

3. A method by which an aggrieved employee can relieve his feelings of dissatisfaction with his job, working conditions, or with management; and

4. A means of ensuring that there is some measures of promptness in the handling of the grievance.

The 16th session of Indian Labour Conference adopted the Code of Discipline. It has highlighted the need for a model grievance handling procedure on an agreed basis. Most of the grievance procedures now a day are built around the Model Grievance Procedure with certain changes to suit the size and special requirements of an enterprise. The principles and procedures which constitute the five successive time-bound steps of model grievance handling procedure are as follows:

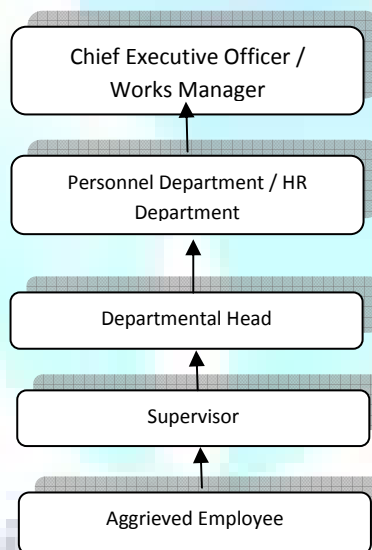
- 1) An aggrieved employee shall first present his grievance verbally in person to the officer designated by the management for this purpose. The answer shall be given within 48 hours;
- 2) If the worker is not satisfied with the decision, he shall be accompanied by a department representative to present his grievances to the head of the department, who has to settle the grievance within three days. Otherwise, he shall have to record reasons for the delay;
- 3) In case workmen is not satisfied with the decision of the department head, he may request him to refer the case to the grievance committee;
- 4) The committee considers the matter and makes its recommendations to the manager within seven days of receipt of the grievance. If this is delayed, reasons are to be recorded. Unanimous recommendations of the grievance committee shall be implemented by the management. Whether there is a unanimous decision by the committee or not, the aggrieved workmen is entitled to know the decision through the personnel officer within three days of the receipt of the grievance committee's recommendations;
- 5) If dissatisfied with the committee's or the manager's decision, the workman has a right of appeal to the higher tier of management for revision. The workman may take his union official along with him for discussion. The management has to inform him of its decision within a week. At any stage where the aggrieved person is not satisfied, he has to prefer an appeal within 72 hours of the receipt of the decision, or if no decision is reached, the appeal is to be made on the expiry of the stipulated period; and
- 6) If the workman is still not satisfied with the decision of the management, the union may ask for voluntary arbitration in the matter. In case the management agrees, the matter is referred to an arbitrator whose decision is binding on both the parties. A properly constructed grievance procedure capped by arbitration should in principle render work stoppages unnecessary during the life of the agreement. Unions generally favour arbitration as the final step in disposing of unsettled grievances.

In the above-mentioned procedure the following points should be noted:

- Calculating the various time intervals under the above clauses, holidays shall not be included.
- The Management shall provide the necessary clerical and other assistance for the smooth functioning of the grievance machinery.
- During the working time, the concerned person may go for enquiry with the Labour/personnel Officer, provided the he has taken permission from his supervisor. Hence he may not suffer any loss of payment.

GRIEVANCE HANDLING MACHINERY

GRIEVANCE HANDLING MACHINERY



MODEL GRIEVANCE REDRESSAL PROCEDURE FOR PERMANENT EMPLOYEES

The Grievance Procedure aims at settlement of grievances of permanent employees, other than supervisors and fresh employees on probation, in the shortest possible time and at the lowest possible level. It is a three-stage procedure with an appropriate grievance form for each stage.

- Individual grievances and complaints shall not be discussed at any level other than that specified in this procedure except that, if the Union so desires, such cases may be put up for discussion at the Central Works Committee.
- Policy matters and their interpretation shall not be discussed at any level except with the top management. The Union, however, can take up such matters at the Central Works Committee.
- Representations for the redressal of grievances from employees to the various authorities either directly or through the Union, when their cases are pending with any Works Committee, are not conducive to the working of those committees. Hence, no representation will be entertained for discussion at any level of the management if the case is already referred to and pending with any Works Committee, until the same is either disposed of or withdrawn from the Works Committee.
- In exceptional cases, however, involving grievances of a number of workmen other than routine grievances or questions of principle or policy or any other important matter where immediate action is necessary, the Union may take up the case with the appropriate level of management. In cases of importance the President of the General Secretary of the Union may ask the management for a joint enquiry.

CONCLUSION

Grievances emerge out of the dissatisfaction of workers it may be as an individual or as a group. Grievances are the expressed complaints about working conditions and environment in which employee work. It is related with day to day work. Nature of grievance may be at individual or at group level, immediate attention and patient hearing from superior is required for amicable industrial relations. Effective grievance handling is an essential part of cultivating good

employee relations and running a fair, successful, and productive workplace. It is advisable to set up an effective grievance procedure in the organization. The procedure should be flexible enough to meet the requirements of the organization. It should be simple so that an average employee is able to understand it.

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WASHINGTON MUTUAL, INC.: FORTUNE 500 TO NOWHERE

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ABSTRACT

Washington Mutual bank (WaMu) was United States **largest savings and loan association** managing an asset of value \$327.9 billion valued in year 2007 until it filed for bankruptcy (on 25th September 2008) making the occasion as the **largest bank failure in U.S. history** by asset size. Before filing for bankruptcy, it was U.S.'s sixth largest bank by asset-size. The Case focus on the Risk Management tools, Credit Appraisal process, Credit Concentration and Risk Assessment Measures adopted by WaMu in order to help its holding company (Washington Mutual Inc.) to continue a position in **Fortune 500** list for continuous four years and also on the internal as well as external environment which caused its failure.

KEYWORDS

ARM (Adjustable Rate Mortgage), Negative Amortization, PMI (Private Mortgage Insurance).

INTRODUCTION

Washington Mutual bank (WaMu) was United States largest savings and loan association managing an asset of value \$327.9 billion valued in year 2007 until it filed for bankruptcy (on 25th September 2008) making the occasion as the largest bank failure in U.S. history by asset size^{[5], [17]}. Before filing for bankruptcy, it was U.S.'s sixth largest bank by asset-size^{[1], [5]}.

Washington Mutual, Inc. (WMI) was the former owner of WaMu (before filing of bankruptcy) and also filed for bankruptcy a day after WaMu got the benefit of receivership under Federal Deposit Insurance Corporation (FDIC). WaMu was a financial services provider to small and mid-sized business and consumers. WaMu operated in three verticals: The **retail Banking and Financial Services Group**, the **Mortgage Banking Group** and the **Commercial Group**. First two verticals were consumer-oriented while the third vertical was commercial customers' oriented². The company's major products include deposits, home loans, and credit cards in consumer-oriented segment^{[3], [1]}.

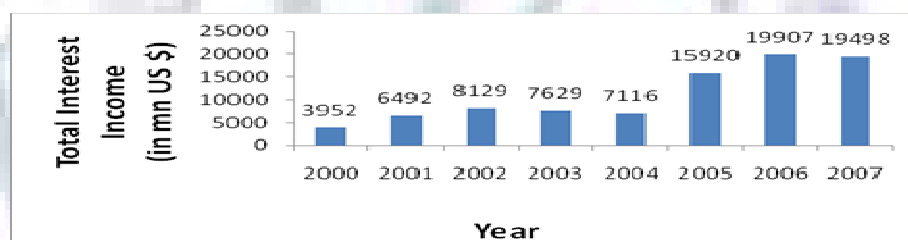
Management of WaMu thought to convert WaMu into "Wal-Mart of Banking", focused to service lower and middle class consumers that other banks deemed too risky. Moreover, it designed terms and conditions of even Complex Mortgages and Credit Cards such that it can be easily accessible for even lower creditworthy borrowers to get it financed, which can be helpful in its strategy to increase "Market-Share" enabling itself to operate on mass-banking⁴. One of the statements of its CEO "We hope to do this industry what Wal-Mart did to theirs, Starbucks did to theirs, Costco did to theirs and Lowe's Home Depot did to their industry" affirms the mass-banking strategy^{[5], [7]}.

One of the advertising campaigns introduced by WaMu during 2003 was "The Power of Yes", which emphasized on saying YES to even a less credit-worthy customer. WaMu used to press sales agents to approve loans just on the basis of stated income (Stated Income means just mention your income on the proposal form, no need to give proof of your mentioned income). Revenues at WaMu's home-lending unit increased from \$707 million to almost \$ 2 billion in 2003, which is attributed to the campaign started^{[5], [3]}.

WaMu offered very high commissions for selling more of riskiest loans. More selling of riskiest loan enable WaMu to charge high interest rates and hence, high profits and in turn huge compensation to its executives. Not only this, WaMu motivated appraiser to provide inflated values of the property against which loan was granted, so that loan sanctioned could appear as less risky and hence, could be easily bundled and sold to investors.

GROWTH PHASE OF WaMu

Data Monitor, a leading business information company specialized in industry analysis, published a research in August 2008, which states that "The US commercial banking has been growing continuously since the beginning of the decade and is expected to grow further at least until 2011". It also indicated that the commercial banking segment of US will keep on growing at a CAGR (Compounded Annual Growth Rate) of 4.4% until year 2011. Moreover, the credit card market was expected to grow at a CAGR of 5.7% until 2011. Both of these were the core strength of WaMu and hence, experts were of the opinion that WaMu will show a robust growth in future. Moreover, the risk taking capability of the management also helped the analyst to forecast a double digit growth rate for WaMu. Before 2005, WaMu followed traditional model of originating loans i.e. at fixed rate of interest, but seeing the intense competition in the market, it adopted a riskier non-traditional model to finance loans. The closest competitor of WaMu in 2005 was Countrywide Financial Corporation, when it adopted new strategy to increase a wide gap between the two. The graph shown below indicates the growth in total interest income of WaMu. Increase in total interest income in year 2005 (100% increase) and onward with respect to 2004 can be due to the change in business strategy as far as loan financing model is concerned.



Source: Income Statements of WaMu

Secondly, the shift in strategy was in anticipation of a higher interest margin. The table shows a list of sale margin by product types of loans of WaMu:

S.No.	Loan Product Type	Return (%)
1	Subprime	1.5
2	Home Equity	1.13
3	Option ARM	1.09
4	Alt-A	0.4
5	Hybrid/ ARM	0.25
6	Fixed Rate	0.19
7	G-Backed	0.13

Source: April 2006, WaMu Board of Directors' Presentation

The lower rate of interest in “Fixed Rate and G-Backed products” justifies the change in management’s strategy to focus more on high margin products. Moreover, the financial market created a demand for high risky products to provide a better return to its investors (which was almost zero in case of G-securities). Hence, risky and complex products like subprime mortgages, CDS (Credit Default Swap), CDOs (Collateralized Debt Obligations) were developed and designed to meet the market demand.

During 2000 and 2003, WaMu’s retail branches grew 70 percent. The total number of retail branches was 2200. This period coincides with the period when WaMu launched the advertising campaign “The Power of Yes”. Not only this, it showcased its employees as casually dressed in different television advertisements to give an indication of “friendly loan sanctioning process”.^[14]

The success of WaMu’s new strategies can be identified by the fact that by 30th June 2008, it had a total asset size of US \$ 307 billion. A break-up of assets in different portfolios is given below:

S.No.	Loan Product Type	Asset Size (\$ bn)
1	Subprime Mortgage Loans	16
2	Home Equity	53.4
3	Option ARM	52.9
4	Credit Card Receivables	10.6

Source: Financial Statement of WaMu as on 30th June 2008

WHAT WENT WRONG

The five basic characteristics of a borrower to obtain credits are: **Character** (Integrity), **Capacity** (sufficient cash flow to sufficiently match obligation both in terms of duration and volume), **Capital** (Net -worth), **Collateral** and **Conditions** (of borrower as well as entire economy). Since, WaMu had a very liberal process of credit evaluation and hence, was not evaluating borrowers on all the said five elements. Borrowers’ were providing “Stated Incomes” on application form and hence, true **capacity** of borrowers’ can’t be identified. About 90% of all WaMu’s home equity loans, 73 % of **Option ARM** (Adjustable Rate Mortgage) and 50% of sub-prime loans were “**Stated Income**”. Moreover, there was no meaning of collateral since the values of collaterals were inflated on the direction of WaMu by appraisers^{[14], [17], [18]}.

“**High loan-to-Value**” ratio was also one of the prime factors in wiping-out the value of loan portfolio when the prices of homes started falling in 2008. WaMu’s 2007 financial statement mentioned that 44 % of subprime loans, 7% of Option ARMs and 35 % of home equity loans were having more than 80% “Loan to Value” ratio. Not only this, WaMu didn’t suggest/ asked its borrowers to buy **PMI (Private Mortgage Insurance)** which protects lenders against the default^[5].

“**Loan Concentration**” was another dimension where WaMu missed the basics of banking practices. WaMu had a policy of loan concentration of upto 25% in one metropolitan area.

Region	Option ARM	Subprime Loan	Home Equity
California	49%	25%	53%
Florida	13%	10%	9%

These two were the states which suffered the above average home value depreciation at the time of subprime crisis, which impacted the business of WaMu significantly^[2].

WaMu had a high percentage of risky products in its portfolio. Option ARMs had a contribution of 47% of all home loans originated from 2003 -07. WaMu had designed innovative ARMs to suit the need of customers. The payment options in Option ARMs (Adjustable Rate Mortgage) were:^{[2], [14]}

1. Interest Only
2. A minimum monthly payment
3. Pay their monthly mortgages in amounts equal to (monthly principal + interest).

As per 2005 Financial Statement of WaMu, approximately 56% of the total Option ARM loan holders selected option 2 (i.e. A minimum monthly payment only). The minimum monthly payment followed the concept of “teaser rate”- significantly low rate of interest for 1 month and thereafter high/ normal rate of interest. The minimum monthly payment option calculated was not sufficient to even pay the interest cost and hence, the unpaid interest was added back to the principal; making the loan outstanding bulkier month by month. This process is known as “**Negative Amortization**”. Financial statement of 2007 says that the quantum of negative amortization had become 84% of the total value of Option ARMs^[2].

The rising interest rate also contributed equally to the downfall of WaMu. Since, WaMu had a high loan percentage of mortgages in its loan portfolio (80% of all loans sanctioned were mortgage loans as on 31-12- 2004) and hence, the percentage of NPA (non-performing assets) as well as loan defaulters started increasing as soon as interest rates followed an upward trend. Till 3rd quarter of 2007, WaMu’s bottom line had not turned red, but during 4th Quarter of 2007 & 1st Quarter of 2008, it suffered consecutive \$ 1 billion quarterly losses because of loss write-off and higher loan loss provisions^[15].

On 15 September 2008, credit rating agencies downgraded WaMu as well as WMI which caused a serious concern in investors’ mind and they started withdrawing money from the bank. By 24th September 2008, customers’ withdrew \$16.7 billion in deposits, which made bank illiquid and ultimately forced Office of Thrift Supervision to close the bank on 25th September 2008^{[6], [16]}. The FDIC (Federal Deposit Insurance Corporation) sold it to JPMorgan Chase for \$1.9 billion^[8].

A day after the bankruptcy of WaMu, WMI (Washington Mutual, Inc.) also filed for bankruptcy; which ended the story of a big giant who always scored a position in **Fortune 500** list from 2005 to 2008 (131 in 2005, 99 in 2006, 81 in year 2007 and 97 in 2008)^[3].

When a recently MBA (Finance) passed out student, AVNI joined in “Risk Management” department of an emerging bank ABC Bank Ltd., he was given this case study to analyze and present a report highlighting the “Risk Dimensions”, “Credit Evaluation Process”, “Exposure Criterion” and “Risk Management Techniques” that a company working in same line of business as WaMu should follow in order to avoid such failure.

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FDI IN ORGANIZED RETAIL SECTOR: A COMPARATIVE STUDY BETWEEN INDIA AND CHINA

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ABSTRACT

FDI is an important tool in the process of globalization and plays a key role in the development of the economies of the developing countries. The share of developing countries at over 50 per cent in total FDI inflows may increase further with well-built growth prospects in organized retail sector. The present papers attempts to study the FDI policies and FDI inflow in organized retail sector in both India and China. From the analysis it is clear, there is no significant difference in the FDI inflow in organized retail sector between India and China. Even though China has given 100 percent FDI provision in organized retail sector in 2004. Compared to China, India has high market potential with increase in GDP growth rate, higher disposable income, rapid urbanization, participation of youth in retail expenditure and more brand loyalty. India's changing FDI climate provides an interesting dynamic to several international retailers entry and expansion plans in Indian organized retail sector.

KEYWORDS

Brand loyalty, Disposable income, FDI, organized retail Tier II, III&IV cities.

INTRODUCTION

FDI is an important tool in the process of globalization and plays a key role in the development of the economies in the developing countries. FDI refers to capital inflows from abroad that is invested to enhance the production capacity of the economy. Retailing acts as the interface between producer and individual consumer buying for final consumption. It prohibit direct interface between the manufacturer and institutional buyers such as the government and other bulk customers. Retailing is the last bond that connects the individual consumer with the manufacturing and distribution chain. The retail sector has been divided into organized and unorganized sector. Organized retailing refers to trading activities undertaken by licensed retailers, that is, those who are registered for sales tax, income tax, etc. These include the corporate-backed hypermarkets and retail chains, and also the privately owned large retail businesses. Unorganized retailing, on the other hand, refers to the traditional formats of low-cost retailing, for example, the local kirana shops, owner managed general stores, paan/beedi shops, convenience stores, hand cart and pavement vendors, etc.

Retail sector has played a major role in the global economy. In today's developed market retailing is one of the most outstanding industries. In 2008, the US retail sector contributed 31% to the GDP at current market prices. When compared to developing countries, the developed countries has 75-80% share in total organized retail sector. In developing economies the unorganized retail sector has a dominant share compare to organized retail sector. Global retail sales was estimated to be around US\$ 12 trillion in 2007; where as in 2008, due to the financial crisis in US (United States), consumer expenditure was reduced in retail market. Till 2007 global level retail sector performed vigorously well, but the impact of US crisis extend over to Europe and also in the Asia-Pacific region in 2008. In 2010 the global FDI flows remained stagnant at US \$ 1.1 trillion since uncertain and weak in the world economic recovery.⁸

According to UNCTAD's Global Investment Trends Monitor (January 17, 2011), although global FDI flows at aggregate level remained stagnant, they showed an uneven pattern across regions – while it contracted further in advanced economies by about 7 per cent, FDI flows recovered by almost 10 per cent in case of developing economies as a group driven by strong rebound in FDI flows in many countries of Latin America and Asia. Rebound in FDI flows to developing countries has been on the back of improved corporate profitability and some improvement in Mergers & Acquisition activities with improved valuations of assets in the stock markets and increased financial capability of potential buyers.¹ In emerging economies macroeconomic conditions improved and led to the changes in FDI policies, resulting in enhanced corporate profits attached with improvement in stock market valuations, which boosted mounting business confidence in global FDI scenario.

According to UNCTAD, these favorable developments may help translate Multi National Corporation's record level of cash holdings (estimated to be in the range of US\$ 4-5 trillion among developed countries' firms alone) into new investments during 2011.¹ The share of developing countries at over 50 per cent in total FDI inflows may increase further with well-built growth prospects in organized retail sector.

Being leaders of developing countries China and India both have more attractive market in retail sector. The GRDI report – 2012 ranks China in 3rd and India in 5th place. The present paper emphasis the trends in FDI of India and China in organized retail sector, and also changing FDI policies in both the economy.

THEORETICAL UNDERPINNINGS

Capital market theory is one of the oldest theories of FDI (1960s). According to this FDI is determined by interest rates. **Dynamic macroeconomic FDI theory:** FDI are a long term function of Trans National Company strategies. The timing of the investment depends on the changes in the macroeconomic environment "hysteresis effect". FDI theory based on exchange rates analyses the relationship of FDI flows and exchange rate changes and FDI as a tool of exchange rate risk reduction. FDI theory based on economic geography explores the factors influencing the creation of international production clusters and Innovation as a determinant of FDI – **Greta Garbo effect.** **Gravity approach** to FDI informs that closer two countries are (geographically, economically, culturally ...) the higher will be the FDI flows between these countries. FDI theories based on institutional analysis explores the importance of the institutional framework on the FDI flows with **Political stability** being key factor.

Product Life cycle theory: (Raymond Vernon & Lewis T. Well – 1966) explains macroeconomic phenomenon, which investigates the relationship between FDI and technology. According to this product life-cycle can be divided into three stages as new product stage, matured product stage and standardized product stage. In the early new product stage, firms place factories in the home country since the demand for a new product is too small elsewhere. As the expansion of production in the home country becomes too expensive, the mature oligopolistic invests in a host country with high income elasticity of demand and similar

⁸ Arpita Mukherjee, Nitisha Patel (2005), 'FDI in Retail Sector: India', *Academic foundation*, pp-2.

consumption patterns to the home country. Therefore it develops into the second stage of matured product. As the product turns into increasingly standardized and its competition is based on price, the product is manufactured in less developed countries (LDCs) for export.

The **internalization theory**, was developed by Buckley and Casson (1983), Rugman (1981) and Hennart (1982), it is primarily concerned with the transactions cost approach. The basic hypothesis of this theory is that MNEs emerge when it is more beneficial to internalize the use of such intermediate goods as technology than externalize them through the market. The core prediction of the theory is that, given a particular distribution of factor endowments, MNE activity will be positively related to the costs of organizing cross-border markets in intermediate products.

Eclectic FDI theory or OLI approach by John Dunning(1981) (O-ownership advantage, L- localization advantage, I- internalization factors) suggests that the greater the O and I advantages possessed by firms, more the L advantages of creating, acquiring (or augmenting) and exploiting these advantages from a location outside its home country. This leads to creation of more FDI. Where firms possess substantial O and I advantages but the L advantages favor the home country, then domestic investment will be preferred to FDI and foreign markets will be supplied by exports.

Economic Conditions: like Market Size, potential market size, Rate of return, Urbanization/Industrialization, Labour cost, Human capital, Physical Infrastructure known to influence FDI along with Macroeconomic fundamentals like inflation, financial health, tax regime and macroeconomic stability. **Host Country Policies:** Promotion of private ownership, efficient financial market, trade policies/regional trade agreements, FDI policies/investment incentives, legal framework, quality of beaurocracy and openness attracts more FDI into a country.

OBJECTIVES

- To study FDI policies in organized retail sector both in India and China.
- To analyze trend in FDI inflow in organized retail sector between India and China.

HYPOTHESIS

- There is no significant difference in FDI inflow in organized retail sector between India and China.

METHODOLOGY

The study is based on secondary data like GRDI reports, FICCI reports, research article and journals. For data analysis FDI inflow in retail sector both China and India have been taken from 2006-2011 and for analysis the appropriate statistical tools like regression, simple table, line graph and flow charts have been used.

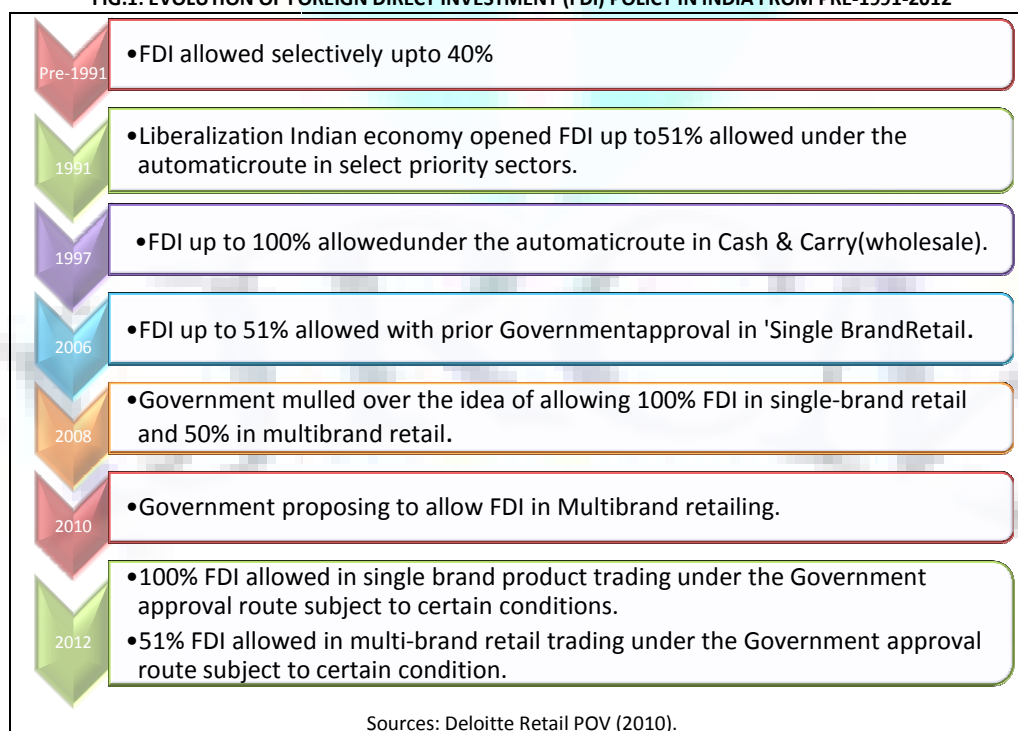
SCOPE OF THE STUDY

This paper highlights the global retail scenario, trends in FDI policy over a period of both India and China. It also attempts to study the difference between the FDI inflow between India and china (2006-2011).

EVOLUTION OF FOREIGN DIRECT INVESTMENT (FDI) POLICY IN INDIA

India ranks 5th in GRDI report 2012, with accelerated retail growth of 15 to 20 percent. In next five years an average annual retail growth can be expected around 6-7 percent with rise in GDP, higher disposable income and rapid urbanization. Overall retail market contributes to 14 percent of India's GDP; organized retail growth is low at 5 to 6 percent. The retail sector employs approximately 8 percent of India's population with demand for skilled workers expected to rise. Even though, India has delayed to open up its economy, it has given a provision to private as well as foreign investment in last two decades. The foreign investment is directed by government through the FDI policy which control industries open to foreign investment, and also the percentage that can be held by the foreign companies. Globalization and liberalization have immensely influenced Indian economy and have gone a long way in making it a profitable consumer market. The government in a series of moves has opened up the retail sector slowly to FDI. There were initial reservations towards opening up of retail sector arising from fear of job losses, procurement from international market, competition and loss of entrepreneurial opportunities. In 1997, FDI in cash and carry (wholesale) with 100 percent ownership was allowed. In 2006, 51 percent investment in a single brand retail outlet was permitted. Since then retailing through franchisee route has been explored by several global brands.

FIG.1: EVOLUTION OF FOREIGN DIRECT INVESTMENT (FDI) POLICY IN INDIA FROM PRE-1991-2012



Today about 1.0 million people are employed directly by organized retail. Without FDI, this number is expected to increase to 2 million by 2016 (plus \$ million opportunities via indirect employment). FDI in retail can potentially add another 1.5 million jobs by 2016 (additional direct and indirect job creation). Over 80% of

this employment opportunity will be for people with minimum qualification. Also, these jobs offer higher salaries, defined career paths and a better work environment compared to unorganized retail.

EVALUATION OF FOREIGN DIRECT INVESTMENT (FDI) IN CHINA

China rose to third place in the GRDI- 2012. The country's future retail growth remains positive, with a double-digit rise in annual sales expected. Inflationary pressures are driving up rent rates up to 30 percent and labour costs are by 15 percent per year. While domestic players still dominate the Chinese market major international retailers are expanding rapidly with a focus on tier II, III, and IV cities. China has become the world's largest luxury goods market with \$ 12 billion in sales. More than 100 percent brands are active in the country fast experiencing on an average growth rate of 30 percent for the past few years.

China has received over Rs. 1.5 lakh crore grow at an extremely fast pace. In fact the amount of sourcing from China has grown at a much higher rate compared to the increase in revenues of foreign retail players. China started the journey of FDI in retail back in 1992 and is now almost fully open to FDI since 2005. FDI in retail is now outpacing overall FDI in China at an overall growth rate of 42%.

FIG.2: EVOLUTION OF FOREIGN DIRECT INVESTMENT (FDI) POLICY IN CHINA (1992-2005)

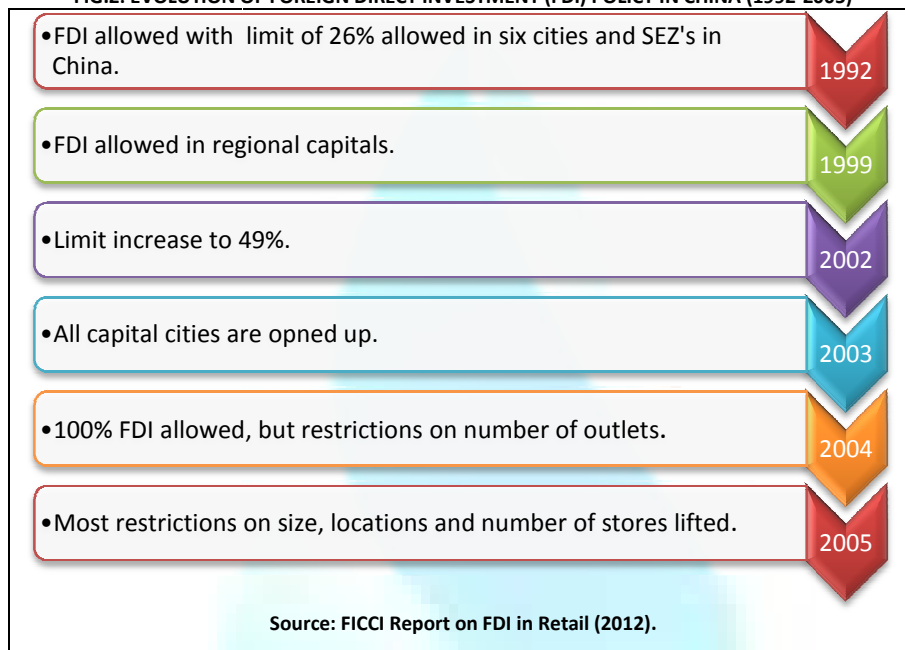
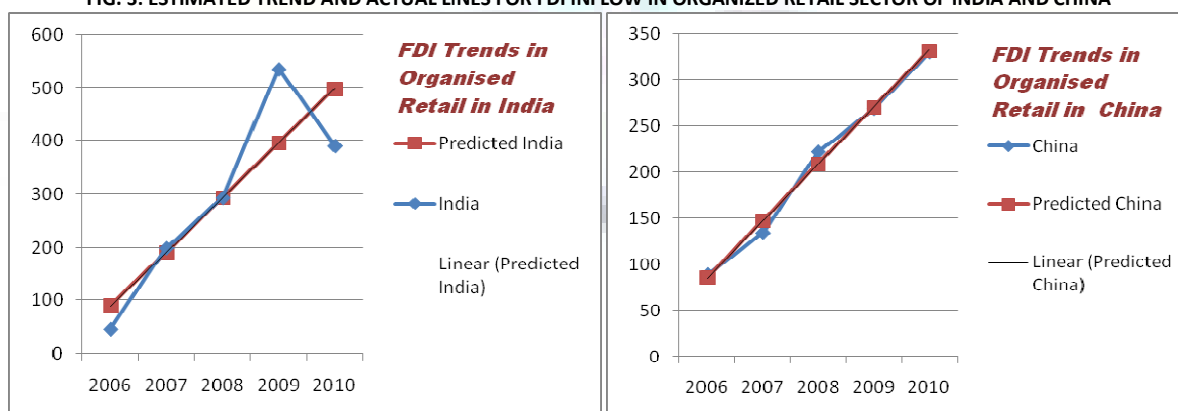


TABLE 1: FDI INFLOW IN ORGANIZED RETAIL SECTOR OF INDIA AND CHINA FROM 2006-2011

Year	India		China	
	Actual	Predicted	Actual	Predicted
2006-07	47	88.8	89	85.4
2007-08	200	191.2	134	147.1
2008-09	294	298.6	222	208.8
2009-10	536	396	269	270.5
2010-11	391	498.4	330	332.2

Sources: RBI annual Report 2011-12⁴ & FICCI Report on FDI in Retail (2012).

FIG. 3: ESTIMATED TREND AND ACTUAL LINES FOR FDI INFLOW IN ORGANIZED RETAIL SECTOR OF INDIA AND CHINA



$$\text{FDI in retailing} = b_0 + b_1 t$$

$$\text{FDI in retailing}_{\text{India}} = -205326 + 102.4t$$

$$Se (66557.06387) (33.14593992)$$

$$t (-3.084955797) (3.089367815)$$

$$(0.053926) (0.05374)$$

$$\text{FDI in retailing}_{\text{China}} = -123685 + 61.7t$$

$$Se (7012.686003) (3.492372641)$$

$$t (-17.63729332) (17.66707231)$$

(0.000397) (0.000395)

The trend equations indicate that there is difference in the trend coefficients of India and China. India's trend coefficient with 102.4 is greater than China's trend coefficient 61.7 reflecting greater flows for India in organized retailing with each passing year when compared to China.

ANALYSIS AND INTERPRETATION

$$Y = \beta_0 + \beta_1 D_1$$

Where Y= FDI in retailing, β_0 = intercept, β_1 =co efficient, D_1 =FDI inflow, 1=China, 0=India.

H_0 : there is no significant difference in the FDI inflow in organized retail sector between India and China.

H_1 : there is a significant difference in the FDI inflow in organized retail sector between India and China.

$$Y = \beta_0 + \beta_1 D_1$$

$$= 293.6 - 84.8D_1$$

Se	(66.37996686)	(93.8754494)
t	(4.42302119)	(0.90332457)
	(0.00221754)	(0.392740838)

As the regression shows that the mean of the FDI inflow in India is about US \$293.6 million and China is about US \$208.8. The estimated slope of coefficient for dummy variable (-84.8) is not statistically significant (p-value is 39%). Therefore there is no significant difference in the FDI inflow in organized retail sector between India and China. Even though China has given 100 percent FDI provision in organized retail sector in 2004, Chinese retail market still remains as a battle field for some foreign investors and retailers as they struggle with domestic retailers, more price sensitiveness of consumers and lack of brand loyalty restrictions on number of outlets, locations, suppliers and regulations. India is opened up its retail market for global retailing in late 2006; still it maintained same status FDI inflows like China. The changes in FDI policy that is 100% provision in Single brand and 51% in Multi-brand retailing is attracting the global retailers towards Indian retail market. Along with increase in GDP growth rate, higher disposable income, rapid urbanization, participation of youth in retail expenditure and more brand loyalty are the major factors attracting the masters of globalization that is four major retailers of world investors namely Wal- Mart, Carrefour, Tesco and Metro groups to have their future projects in India retail sector.

CONCLUSION

The FDI policy of organized retail sectors in India is changing over a period of time. It was only 40 % (wholesale market) in pre liberalization. In 2006 government approved FDI to allow only 51% in single brand in retail sector and in 2012 it increased up to 100% in single brand and 51% in multi-brand. Whereas China allowed only 26% FDI in retail sector in 1992 and it went up to 49% in 2002. It reached 100% in 2004 with restrictions on number of outlets, locations, suppliers and regulations. The trend equations indicate that there is difference in the trend coefficients of India and China. India's trend coefficient with 102.4 is greater than China's trend coefficient 61.7 reflecting greater flows for India in organized retailing with each passing year when compared to China.

The dummy regression shows that the mean of the FDI inflow in India is about US \$293.6 million and China is about US \$208.8. The estimated slope of coefficient for dummy variable (-84.8) is not statistically significant. Therefore there is no significant difference in the FDI inflow in organized retail sector between India and China. Though the overall FDI inflows for China are higher than India, the trend equations for the two countries indicate greater FDI inflows for India when compared to China in the organized retail sector. This is because of Chinese retail market being a battle field for some foreign investors and retailers as they struggle with domestic retailers, more price sensitiveness of consumers and lack of brand loyalty restrictions on number of outlets, locations, suppliers and regulations as mentioned earlier.

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FOREIGN DIRECT INVESTMENT INFLOWS INTO USA

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ABSTRACT

Foreign Direct Investment (FDI) of the USA is growing very rapidly in recent years and the FDI will be posing a lot of problems to the USA in the years to come. Hence a perspective plan is necessary to mobilize investment for the servicing of FDI. Projection of FDI will help to get a clear idea about our future commitments and then to plan accordingly. This research work clearly analysed how the FDI of the USA has grown during the period from 1971 to 2010 and what would be USA FDI in the near future besides it would also help to get a clear picture about the Economic Growth through using the tools of Regression, Correlation analysis and Time Lag model were used to overcome the various work also analyses to overcome the various problems of inflows of USA FDI.

KEYWORDS

Foreign Direct Investment, Regression, Correlation, and Time Lag.

1. INTRODUCTION

Foreign direct investment (FDI) is defined as a long term investment by a foreign direct investor in an enterprise resident in an economy other than that in which the foreign direct investors is based foreign direct investment (FDI) is also defined as investment made to acquire lasting interest in enterprises operating outside of the economy of the investor. The FDI relationship consists of a parent enterprise and a foreign affiliate which together form a multinational corporation (MNC). In order to qualify as FDI has investment must afford the parent enterprise control over its foreign affiliate. The UN defines control in this case as owning 10 per cent or more of the ordinary shares or voting power an incorporate firm or its equivalent for an unincorporated firm lower ownership shares are known as portfolio investment foreign direct investment (FDI) flows have increased dramatically in last few decades. As developed economics. Particularly in USA remove restrictions and implement policies to attract FDI inflows. Trade and investment have become increasingly intertwined. As such there have been growing calls for a multilateral framework of foreign investment rules to be negotiated under the auspices of the world trade organization (WTO).⁹

FDI refers to capital inflows from abroad that invest in the production capacity of the economy and are "usually preferred over other forms of external finance because they are non-debt creating, non-volatile and their returns depend on the performance of the projects financed by the investors. FDI also facilitates international trade and transfer of knowledge, skills, and technology." It is furthermore described as a source of economic development, modernization, and employment generation, whereby the overall benefits (dependent on the policies of the host government) "...triggers technology spillovers, assists human capital formation, contributes to international trade integration and particularly exports, helps create a more competitive business environment, enhances enterprise development, increases total factor productivity and, more generally, improves the efficiency of resource use."¹⁰

As such it may take money forms. Such as a direct acquisition of foreign form construction of a facility or investment in a joint venture or strategic alliance with a local firm with attendant input of technology, licensing of intellectual property. In the past decade, FDI has come to play a major role in the internationalization of business. Reacting to changes in technology growing liberalization of the national regulatory framework governing investment in enterprise and change in capital market scope and methods of FDI. New information technology system, decline in global communication costs have made management of foreign investment far easier than in the past. The sea change in trade and investment policies and the regulatory environment globally in the past decade including trade policy and tariff liberalization easing of restrictions on foreign investment and acquisition in many nations, and the deregulation and privatization of many industries has probably been the most significant catalyst for FDI's expanded role.¹¹

Foreign Direct investment is new facilities or the expansion of existing facilities Greenfield investment are the primary target of a host nation's promotional efforts because they create new production capacity and jobs, transfer technology and know-how and can lead to linkages to the global market place. The organization for international investment at the benefits of Greenfield investment (or insourcing) for regional and national economies to include increased employment often at higher wages than domestic firms investments in research and development and additional capital investments criticism of the efficiencies obtained from Greenfield investments include the loss of market share for competing domestic firms. Another criticism of Greenfield investment is that profits are perceived to hypes /ball economies and instead flow back entirely to the multinational's home country. Critics contrast this to local industries whose profits are seen to flow back entirely into the domestic economy.¹²

This is especially applicable for the economically developing countries. During the decade of the 90s foreign direct investment was one of the major extreme sources of financing for most of the countries that were growing from an economic perspective.

Foreign direct investment also permits the transfer of technologies. This is done basically in the way of provision of capital inputs. The importance of this factors use in the fact that this transfer of technologies cannot be accomplished by way of trading of goods and services as well as investment of financial resources. It also assists in the promotion of the competition within the local input market of a country.

The countries that get foreign direct investment from another country can also develop the human capital resources by getting their employees to receive training on the operations of a particular business. Foreign direct investment helps in the creation of new jobs in a particular economy or country. It also helps in

⁹. Preet Kamal, (2009) "Foreign Direct Investment", <http://preetkamal.hubpages.com/hub/pks>

¹⁰. Dr. Khandare V.B. Dr. S. N. Babar, 2012, "Structure of Foreign Direct Investment in India during globalization period", Indian Streams Research Journal, 2, III, pp 1-4.

¹¹. Jeffrey P. Graham and R. Barry Spaulding, 2004, "Understanding Foreign Direct Investment," Going Global, http://www.going-global.com/articles/understanding_foreign_direct_investment.htm

¹². Benefits of FDI the International Trade Administration. Retrieved on 2010-03-10.

increasing the salaries of the workers. This enables them to get access to a better life style and more facilities in life. Foreign direct investment can also bring in advanced technology and skill set in a country. These are also some scope for new research activities being undertaken.

1.1. FDI IN USA

The United States is the world's largest recipient of FDI US. FDI totaled 194 billion of US dollars in 2010.84 per cent of FDI in the US in 2010 came from or through eight countries Switzerland, the United Kingdom, Japan, France, Germany, Luxembourg, Netherlands, and Canada US Dollar 2.1 trillion stock of FDI in the United States at the end of 2008 in the equivalent of approximately 16 percent of US gross domestic product (GDP).

Inflow of FDI in USA deals with during 1971 to 2010. During 1971 the inflow of USA FDI was 870 million of US Dollars it was increase in 1980 16918 million of US Dollars. In 2001 the FDI inflow of USA was 159477.6 million of US Dollars. It was increase during 2010, 228249 million of US Dollars finally conclude that the inflow of FDI in USA comparatively increasing between the time period of 1971 to 2010.¹³

At a time when job creation is paramount, it is outstanding news that global companies are pumping. The dramatic increase in such investment is a clear sign that these companies have a decidedly positive outlook for the American economy of particular note the new statistics shows that the US operations of global companies are reinvesting what they earn back into their US plants and factories Re invested earnings more than tripled from 28.5 billion of US Dollars in 2009 to 93.1 billion of US Dollars in 2010.¹⁴

1.2. INFLOW FDI IN DEVELOPED COUNTRIES

In developed countries increase the FDI over the period of year during 1971 state FDI in Developed countries 10050.6 million of US dollars (8.17 per cent) increasing the FDI in developed countries in 1980,46575.81 million of US Dollars (36.32). The last decade FDI was increase during the period of 2010. It comparatively differs between two periods. In 2010 developed countries FDI was grew up 601905.9 million of US dollars (37.92 per cent). FDI flows bounced back slightly in the second quarter of 2009, but remained low for the rest of the year. According to UNCTAD's Global FDI Quarterly Index, however, foreign investment showed renewed dynamism in the first quarter of 2010. Cross-border mergers and acquisitions (M&As) – still low at \$250 billion in 2009 – rose by 36 per cent in the first five months of 2010 compared to the same period in the previous year. This suggests that annual FDI flows are likely to recover in 2010, thanks to higher economic growth in the main home and host countries, improved corporate profitability, and higher stock valuations.¹⁵

2. REVIEW

Economic literature enumerates a number of studies on the various aspects of FDI inflows into USA (Glen Biglaiser and David Lektzian (2011), Rao V. Nagubadi, Daowei Zhang (2011), Theresa M. Greaney. Vao Li (2009), Axel Grossmann, Marc W. Simpson, Cynthia J. Brown (2009), Miguel D. Ramirez (2006), Reid W. Click (2005), Rahim Bang (2004), Kai Carstansen and Faid Toubal (2004), Setni, SE Gusinger, SE Phelan and DM Berg (2003), Wilbur Chung Juan Alcales (2002), Murray S. Simpson (2001), James H. Love and Francisco large-Hidalgo (2000), J. Myles Shaves and Fredrick Flyer (2000), J. Myles Shaver. Will Mitchell and Bernard. Yeung (1997), Hong Y. Part (2000), Manuel G. Serapio Jr. Donald .H. Dalton (1999), Marjam Svetetic, Matija Rojec (1999), Joseph Friedman Daniel A Gerlowski. Jonathan Silberman (1996), Benjamin Tan, Ilan Verinsky, (1996), John .B, Goodman Debora Spar and David B. Yoffie (1996), Francis M. Ulgad (1994), Andrew Solochal, Mark D. Soskin, Mar J. Kasoff (1990), In this work on (1988), Grosse (1988), Jaffrey S. AR pan, B. ,David A. Ricks, (1981), John. M. Stopford (1980), and James E. Mc Connell (1980)). However, the extent of trend analysis through time lag model in FDI inflows into USA, have not been studied.

3. DATA AND METHODOLOGY

To study the extent of time series data on total FDI inflows into USA. to be more specific this study describe the FDI inflows in terms of actual value, FDI Index and annual growth rate and trend analysis through simple linear regression model and semi log linear regression model and semi log linear model. To the relationship between the FDI and Economic Growth through lagged regression models, first the regression model is fitted by taking the GDP as the dependent variable for the set of data on respective years. Secondly, a time lag is introduced and influence of FDI in GDP is studied. To study the advantages of FDI is that it will stimulate growth process and help to achieve a higher rate of growth, the time series data for a period 40 years, from 1971 to 2010 have been used. This period is divided into four sub periods consisting of first ten years from 1971 to 1980, the second ten years from 1981 to 1990, the third ten years from 1991 to 2000, and the fourth ten years from 2001 to 2010.

4. ANALYSIS

4.1. FDI TRENDS IN UNITED STATES OF AMERICA

Total FDI inflows, Index number and annual growth rates are given in table 1. During the decade from 1971 to 1980, USA's FDI inflow in dollar terms has increased more than 19-folds from 870 million of US dollars in 1971 to touched 16.92 billion of US dollars in 1980. Moreover the same period the highest annual growth rate was 101.72 per cent in 1978 and lowest annual growth rate was -30.95 per cent in 1972. During the same decade, the average value of FDI inflows and annual growth rate works out to 4.78 billion of US dollars and 204.96 per cent per year respectively.

During the decade from 1981 to 1990, the value of FDI inflows in dollar terms has increased more than 2-folds from 25.20 billion of US dollars in 1981 to touched 48.42 billion of US dollars in 1990. Moreover the same period the highest annual growth rate was 121.974 per cent in 1984 and lowest annual growth rate was -45.187 per cent in 1981. During the same decade, the average value of FDI inflows and annual growth rate works out to 37.83 billion of US dollars and 10.24 per cent per year respectively.

During the decade from 1991 to 2000, FDI inflows into USA have grown sizably. The value of FDI inflows in dollar terms has increased more than 13-folds from 22.80 billion of US dollars in 1991 to touched 314.00 billion of US dollars in 2000. Moreover in this decade the highest annual growth rate was 68.693 per cent in 1998 and lowest annual growth rate was -165.576 per cent in 1993. During the same decade, the average value of FDI inflows and annual growth rate works out to 115.65 billion of US dollars and 141.91 per cent per year respectively.

During the decade from 2001 to 2010, the value of FDI inflows in dollar terms has increased more than 2-folds from 159.48 billion of US dollars in 2001 to touched 306.37 billion of US dollars in 2008 and then it started showing a declining trend. Moreover the same period the highest annual growth rate was 126.254 per cent in 2006 and lowest annual growth rate was -50.094 per cent in 2009. During the same decade, the average value of FDI inflows and annual growth rate works out to 166.84 billion of US dollars and 4.7914 per cent per year respectively.

¹³ . US International Direct Investment, (2010)", Organization for International Investment, http://www.ofii.org/docs/FDIUS_2010.pdf

¹⁴ . James K. Jackson, 2012, "Foreign Direct Investment in the United States: An Economic Analysis", Congressional Research Service, <http://www.fas.org/sgp/crs/misc/RS21857.pdf>

¹⁵ . Dr. Khandare V.B. Dr. S. N. Babar, 2012, "Structure of Foreign Direct Investment in India during globalization period", Indian Streams Research Journal, 2, III, pp 1-4.

TABLE 4.1: FDI INFLOWS INTO USA DURING 1971-1980(millions of US dollars)

Year	USA	Index Number	Annual growth rate
1971	870	100	-
1972	1350	155.172	-30.952
1973	2120	243.678	55.172
1974	3330	382.759	57.037
1975	2560	294.258	-23.12
1976	3250	373.563	26.953
1977	2900	333.333	-10.769
1978	5850	672.412	101.724
1979	8700	1000	48.718
1980	16918	1944.598	94.459
Average	4784.8		204.955
1981	25195	100	48.92
1982	13810	54.8152	-45.187
1983	11518	45.715	-16.5977
1984	25567	101.476	121.974
1985	20490	81.326	-19.857
1986	36145	143.461	76.403
1987	59581	236.479	64.838
1988	68571	232.471	-1.695
1989	69010	273.904	-17.823
1990	48422	192.189	-29.834
Average	37830.9		10.2432

Source: UNCTDA.

TABLE 4.1:- FDI INFLOWS INTO USA DURING 1971-1980(millions of US dollars)

Year	USA	Index Number	Annual growth rate
1991	22799	100	-52.92
1992	19222	84.31	-15.689
1993	50664.65	222.223	-163.576
1994	45090.64	197.774	-11.00
1995	58772	257.783	30.342
1996	84460	370.455	43.707
1997	105405.7	453.554	22.43
1998	174438.8	765.116	68.693
1999	283676.4	1244.249	62.622
2000	313997.2	1377.241	10.689
Average	115652.639		141.91
2001	159477.6	100	--
2002	74500.56	46.715	-53.284
2003	53140.5	33.322	-28.641
2004	135849.8	85.184	55.642
2005	104809.3	65.720	-22.849
2006	237136	148.695	126.254
2007	215952	135.412	-8.9332
2008	306366	192.106	41.8676
2009	152892	95.871	-50.094
2010	228249	143.123	49.285
Average	166837.276		4.7914

Source: UNCTDA.

4.2.TREND ANALYSIS FOR THE FDI INFLOWS INTO UNITED STATES OF AMERICA

The results of the trend analysis reveal that the FDI inflows into USA increased per decade 1296.558 millions of US dollars during 1971 to 1980. The regression co-efficient of the semi-log linear model implies that the FDI inflows increased at the compound growth rate of 86.638 per cent per year. The regression co-efficient in the both models are significant at percent level. The value of adjusted R^2 is high in the simple linear model. It means that the FDI inflows of USA during 1971 to 1980 were not linear trend in this period. The FDI inflows into USA increased next decade by 5747.91 million of US dollars during 1981-1990. The regression co-efficient of the semi- log linear model implies that FDI inflows decreased at the compound growth rate of 48.594 per cent per year. The regression co-efficient in both models are significant at one per cent level. The value of adjusted R^2 0.706 is very high in this care. It means that the FDI inflows into USA had registered at linear trend in this period around 70 per cent of variations in the dependent variable are explained by the independent variable. The FDI inflows of USA independent variable. The FDI inflow of USA was increased 32069.51 million of US dollars during 1991-2000. The regression co-efficient of the semi log linear model implies that FDI inflows increased at the compound growth rate of 105.116 per cent per year. The regression co-efficient in both models are significant at one per cent level. The value of adjusted R^2 0.8 is very high in this case it means that the FDI inflows into USA had registered at not linear trend in this period and amount 82 per cent the inflow of FDI in USA was discussed in next decade during 2001 to 2010. The regression co-efficient of the semi-log linear model implies that FDI inflows decreased 17008.16 millions of US dollars the compound growth rate was 30.918 per cent per year. The regression co-efficient in both models are significant at five per cent level. The value of adjusted R^2 0.41 very low in this care it means that the FDI inflows into USA had registered at linear trend in this period around 41 per cent of variations in the dependent variable are explained by the independent variable. Comparing the four decades during 1971 to 2010. The FDI inflows into USA increased per decade by the highest amount of 32069.51 million of US dollars in the third decade during 1991 to 2000. The highest compound growth rate of 105.116 per cent was recorded during the same period.

TABLE 4.2: RESULTS OF TREND ANALYSIS FOR THE FDI INFLOWS INTO USA

Period	Model	a	b	SE _b	t	Sig	R ²	Adjusted R ²	CGR
1971-1980	Simple linear	-2346.267	1296.558	330.723	3.920	.004	.658	.615	-
	Semi log linear	6.625	0.271	.034	8.029	.000	.890	.876	86.638
1981-1990	Simple linear	5217.400	5747.909	1311.282	4.383	.002	.706	.669	-
	Semi-log linear	9.403	0.172	.042	4.140	.003	.682	.642	48.594
1991-2000	Simple linear	-60729.645	32069.506	5173.131	6.199	.000	.828	.806	-
	Semi-log linear	9.544	0.312	.025	13.544	.000	.958	.953	105.116
2001-2010	Simple linear	73289.160	17008.748	7096.322	2.397	.043	.418	.345	-
	semi-log linear	11.262	0.117	.049	2.355	.046	.409	.336	30.918

4.3. IMPACT OF FDI ON ECONOMIC GROWTH LAGGED MODEL APPROACH

4.3.1. INTRODUCTION

In this part an attempt is made to study the relationship between the FDI and Economic Growth through lagged regression models. First the regression model is fitted by taking the GDP as the dependent variable and FDI as the independent variable for the set of data on respective years. Secondly, a time lag is introduced and the influence of FDI on GDP is studied. The time lag is increased at each stage one by one to investigate whether the spillover effect increases or decreases, depending on the availability of data. The results of the analysis of the current data and lagged models are discussed for U.S.A in the section.

The correlation between GDP and FDI is the highest for the set of data without any lag. It is 0.74. The correlation continues to be greater than 0.7 till the time lag $t=25$ and the correlation coefficient touches the highest value of 0.87 when $t=27$. Thus the influence FDI on GDP is high in U.S.A.

The regression coefficient is 36.41 when there is no time lag and it increases gradually when time lag is increased. The regression coefficient significant at one per cent level. Initially, FDI explains 55 per cent of variations in GDP. The explanatory power of FDI increases to 76 per cent when time lag is 27.

Initially, FDI is capable of explaining 54 per cent of variations in GDP. The explanatory power is slightly reduced at the middle of time lag. The value of adjusted R^2 also shows a cyclical pattern and it touched the highest value of 0.74 when $t=27$. Therefore, in the case of USA, FDI remains a significant variable in influencing the GDP and the effect of FDI on GDP shows a cyclical pattern as time lag is introduced. FDI is capable of explaining 74 per cent of variations in GDP when time lag is 27. That is, FDI has exerted the high influence on GDP after 27 years in USA.

TABLE 4.3.1: IMPACT OF FDI AND ECONOMIC GROWTH RESULTS OF LAGGED APPROACH MODEL

Year	time lag	R	A	B	SE _b	t-value	R ²	Adjusted R ²	F	DW
1971	t=0	0.743	372950.80	36.41	5.32	6.84	0.55	0.54	46.84	1.45
1972	t=1	0.726	4033685.25	36.10	5.62	6.42	0.53	0.51	41.22	1.07
1973	t=2	0.771	3824888.25	37.83	5.21	7.26	0.60	0.58	52.66	0.93
1974	t=3	0.755	4041593.17	40.19	5.90	6.81	0.57	0.56	46.41	0.81
1975	t=4	0.730	4372246.21	39.90	6.40	6.23	0.53	0.52	38.84	0.76
1976	t=5	0.686	4747419.08	39.45	7.29	5.42	0.47	0.45	29.31	0.71
1977	t=6	0.696	4964293.03	39.30	7.18	5.48	0.48	0.47	29.10	0.74
1978	t=7	0.702	5210319.89	39.38	7.17	5.51	0.49	0.48	30.19	0.65
1979	t=8	0.731	5332479.73	40.00	6.82	5.86	0.53	0.52	34.39	0.83
1980	t=9	0.745	5526958.22	39.84	6.62	6.02	0.56	0.54	36.22	0.84
1981	t=10	0.715	5901826.35	38.47	7.10	5.41	0.51	0.49	39.31	0.61
1982	t=11	0.693	6024025.89	47.46	9.50	5.00	0.48	0.46	24.98	0.73
1983	t=12	0.764	5476848.62	79.83	13.22	6.04	0.58	0.57	36.49	0.87
1984	t=13	0.792	5081260.23	113.01	17.43	6.49	0.63	0.61	42.06	1.06
1985	t=14	0.738	5381078.93	120.25	22.42	5.37	0.55	0.53	28.78	1.18
1986	t=15	0.732	5543216.63	132.13	25.64	5.15	0.53	0.52	26.55	0.99
1987	t=16	0.745	6173031.40	128.06	24.41	5.25	0.56	0.54	27.51	1.06
1988	t=17	0.77	6438738.92	130.24	23.93	5.44	0.59	0.57	29.63	1.20
1989	t=18	0.77	6754178.11	132.44	24.59	5.39	0.59	0.57	29.02	1.09
1990	t=19	0.81	6901310.49	134.13	22.70	5.91	0.65	0.63	34.91	1.48
1991	t=20	0.82	7164487.05	131.51	22.05	5.97	0.66	0.66	35.59	1.47
1992	t=21	0.76	7703168.05	124.26	25.64	4.85	0.58	0.56	23.48	1.19
1993	t=22	0.72	8058749.54	136.09	32.99	4.13	0.52	0.49	17.01	1.16
1994	t=23	0.68	8385190.42	152.02	41.84	3.68	0.47	0.43	13.20	1.14
1995	t=24	0.73	8105700.44	234.20	59.45	3.94	0.53	0.49	15.52	0.99
1996	t=25	0.86	9248178.29	225.16	37.63	5.98	0.73	0.71	35.79	1.50
1997	t=26	0.87	9726450.93	219.78	35.98	6.10	0.76	0.74	37.31	1.18
1998	t=27	0.84	10195862.35	229.03	45.12	5.08	0.70	0.68	25.77	0.82
1999	t=28	0.77	10830415.83	187.82	40.89	3.77	0.59	0.55	14.17	0.92
2000	t=29	0.71	11398866.66	157.82	52.99	2.98	0.49	0.44	8.87	0.36
2001	t=30	0.68	11624274.52	223.71	85.30	2.62	0.46	0.40	6.88	0.40
2002	t=31	0.74	11468311.36	434.05	151.23	2.87	0.54	0.48	8.24	0.64

4.4. FDI AND ECONOMIC GROWTH

One of the advantages of FDI is that it will stimulate growth process and help to achieve a higher rate of growth. However, FDI does not guarantee growth uniformly all the countries and at all points of time in all the developed countries USA also many factors influence the effect of FDI on growth in an economy. Hence in this chapter an attempt is made to study the relationship between FDI and Economic growth through correlation and regression analysis.

4.4.1. CORRELATION ANALYSIS

Correlation analysis generally helps to study the degree and direction of relationship between two variables. If FDI stimulates the growth process and a high growth rate is achieved. There will be strong positive correlation between FDI and GDP. If the growth of FDI does not yield adequate growth the correlation will be low or insignificant.

To study the correlation between FDI and GDP the time period taken for analysis is divided into four sub periods. The first period is from 1971 to 1980 and the second period is from 1981 to 1990 and third period is from 1991 to 2000 and the final period is from 2001 to 2010. The Karl Pearson's correlation co-efficient is calculated for these four periods for the USA taken for analysis depending on the availability of data. The correlation co-efficient are tested against the null hypothesis that their value is equal to zero using the 't' test. A positive and significant correlation implies a high degree of association between FDI and Economic growth. The correlation worked out for the USA for the four sub periods are given in the table 5.4.1

TABLE 4.4.1: FDI AND ECONOMIC GROWTH RESULT OF THE CORRELATION ANALYSIS

S.No	Country USA	First Period	N	Second Period	N	Third period	N	Fourth Period	N
1.	USA	-117 (.748)	10	.516 (.127)**	10	.634 (.049)*	10	.740 (.014)*	10

** significant at one per cent level.

* Significant at five per cent level.

During the first decade during the period from 1971 to 1980 the correlation co-efficient between FDI and GDP is not significant for USA. Even though the actual value of correlation for this period is negative. They do not indicate a statistically significant association between FDI and economic growth in these year.

In the second decade the period from during 1981 to 1990 the correlation co-efficient are significant at one per cent level for USA. The significant correlation indicates that FDI has been an instrumental factor in promoting economic growth in this country. However, in the care of third period during 1991 to 2000 the correlation co-efficient are significant at five per cent level for USA. The significant correlation indicates that FDI has been an instrumental factor in promoting economic growth in this country.

In last decade during the period from 2001 to 2010 deals with the correlation co-efficient are significant at one percent level for USA. The significant correlation co-efficient indicates that FDI has been an instrumental factor in promoting economic growth in USA.

4.4.2. COMPARISON OF CORRELATION CO-EFFICIENT

The correlation co-efficient value is negative during the period from 1971 to 1980. In this decade the correlation is not increased after 1980 to 2001 the correlation co-efficient was increased year by year. Hence, the influence of FDI on economic growth is improved since 1981 in the case of USA. The relationship between FDI and GDP has been good. Since 1990, it means that FDI bring out optimum benefits to promote growth in USA.

4.4.3. REGRESSION ANALYSIS

To analyze the relationship between the FDI and GDP, Simple linear regression model is used by taking the FDI as the independent variable and GDP as the dependent variable for the four sub periods separately. FDI and GDP are measured in millions of US Dollars. The regression co-efficient in this case will measure the increase in GDP in millions of US Dollars if the FDI is increased by millions of US Dollars. The regression co-efficient is also tested for the null hypothesis that its value is zero. The co-efficient of determination, R^2 will measure the ability of the independent variable FDI to explain the variations in GDP.

TABLE 4.4.3: FDI AND ECONOMIC GROWTH RESULTS OF THE REGRESSION ANALYSIS

Year	Model	a	b	SE _b	t	sig	R ²	Adj R ²	F
1971-1980	Simple linear	3355357.366	-82.016	246.904	-0.332	0.748	0.014	-0.110	0.110
1981-1990	Simple linear	2544270.038	38.274	22.488	1.702	0.127	0.206	0.174	2.897
1991-2000	Simple linear	5321834.683	15.434	6.659	2.318	0.049*	0.402	0.327	5.373
2001-2010	Simple linear	10225594.950	14.800	4.752	3.114	0.014*	0.548	0.492	9.699

** Significant at one per cent level.

* Significant at five per cent level.

In the initial stages, FDI can promote the GDP by a larger amount and as the inflows of FDI increase continuously. The impact of FDI and GDP may decline in absolute terms. The estimated regression co-efficient its standard error co-efficient of determination and other important results for the four sub-periods for the various USA is above in table 5.4.1.

For USA, in the first period the regression co-efficient is not statically significant. The value of adjusted R^2 is also negative. Further FDI could not influence the GDP significantly in the first period. However, in the second period, the regression co-efficient 38.274 and this is significant at five per cent level of significance FDI now is capable of explaining 21 percent of variation in GDP. Hence GDP increased by 38.274 million of US Dollars. If FDI is increased by millions of US Dollars in the second period in USA. And FDI influence the GDP significantly in the second period in USA.

In third period, the regression co-efficient of USA is 15.434 and this co-efficient is statistically significant, the value of adjusted R^2 0.32 and hence FDI could explain 40 per cent of variations in GDP for USA in the third period. The inflow of FDI in USA during the period 1991-2000 was decreased 15.434 millions of US Dollars compares to the previous period. The third period the correlation co-efficient significant at one per cent level. FDI is capable of explaining 40 per cent of variation in GDP. Thus the influence of FDI on GDP is significant in the third period and FDI is capable of explaining the variation in GDP to a lower extent.

In fourth period, the regression co-efficient of USA is 14.800 and this co-efficient is statistically significant, the value of adjusted R^2 0.49 and hence FDI could explain 55 per cent of variation in GDP for USA in the fourth period. The inflow of FDI in USA during the time period from 2001 to 2010 was decreased 14.800 millions of US Dollars compared to the previous period. The fourth period the correlation co-efficient significant at one per cent level FDI is capable of explaining 55 per cent of variation in GDP. Thus the influence of FDI on GDP is significant in fourth period and FDI is capable of explaining the variation in GDP to a low level extent.

In overall period compared to the first period is negative value of inflows of FDI. In second period increased 38 million of US Dollars USA FDI inflows were decreased. The adjusted R^2 was negative during the first decade from 1971 to 1980 the next period was increased slowly for adjusted R^2 . The correlation co-efficient of FDI in USA was significant at one per cent level. The FDI influence GDP in slow rate.

5. CONCLUSION

Foreign direct investment in the United States in 2009 rose slightly over the amount invested in 2008, but set a record in nominal terms for the most amount of foreign direct investment in the economy in a year. Other countries have experienced a similar turnaround in foreign direct investment inflows, especially some of the less developed economies where there is a great potential for investment. As the rate of growth of the U.S. economy improves relative to other advanced economies, interest rates stay low, and the rate of price inflation stays in check, foreign direct investment in the United States likely will continue to increase. Of particular importance will be public concerns over foreign direct investment in the economy as a whole and on the overall phenomenon referred to as "globalization," with its impact on jobs in the economy.¹⁶

In general liberal policies along are not enough to attract FDI. Well-developed communication and infrastructure facilities, technological foundation, availability of skilled labour at low wages are some of the factors which would help to attract more FDI. Besides opening more sectors innovative skills, broad based research and development activities are also needed. Undeserving cases even a cent percent FDI can also be permitted if it can contribute for growth and provide employment without posing heavy burden on economy in future USA designing their FDI policy and utilize the benefits of FDI to the maximum possible extent for the upliftment of the welfare of the people.

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ARIMA MODEL BUILDING AND FORECASTING OF GDP IN BANGLADESH: THE TIME SERIES ANALYSIS APPROACH

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ABSTRACT

GDP is defined as the total market value of all financial goods and services produced within the country in a given period of time. A good region's Gross Domestic Product (GDP) is one of the ways of measuring the size of its economy. A fore cast is a quantitative estimate about the likelihood of future event based on past and current information. This information is embodied in the form of a model. The study was based on secondary data during the period from 1984-1985 to 2010-2011. Data was collected from Bangladesh Bureau of Statistics (BBS). Here GDP was measured at constant price (Base year 1995-96). The primary objective of the research was to find an appropriate ARIMA Model for forecasting, GDP. Forecasting attempts had been made to achieve the target by developing Box-Jenkins type autoregressive integrated moving average (ARIMA) model; consider the minimum of biased corrected information criterion of Akaike and Schwarz criteria. Primarily several models for different values of p , d and q were estimated from the different ARIMA model. The AIC and SIC for the model ARIMA [0,2,0] were 20.11, 19.88 respectively. and the adjusted $\bar{r}^2 = (.503)$ was very high compared to others models. More over from the above forecasted part it was found that the percentage variation between actual and forecasted value was very less. Therefore the suggested model is appropriate to forecast for the future time.

KEYWORDS

Production, ARIMA model, Forecasting.

1.0 INTRODUCTION

 GDP is defined as the total market value of all final goods and services produced within the country in a given period of time (Usually a Calendar Year). It is also considered the sum of a value added at every stage of production of all final goods and services within a given period of time. Business and finance dictionary defined GDP as follows "The monetary value of all the finished goods and services produced within a country's boarder in a specific time period. It includes all of private and public consumption, government outlays, invest and exports that occur within a defined territory.

$GDP = C + I + G + NX$

In recent years more and more attention has been given to modeling and forecasting the non- linearity in various macroeconomic series such as GDP and unemployment rate. Forecasting is vital in economics and in economical time series analysis. It is an integral part of the decision making activities of management. The need for forecasting is increasing as management attempts to decrease its dependence on chance and becomes more scientific in dealing with its environment. So forecasting, GDP is quite necessary for making valid economic policy. A number of models have been applied, such as the ARCH, GARCH, ARIMA and so on. Among them ARIMA model is more popular. The main advantage of Box-Jenkins ARIMA method is, for immediate and short term forecasting. The study will use ARIMA model to analyze GDP from Bangladesh.

1.2 REVIEW OF LITERATURE

There is great interest among researchers, on economic sectors performance analysis, based on comparison between different historic time intervals. One of the most important measures of the size of a country's economy is the Gross Domestic Product (GDP).

"Judi (2006) forecasted the non-oil GDP in the united Arab Emirate (UAE) by using Autoregressive Integrated Moving Average (ARIMA) models. The researcher divided the economic development in the United Arab Emirates into three eras. The researcher defined the most important sectors in the United Arab Emirates. Then she estimated the effect of the oil sector on the non-oil economy using ARIMA models, she showed the results of forecasting the non-oil Gross Domestic Product (GDP) up to the year 2020 by using ARIMA models.

Ediger and Akar (2006) used the Autoregressive Integrated Moving Average and seasonal ARIMA (SARIMA) methods to estimate the future primary energy demand of Turkey 2015 to 2020. The ARIMA forecasting of the total primary energy demand appears to be more reliable than the summation of the individual forecasts. Another interpretation was that any decrease in energy demand will show down the economic growth during the forecasted period.

Rahman (2010) examined the best fitted ARIMA model that could be used to make efficient forecast boro rice production in Bangladesh from 2008-09 to 2012-13 > It appeared from the study that the ARIMA (0,1,2) are the best for local, modern and total boro rice production respectively. It was observed from the analysis that short term forecasts are more efficient for ARIMA models.

Suleman and Sarpong (2012) examined the Box-Jenkins approach to model milled rice production using time series data from 1960 to 2010. The analysis revealed that ARIMA (2,1,0) was the best model for forecasting milled rice production. Although, a ten years forecast with the model shows an increasing trend in production, the forecast value at 2015 was not good enough to compare with the current production of Nigeria, the leading producer of rice in West Africa.

1.3 OBJECTIVES OF THE STUDY

The present study is carried out with the following objectives:

- 1) To estimate the best fitted ARIMA model.
- 2) To analyze the forecasting performances of the selected ARIMA models.
- 3) To compare the predicted values of GDP in Bangladesh.

2.0 METHODOLOGY

2.1 Introduction: The study represents a fundamental discussion about Autoregressive Integrated Moving Average Models. ARIMA models have been studied extensively in time series analysis and forecasting. They were popularized by Box and Jenkins in the early 1970's and their names have frequently been used synonymously with general ARIMA models.

2.2 ARIMA Model: Autoregressive (AR) models can be effectively coupled with Moving Average (AR) models to form a general and useful class of time series models called Autoregressive Integrated Moving Average (ARIMA) model (Makridakis, 1998). It is a combination of an Autoregressive process and a Moving Average process applied to a non- stationary data series. The general non-seasonal model is known as ARIMA (p , d , q).

Where,

AR (p) denotes the number of autoregressive terms

I (d) denotes the number of times the series has to be differenced before it becomes stationary.

MA (q) denotes the number of moving average terms.

The model is:

$$Y_t = C + \phi_1 Y_{t-1} + \phi_2 Y_{t-2} + \dots + \phi_p Y_{t-p} + e_t - \theta_1 e_{t-1} - \theta_2 e_{t-2} - \dots - \theta_q e_{t-q}.$$

C = constant term

d = difference

ϕ_i = i th autoregressive parameter, $i = 1, 2, \dots, p$

θ_j = j th moving average parameter, $j = 1, 2, \dots, q$

e_t = error term at time t .

2.3 Difference Operator for non-stationary time series: If a time series values y_1, y_2, \dots, y_n indicate that these values are non stationary we can transform the non-stationary series values by taking the first difference of the non-stationary time series values. That is, the difference of time series values y_1, y_2, \dots, y_n are $Z_t = y_t - y_{t-1}$, where, $t=2, \dots, n$ and the second difference of the time series values, y_1, y_2, \dots, y_n are

$$Z_t = (y_t - y_{t-1}) - (y_{t-1} - y_{t-2})$$

$$= y_t - 2y_{t-1} + y_{t-2} \text{ for } t = 3, 4, \dots, n$$

2.4 Autocorrelation and partial Autocorrelation Function: The identification of the model involves the comparison of sample autocorrelation (r_k) and partial autocorrelation (r_{kk}) function derived from the stationary time series. Box-Jenkins forecasting models are tentatively identified by examining the behavior of the sample Autocorrelation function (SAC) and Sample Partial Autocorrelation Function (SPAC) for the values of a stationary time series Z_b, Z_{b+1}, \dots, Z_n .

2.5 Box – Jenkins Methodology: To identify a perfect ARIMA model for a particular data series, Box – Jenkins proposed a methodology that consists of three phases which is known as Box - Jenkins methodology. The total process of selecting a model is nothing but an iteration process that contains the following processes:

2.5.1 Phase: 1: Identification:

In this phase a tentative model is usually obtained by using the following four steps:

Step 1: Stability of Variance:

At first the data series is transformed to achieve the stationarity in the variance.

Step 2: Checking the Stationary:

The time plot as well as the ACF (Autocorrelation Function) and the PACF (Partial Autocorrelation Function) of the possibility transformed data are considered. If the time plot shows that the data are scattered horizontally around a constant mean or equivalently, ACF and PACF drop to or near to zero quickly, and indicates that the data are stationary. If the time plot is not horizontal or ACF and PACF do not drop to zero, non-stationary is implied.

Step 3: Obtaining Stationary:

If the data appear non-stationary, it can be made stationary through differencing. The order of the difference is the value of the parameter in the model.

Step 4: Model Selection:

When stationary has been achieved the ACF and PACF of the stationary series and the resulting correlogram are observed to see if any pattern remains. A primary guess of the parameters p , d and q are so obtained and corresponding tentative ARIMA model can be identified.

2.5.2 Phase: 2: Estimation and Diagnostic checking: In this phase there are three steps.

Step 1: Estimating the parameters:

When a tentative model is identified, we want the best estimate of the AR and MA parameters to fit the time series that is being modeled. For ARIMA model, the method of least squares can be used.

Step 2: Selection of the best model:

To select the best model the following processes are mentioned below:

2.1 Unit Root Test: At the formal level, Stationary can be checked by finding out if the time series contains a unit root. The Dickey – Fuller (DF) and augmented Dickey – Fuller (ADF) tests can be used for this purpose.

2.2 Testing Goodness of fit: Several criteria that have used to compare the competing models for our forecasting purpose. The criterions are given as follows:

2.2.1 Adjusted R^2 : Henry Theil developed the adjusted R^2 , denoted by \bar{R}^2 , which is

$$\text{Adjusted } R^2 = 1 - \frac{RSS/(n-k)}{TSS/(n-k)} \\ = 1 - (1 - R^2) \frac{(n-k)}{(n-1)}$$

Where,

K' is the number of regressors.

n' is the number of observations.

RSS' is the number of residual sum of squares.

TSS' is the number of total sum of squares.

As we can see from this formula, $\bar{R}^2 \leq R^2$, \bar{R}^2 is a better measure than R^2 .

2.2.2 Error Sum of Squares:

$$SSE = \sum (y_t - \hat{y}_t)^2$$

The lowest value of SSE is preferred.

2.2.3 Akaike Information Criterion (AIC):

$$e^{\frac{2k}{n} \sum u_i^2} = e^{\frac{2k}{n} \frac{RSS}{n}} \text{ Where, } k \text{ is the number of regressors. } n \text{ is the number of observations.}$$

RSS is the residual Sum of Square. With the lowest value of AIC is preferred.

2.2.4 Schwarz Information Criterion:

$$SIC = \frac{k}{n} \sum \frac{u_i^2}{n} = \frac{k}{n} \frac{RSS}{n}$$

Where,

k is the number of regressors.

n is the number of observation.

RSS is the residual sum of squares.

The lowest value of SIC is preferred

2.2.5 Test of Significance: Most ARIMA estimation routines automatically test the hypothesis that the true co-efficient is zero. An approximate t -value to test this hypothesis for each co-efficient is calculated in this way: $t = \frac{(\text{estimated co-efficient}) - (\text{hypothesized co-efficient value})}{(\text{estimated standard error of the co-efficient})}$

Step 3: Diagnostic checking: This is simply done by studying the residual to see if any pattern remains unaccounted for (Makridakis, 1998)

2.5.3 Phase: 3: Application: One of the popularity of the ARIMA modeling is its success in forecasting.

2.6 Measures of Forecast Error: The model that gives the minimum measures of error will be our desired model for forecasting. The following statistical summary measures of a model's forecast accuracy are defined using the absolute errors.

1) The Root mean Square Error (RMSE)

$$RMSE = \sqrt{\frac{\sum_{t=1}^n e_t^2}{n}}$$

2) The Mean Absolute Error (MAE) :

$$MAE = \sum_{t=1}^n |e_t|$$

3) The mean of the Absolute Percentage Error (MAPE) :

$$MAPE = \frac{\sum_{t=1}^n \frac{|e_t|}{y_t}}{n}$$

4) Theil's inequality Co-efficient:

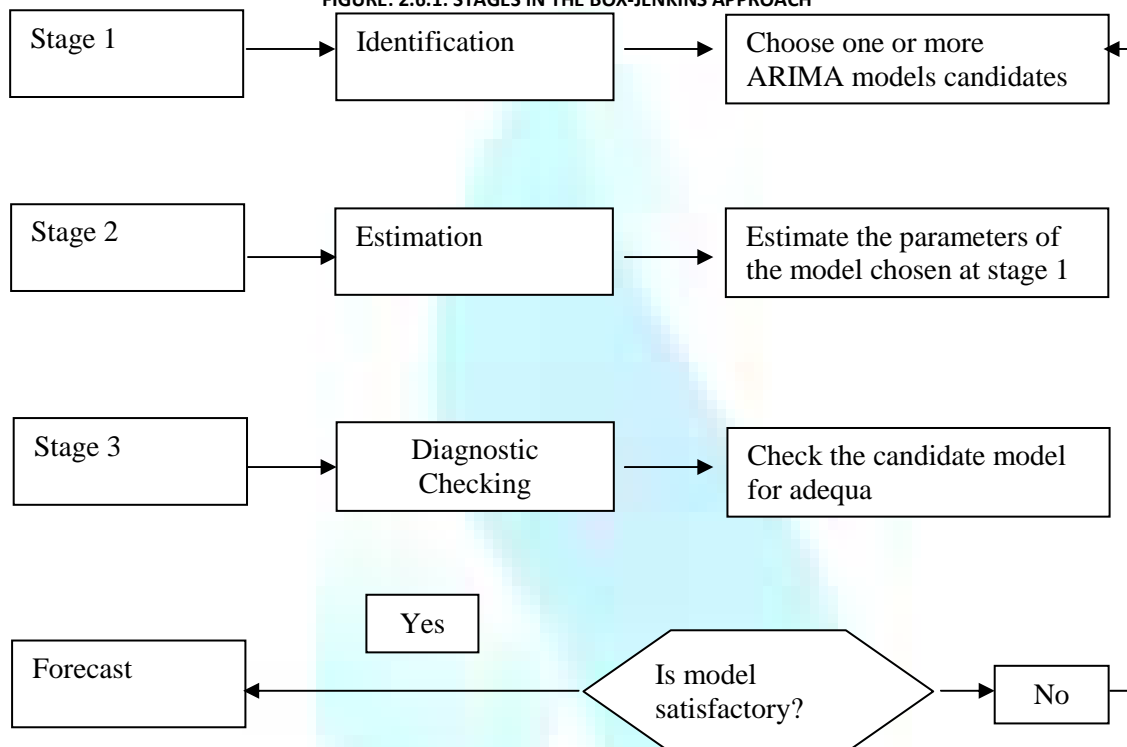
$$U = \frac{(RMSE \text{ of the forecasting model})}{(MMSE \text{ of the actual model})}$$

The smaller values of MAE, RMSE and MAPE, the better the model is considered to be.

A theil's inequality co-efficient greater than 1.0 indicates that the forecast model is worse than the actual model, a value less than 1.0 indicates that it is better.

The closer U is to 0 the better the model.

FIGURE: 2.6.1: STAGES IN THE BOX-JENKINS APPROACH



Source: Box-Jenkins, 1976, p.19

2.7 Statistical Software: Statistical packages: spss, Eviews-5 and Microsoft Excel are used for the analysis.

2.8 Data Sources: The secondary data were collected from "National Accounts" Statistics of Bangladesh (2012) published by Bangladesh Bureau of Statistics that covered the period 1984-85 to 2010-2011. The data have been presented on a time series. Data related to production and expenditures accounts have been reflected both in current and constant prices. Here GDP is measured at constant price (base year 1995-96).

3.0 ANALYSIS OF DATA

3.1 Modeling Time Series of GDP: To select a best ARIMA model for GDP a routine test of identification is done before using Box-Jenkins methodology. Figure-3.1 shows the ACF and PACF plots and their level. The ACF has five significant spikes at the beginning while the PACF has only one significant spike at the beginning. Figure shows ACF and PACF plots of GDP at the first difference level. First difference of the log of GDP data shows that the data is fluctuating and increasing trend. So, the data are non stationary. The time plot of second differenced series shows that the values differ around a constant mean. The second differ of log of GDP data is stationary. From the above test, we can conclude that the second difference of log of GDP data at lag 2 is stationary. Thus we will stop further test. The plot of ACF and PACF can give a primary guess about the parameter p and q for ARIMA model.

3.1: Checking and obtaining Stationary GDP A plot of the sample autocorrelation function, ACF and the sample partial autocorrelation functions, PACF of the series is shown in fig- 3.1

FIGURE-3.1 CORRELOGRAM FOR ACF AND PACF OF GDP

FIGURE 5.11 CORRELOGRAM FOR AC AND PAC OF GSI						
Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. *****	. *****	1	0.873	0.873	22.930	0.000
. *****	. .	2	0.753	-0.035	40.686	0.000
. *****	. .	3	0.637	-0.051	53.932	0.000
. *****	. * .	4	0.524	-0.059	63.284	0.000
. *****	. .	5	0.416	-0.054	69.434	0.000
. *****	. .	6	0.315	-0.043	73.132	0.000
. *****	. .	7	0.221	-0.046	75.045	0.000
. *****	. .	8	0.134	-0.048	75.782	0.000
. *****	. .	9	0.054	-0.045	75.908	0.000
. *****	. .	10	-0.021	-0.055	75.929	0.000
. *****	. * .	11	-0.092	-0.061	76.343	0.000
. *****	. .	12	-0.157	-0.056	77.629	0.000

Six ARIMA models at different values of p and q such as, ARIMA (1,1,1), ARIMA (1,2,5), ARIMA (1,2,2), ARIMA [1,2,3], ARIMA [1,2,4], ARIMA [0,2,0] are estimated. All these models are estimated and their diagnostic checks are done. In addition the minimum value of RMSE, MSE, MAE, AIC, BIC, MAPPE, and high

value of R^2 , \bar{R}^2 are used to select the best model which are presented in table 3.1.1 Hence it can be concluded that ARIMA (0,2,0) is comparatively the best fitted model for forecasting the GDP in Bangladesh. This justifies the selection of ARIMA (0, 2, 0) as the best model to represent the data generating process very precisely.

TABLE: 3.1.1: DIAGNOSTIC TOOLS AND MODEL SELECTION CRITERIA FOR GDP OF BEST FITTED MODELS

Model	Values of Selection Criteria							
	MAE	MSE	RMSE	AIC	BIC	MAPPE	R^2	\bar{R}^2
ARIMA (1,1,1)	12548.138	42080.709	17759.162	22.45512	20.071	.714	0.22037	0.146
ARIMA (1,2,5)	10264.925	31658.925	15008.684	22.33540	20.263	.572	0.50440	.229
ARIMA (1,2,2)	10328.906	30295.350	14501.609	22.49559	19.808	.556	0.161465	.0852
ARIMA (1,2,3)	10393.684	31871.519	14930.905	22.37800	19.995	.560	0.335945	0.236
ARIMA (1,2,4)	10362.155	27595.268	14783.874	22.11057	20.104	.575	0.532406	0.434
ARIMA (0,2,0)	14305.725	40164.662	17757.598	20.1120	19.875	.769	1.00	.503

Note: The value of the criterion for a model with asterisk show that the model is better than other models with respect to that criterion.

From the above table revealed that the model ARIMA [0,2, 0] is better than the other model in case of smaller AIC and BIC and higher \bar{R}^2 . But the model ARIMA [1,2,4] is better than the other model in case of smaller MSE, RMSE. So we can conclude that ARIMA [0,2,0] is the best model.

3.2 Forecasting performance of GDP: Five year forecast is used to make with 95% confidence interval of GDP production estimated by using the best selected model (Table 3.2.1). The production period extends from 2011-2012 to 2015-2016. An important limitation of making forecasts is that forecasting error increasing as the period of forecast increases. For this reason short-term forecast is more reliable compared to long term forecast.

TABLE: 3.2.1 FORECAST OF GDP IN BANGLADESH FOR THE PERIOD OF 2011-12 TO 2015-2016. [DATA USING ARIMA (0,2,0)]

Year	Forecast	UPL	LPL
2011-2012	415733	4152468	4078999
2012-2013	4401913	4484053	4319772
2013-2014	4708187	4845635	4570740
2014-2015	5035354	5236557	4834152
2015-2016	5384213	4834152	5111783

LPL: Lower Predicted Limit. UPL: Upper Predicted Limit.

Table 3.2.1 would reveal that forecasting errors are sufficiently small and consequently the intervals are not too large. As shown in table the forecasted GDP in year 2011-2012 was 4115733 millions of taka. The analysis reveals that if the present growth rate continues the GDP of Bangladesh would be millions of taka in the year of 2015-2016, with a 95% confidence interval of 5384213 million respectively.

4.0 CONCLUSION

In this study, an attempt has been made to apply some of this lessons learned from the problems of model selection. To select the best model for a particular time series the latest available model selection criteria are used. They are efficient of determination (R^2), adjusted co-efficient of determination (\bar{R}^2). Root mean square error (RMSE), Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), Mean Absolute Error (MAE), and mean Absolute Percent Prediction (MAPPE). From the different ARIMA models of GDP we see that the various information criterions such as AIC and SIC for the model ARIMA (0, 2, 0) are 20.112 and 19.747 respectively which are very less but adjusted \bar{R}^2 is very high compared to the other models. Moreover, from the above forecasted analysis it is found that the percentage variation between actual and forecasted value is very less. Therefore the suggested model is appropriate to forecast for the future time period. Empirical results suggest that ARIMA models fit well and they are capable for predicting the future trend of GDP movement. According to the minimum AIC and SIC criterion, ARIMA model was considered the best model for predicting GDP. But before use this, model are must verify the validation of the model in different time period, because a forecasting model may loss its validity and suitability as time changes.

Hence it can be concluded that ARIMA (0, 2, 0) is comparatively the best fitted model for forecasting the GDP in Bangladesh. This justifies the selection of ARIMA (0, 2, 0) as the best model to represent the data generating process very precisely.

The ARIMA model offers a good technique for predicting magnitude of any variable. The accuracy of the proposed ARIMA model is very important in model selection for evaluating the performance of GDP in Bangladesh. A time series model accounts for patterns in the past movement of a variable and uses that information for predicting its future movements. In a sense, a time series model is just a sophisticated model for extrapolation. The study tries to develop a forecasting model of GDP in Bangladesh.

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APPENDIX

APPENDIX 1

Model Type
ARIMA(0,2,0)

MODEL SUMMARY

MODEL FIT

Fit Statistics	Mean	SE	Minimum	Maximum
Stationary R-squared	.103	.	.103	.103
R-Squared	1.000	.	1.000	1.000
RMSE	17757.598	.	17757.598	17757.598
MAPE	.769	.	.769	.769
MaxAPE	3.132	.	3.132	3.132
MAE	14305.728	.	14305.728	14305.728
MaxAE	40164.662	.	40164.662	40164.662
Normalized BIC	19.827	.	19.827	19.827

MODEL STATISTICS

ARIMA [0,2,0]		Model Fit Statistics				
	Number of predictors	Stationary R squared	R-squared	RMSE	MAPE	MAE
	1	.103	1.000	17757.598	.769	14305.728

MODEL STATISTICS

ARIMA [0,2,0]	Model Fit Statistics			Ljung-Box Q(18)		
	MaxAPE	MaxAE	NormalizedBIC	Statistics	DF	Sig.
	3.132	40164.662	19.827	24.115	18	.151

FORECAST

Year	2011-12	2012-13	2013-14	2014-15	2015-16
Forecast	4115733	4401913	4708187	5035354	5384213
UCL	4152468	4484053	4845635	5236557	5656642
LCL	4078999	4319772	4570740	4834152	5111783

INFLUENCE OF CORPORATE SOCIAL RESPONSIBILITY AND CORPORATE CULTURE TO THE STRATEGIC ALIGNMENT MATURITY, BUSINESS PERFORMANCE AND CORPORATE SUSTAINABILITY AT THE CONSUMER SERVICE UNIT OF EAST JAVA REGIONAL V OF PT TELEKOMUNIKASI INDONESIA

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INDONESIA

ABSTRACT

Corporate sustainability can be achieved if corporate social responsibility and corporate culture are established to be the commitment of PT Telkom (the shortened name for 'PT. Telekomunikasi Indonesia') formulated into the form of business strategic alignment maturity and the business performance. This study is intended to describe the influence of corporate social responsibility and corporate culture to the strategic alignment maturity, business performance and the corporate sustainability. This study applies the PLS – Partial Least Square Analysis to examine the significance of the research variables. Data are obtained from the Office Heads of Consumer Service Unit of East Java Regional V of PT. Telekomunikasi Indonesia by using the saturated samples, namely all population are used as the samples. There are 70 respondents. The main instrument applied to collect the data is the 'questionnaire', while its supporting instruments are in the forms of 'interview', 'observation', and 'documentation'. Output of the analysis indicates that all variable relations being materialized into 9 (nine) hypotheses have the significant influences leading to positive relationship. Output of this research is contributed to the theory of management, with the focus on strategy management and organizational behavior, namely the need for the conformance or alignment of corporate social responsibility and corporate culture to the strategic alignment maturity, business performance and the corporate sustainability. The important finding in this study shows that the strategic alignment maturity has a strong influence to the corporate sustainability, whereas the business performance has a weak influence to the achievement of corporate sustainability.

KEYWORDS

Corporate Social Responsibility, Corporate Culture, Strategic Alignment Maturity, Business Performance and Corporate Sustainability.

INTRODUCTION

Businessmen at the global business era at present are getting more aware that sustainability of their business is not merely focused on the efficiency in utilizing the resources to gain the profit. Without being accompanied by the effort to improve quality of their social interaction to their external environment in the form of Corporate Social Responsibility (CSR) and the Environmental Sustainability, the company operation will sooner or later undergo the problem.

The corporate sustainability becomes the focus in this study considering the fact that the company able to carry out its sustainable business operation has proven that it has been able to deal with the global business competition at present. The corporate sustainability is a business approach establishing long term values for the stakeholders by embracing the opportunities and managing the risks deriving from economy, social and environmental developments.

Based on some previous researches, the antecedent variables influencing the corporate sustainability variables in this study are: CSR (Corporate Social Responsibility), corporate culture, SAM (Strategic Alignment Maturity), and the business performance. Output of study by Siegel and Paul (2006) indicates that CSR activities have productive significant impacts to efficiency, technical changes, and economic scale of the company.

The corporate sustainability can be achieved if the company has a corporate culture able to lead the organizational behavior to adapt to the external environment and to make the internal integration. Corporate culture is able to help the company reach the success. Work culture holds the important role in establishing sustainability for an organization. Corporate culture is a set of values, norms, rites and patterns of behavior becoming characteristics of the company.

SAM is a harmonization process between the objectives as well as the information technology and the business goals of an organization, a process how to make the information technology able to run in parallel with business and so is the contrary, how to make the business in line with the information technology. According to Luftman and Brier (1999), a company achieving the harmony or alignment between the business strategy and the information system strategy (strategic alignment maturity) can set up the competitive profit strategy that will improve the company by the increase in visibility, efficiency and profitability at the competition in market change at present. In this way, the corporate sustainability can be materialized. The company seems to get good performance is the company having the alignment between the materialization of its business strategy and that of its information system strategy (Chan et al, 1997).

Performance is a complex multidimensional construct with many differences in the sense that it depends on who is evaluating, how it is evaluated, and what aspects are evaluated. The business performance instrument with the orientation to the consumer service applied in this study refers to Bonnici and Sarkis (2001:22).

LITERATURE REVIEW

Some theories and empirical researches are used as the ground of this study. The theories and empirical researches concern with the research variables covering the corporate sustainability, CSR, corporate culture, SAM, and business performance.

1. CORPORATE SUSTAINABILITY

The sustainability principle focuses on the growth and development in integrating the economic, ecological and social dimensions. On its development process, the stakeholders are expected to support the company to grow in sustainable way.

Corporate Sustainability is an approach to creating long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social trends and challenges (Dow Jones, 2012:5).

Corporate sustainability can be viewed as a new and evolving corporate management paradigm. The term 'paradigm' is used deliberately, in that corporate sustainability is an alternative to the traditional growth and profit-maximization model (Wilson, 2003).

According to Lacy et al. (2010), CEOs around the world are starting to see the shape of a new era of sustainability coming into view. In the face of rising global competition, technological change and the most serious economic downturn in nearly a century, corporate commitment to the principles of sustainability remains strong throughout the world: 93 percent of CEOs see sustainability as important to their company's future success.

The instrument to measure the indicators of company sustainability applies the opinion of Strobel. According to Strobel (2006:5), indicators of the company sustainability consist of: Environmental Dimension, Social Dimension, and Economic Dimension. Each dimension represents 33.3% of the overall total, so that having the same weight and representing the concept of sustainable development.

2. CORPORATE SOCIAL RESPONSIBILITY

According to Jalal (2010), the size and concept of CSR in Indonesia should follow the global standards. The Government should not only stick on and on to the Law No. 40 the year 2007. It is important to adjust the CSR concept in Indonesia to ISO 26000.

According to Prastowo and Huda (2011:100), ISO 26000 can be used as a single choice in defining the CSR, considering the fact that ISO 26000 has been formulated by the multi-stakeholders, among others the corporation, academicians, NGOs, Government, consumers and researchers from 90 countries all over the worlds, including Indonesia. The whole participants have approved this ISO 26000. Park et al. (2001) states that there is a causal relation between ISO 26000 constituting the CSR global standard and the company reputation.

The guideline in implementing the corporate social responsibility applies the ISO 26000 standard. According to ISO 26000 (2010:19) there are 7 (seven) main factors in planning the corporate social responsibility (CSR), among others are: Organizational Management, Human Rights, Employment Practices, Environment, Fair Operational Practices, Consumer Issues, Community Involvement and Development. The representative measurement of those CSR variables applied for this research is modified pursuant to the objects being analyzed excluding the Fair Operational Variable, because it has already been represented by the variables of Organizational Governance.

3. CORPORATE CULTURE

The corporate culture is developed socially because substantially it is based on the collective assumption of all members of organization in all hierarchical stages. The objective culture is the success of an organization in encountering a situation constituting a successful response applied by the organization to adjust to the environmental situation and condition of the company. The thing most frequently found in the process of change in corporate culture is that the implemented efforts do not bring any change to the organizational behavior, but they in reality strike the company back, or even they do not produce any thing.

According to Melo (2012:41), the companies combining the humanistic approaches in culture turn the corporate social performance to be better, because internal values of the culture motivate to build good relation with the stakeholders. Russo and Fouts (1997) have the opinion that the corporate culture deeply rooted to CSR behavior can increase the cross-functional integration of the whole learning and organizational commitment, employee skill, and integrating the high quality employees. Applying the social and environmental consideration into the company planning will help the company develop the culture based on innovation, mutual trust among the stakeholders, and collaborative relationship (Surroca et al., 2010). In this way, CSR can help build the culture in which the company can take the ground on the competitive superiority (Wissink, 2012:23).

In order to get the corporate culture able to involve members of the company to be consistent to the organizational commitment, able to adapt to the external environment and to be in conformity with the mission of the company, the instrument of corporate culture in this study refers to the opinion of You et al. According to You et al. (2010:55), there are 4 (four) natures and indexes of corporate culture, namely: Involvement, Consistency, Adaptability and Mission.

4. STRATEGIC ALIGNMENT MATURITY (SAM)

SAM is required in an organization because organizational development covers not only its business scope but also its technology and infrastructure (Luftman, 2000:2). The SAM instrument applied in this study refers to the opinion of Luftman. The Strategic Alignment Maturity is determined by 6 (six) criteria and each criteria consists of several attributes being used as parameter to the alignment between business and Information Technology (Luftman 2000:10) consisting of: Communication, Competence / Value Measurement, Governance of the Business Unit and Information Technology, Partnership, Scope and Architecture, and Skill.

5. BUSINESS PERFORMANCE

Business performance in this study applies non-financial performance measurement, namely: consumer service performance pursuant to the tasks and responsibility of Consumer Service Unit of PT. Telkom. Non-financial indicators can become better indicators for the financial performance in the future. Non-financial performance measurement can be used as material of evaluation by manager in order to know the problem very early.

Output of study by Shelton (1997:107) states that service quality established from the view point of consumer can provide the added value upon the products being offered. The company has to materialize the quality pursuant to requirements demanded by the customers. Output of study conducted by Chang and Chen (1998:248) states that superior quality of the service has positive influence to profitability of the company.

Instrument of consumer service performance applied in this study is the opinion of Bonnici and Sarkis (2001). According to Bonnici and Sarkis (2001:22), measurement of business performance at the Customer Care Department among others are: Reported Faults by Type and Source; Report on Type of Faults; Enquiries from Clients to the Customer Care Department; Visits by Clients to Customer Care Center; Calls to Customer with Low Usage, Outcome; Phone Calls Made by Customer Care Personnel to Clients, Issue Addressed; Meeting Held between Personnel and Clients, Issues Addressed and Disconnections Effected, Reason Given.

RESEARCH METHODOLOGY

POPULATION AND SAMPLES

Population in this study are 70 (seventy) Office Heads of Consumer Service Units of East Java Regional V PT. Telekomunikasi Indonesia.

SOURCES OF DATA AND DATA COLLECTING METHOD

Data applied in this study are obtained from the primary and secondary data sources, whereas the data are collected through the methods of interview and questionnaire.

VARIABLE MEASUREMENT

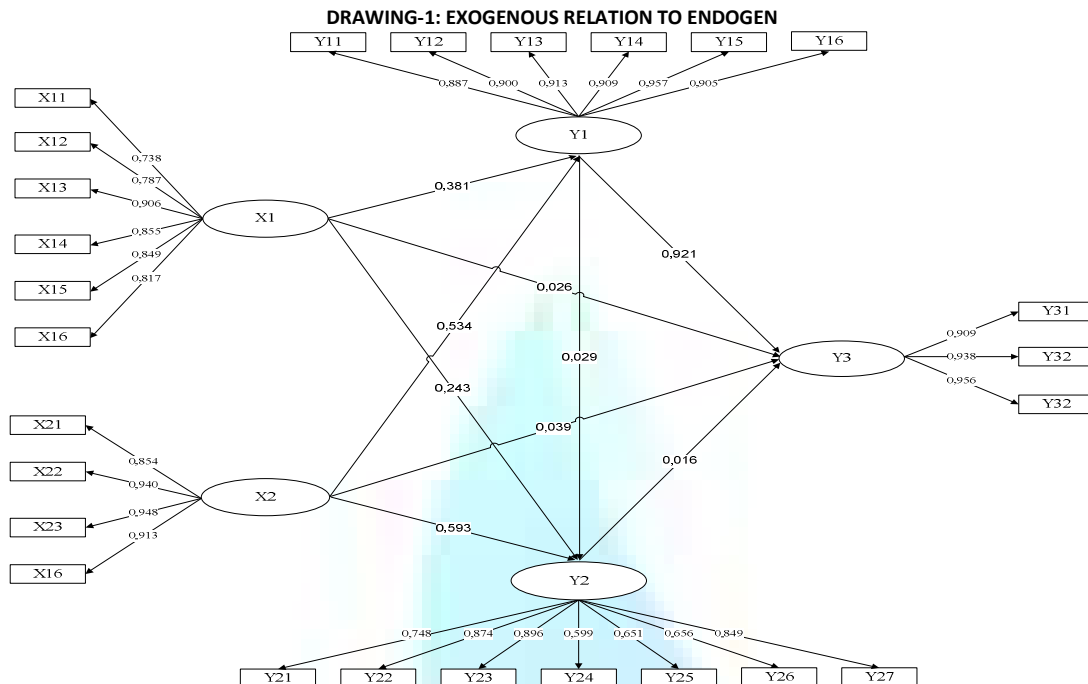
Measurement of research variables covers the corporate social responsibility, corporate culture, strategic alignment maturity, business performance and company sustainability using the Likert Scale with 5 options, namely: completely disagree (1), disagree (2), neutral (3), agree (4), and completely agree (5).

TECHNIQUE OF DATA ANALYSIS

The analysis in this research applies the model of Partial Least Square (PLS) constituting a method to construct the predictable models when the factors are abundant in number. The T statistic value is determined by using the *sample bootstrap* ($B=500$). The bootstrap method can be used for various subjects, and one of them is to determine the t-statistic value as conducted at the model of *SEM Partial Least Square*.

FINDING AND DISCUSSION

Data processing and testing using the PLS get the outputs as follows: the Structural Equation as shown in Drawing-1 and output of the Linear Coefficient Testing as shown in Table-1 below.



From the suitable model, each linear coefficient can be interpreted. Such linear coefficients constitute the hypotheses in this research that can be presented in structural equations as follows:

$$Y_1 = 0.381X_1 + 0.534X_2$$

$$Y_2 = 0.243X_1 + 0.593X_2 + 0.029Y_1$$

$$Y_3 = 0.026X_1 + 0.039X_2 + 0.921Y_1 + 0.016Y_2$$

TABLE 1. OUTPUT OF LINEAR COEFFICIENT TESTING ON THE MODEL OF CORPORATE SUSTAINABILITY

Variables	Coefficient	T Statistics	TTable	Information
Corporate Social Responsibility (X ₁) → Strategic Alignment Maturity (Y ₁)	0.381	21.472	1,96	Significant
Corporate Social Responsibility (X ₁) → Kinerja Bisnis (Y ₂)	0.243	14.461	1,96	Significant
Corporate Culture (X ₂) → Strategic Alignment Maturity (Y ₁)	0.534	28.241	1,96	Significant
Corporate Culture (X ₂) → Business Performance (Y ₂)	0.593	21.346	1,96	Significant
Strategic Alignment Maturity (Y ₁) → Business Performance (Y ₂)	0.029	2.154	1,96	Significant
Strategic Alignment Maturity (Y ₁) → Corporate Sustainability (Y ₃)	0.921	67.737	1,96	Significant
Business Performance (Y ₂) → Corporate Sustainability (Y ₃)	0.016	2.192	1,96	Significant
Corporate Social Responsibility (X ₁) → Corporate Sustainability (Y ₃)	0.026	2.655	1,96	Significant
Corporate Culture (X ₂) → Corporate Sustainability (Y ₃)	0.039	4.052	1,96	Significant

Sources: The Processed Data.

Based on the data shown in Table-1, it is known that all variable relations materialized in 9 (nine) hypotheses have significant influence leading to positive relationship.

INFLUENCE OF CORPORATE SOCIAL RESPONSIBILITY TO THE STRATEGIC ALIGNMENT MATURITY

Corporate social responsibility has significant influence to the strategic alignment maturity leading to positive relationship. This is shown from the linear coefficient having the positive sign at the amount of 0.381 with the T-statistic value of 21.472 bigger than the T-table = 1.96. It means that the implementation of corporate social responsibility program can give contribution to the criteria of skill in the strategic alignment maturity, namely condition of company social environment. This is caused by facts that the CSR activities have direct or indirect relation with the needs and interests of the stakeholders (company social environment). CSR becomes the business strategy that can be maximized in order to increase the positive image of the company.

INFLUENCE OF CORPORATE SOCIAL RESPONSIBILITY TO THE BUSINESS PERFORMANCE

The corporate social responsibility has significant influence to the business performance, leading to positive relationship. This is indicated by the linear coefficient having the positive sign at the amount of 0.243 with the T-statistic value of 14.461 bigger than the T-table = 1.96. It means that the corporate social responsibility has significant influence to the business performance. This means that if the company carries out the true real and sustainable corporate social responsibility activities by maximizing the positive impacts and at the same time minimizing the negative impacts of certain business activities, the company will be able to enjoy good market performance and in turn will also be able to be enjoyed by the stakeholders. Implementation of corporate social responsibility will establish the increase in trust and image of the stakeholders, so that able to give contribution in materializing the increase of the company performance.

INFLUENCE OF CORPORATE CULTURE TO THE STRATEGIC ALIGNMENT MATURITY

Corporate culture has significant influence to the strategic alignment maturity, leading to positive relationship. This is shown by the linear coefficient having the positive sign at the amount of 0.534 with the T-statistic value of 28.241 bigger than the T-table = 1.96. It means that the more number of company employees accept the core values taken by the company and feel so much bound to them, the easier a strategy to be implemented in a company, because the alignment level of perception in the applicable corporate culture is significantly related to the alignment level of the strategy. The cultural adjustability level contributes the major amount of variants at the level of strategic alignment maturity. Corporate culture has a potential to give contribution to the optimal achievement supporting the alignment level between the business strategy and the information technology.

INFLUENCE OF CORPORATE CULTURE TO THE BUSINESS PERFORMANCE

Corporate culture has significant influence to the business performance, leading to positive relationship. This is indicated by the linear coefficient having the positive sign at the amount of 0.593 with the T-statistic value of 21.346 bigger than the T-table = 1.96. It means that the corporate culture significantly influences the business performance. The meaning is that the higher the characteristics of the corporate culture is, the more conducive the corporate culture to be in forming the positive behavior (high performance), because corporate culture constitutes a system of meaning and the joint control followed by members of the

company. Involvement in cultural context is the empowerment of culture as the actualization of ability to develop every employee independently, the company organizes the work activities for the team and develop the employee's capability to achieve the maximum results.

INFLUENCE OF STRATEGIC ALIGNMENT MATURITY TO THE BUSINESS PERFORMANCE

Strategic Alignment Maturity has significant influence to the business performance, leading to positive relationship. This is shown by the linear coefficient having the positive sign at the amount of 0.029 with the T-statistic value of 2.154 bigger than the T-table = 1.96. It means that the available alignment between the information system and the business unit is able to support and improve business performance of the company. Through the alignment between the information system plan and the business plan, the information resources will support the business goal and gain the profit in grabbing the opportunities in order to utilize the information system strategy. Strategic Alignment means the conformance between priority and activities of information system function and business unit. The goals of strategic alignment are: priority, ability, decision and information system action in order to support the whole business.

INFLUENCE OF STRATEGIC ALIGNMENT MATURITY TO THE CORPORATE SUSTAINABILITY

Strategic Alignment Maturity has significant influence to the Corporate Sustainability, leading to positive relationship. This is indicated by the linear coefficient having the positive sign at the amount of 0.921 with the T-statistic value of 67,737 bigger than the T-table = 1.96. It means that the company which is successful in performing the integration between information technology and the business strategy shows the significant increase in its income. Alignment of business strategy and the information technology is applied by the company to increase the efficiency, to reduce the costs, to create the constraints to new comers, to improve relationship between consumers and suppliers, and to establish products and solution of new business in achieving the company sustainability. Strategy in developing the information technology shall have the alignment with the business strategy run by the company.

INFLUENCE OF BUSINESS PERFORMANCE TO THE CORPORATE SUSTAINABILITY

Business Performance has significant influence to the Corporate Sustainability, leading to positive relationship. This is shown by the linear coefficient having the positive sign at the amount of 0.016 with the T-statistic value of 2.192 bigger than the T-table = 1.96. It means that the business performance significantly influences the corporate sustainability. The business performance in this study is non-financial performance, namely service performance to the customers. Measurement of customer service performance can be used as material for evaluation by the manager to know the problems early and able to measure the customer-oriented indicators.

INFLUENCE OF CORPORATE SOCIAL RESPONSIBILITY TO THE CORPORATE SUSTAINABILITY

Corporate Social Responsibility has significant influence to the Company Sustainability, leading to positive relationship. This is indicated by the linear coefficient having the positive sign at the amount of 0.026 with the T-statistic value of 2.655 bigger than T-table = 1.96. It means that the CSR program constitutes the company commitment to support the establishment of company sustainability. Application of CSR program is one of the forms of implementation of the concept of good company governance. CSR program constitutes commitment of the company to support the establishment of corporate sustainability.

INFLUENCE OF CORPORATE CULTURE TO THE CORPORATE SUSTAINABILITY

Corporate Culture has significant influence Corporate Sustainability, leading to positive relationship. This is shown by the linear coefficient having the positive sign at the amount of 0.039 with the T-statistic value of 4.052 bigger than T-table = 1.96. It means that the corporate culture influences the way the employees understand and apply the company sustainability. An organization dominated by culture will place bigger emphasis on efficiency of resources in striving for the company sustainability.

CONCLUSION

1. Corporate social responsibility has significant influence to the strategic alignment maturity leading to positive relationship, corporate social responsibility has significant influence to the business performance leading to positive relationship, corporate culture has significant influence to the strategic alignment maturity leading to positive relationship, corporate culture has significant influence to the business performance leading to positive relationship, strategic alignment maturity has significant influence to the business performance leading to positive relationship, strategic alignment maturity has significant influence to the corporate sustainability leading to positive relationship, and business performance has significant influence to the corporate sustainability leading to positive relationship, the corporate social responsibility has significant influence to the corporate sustainability leading to positive relationship, and the corporate culture has significant influence to the corporate sustainability leading to positive relationship.
2. In general, the important finding of this study is that it gives theoretical contribution to the analysis in strategy management and organizational behavior in telecommunication industry in performing the empirical research on the corporate sustainability, namely the conformance or alignment of corporate social responsibility, corporate culture and its influence to the strategic alignment maturity, business performance and company sustainability. The role of strategic alignment maturity is so strong, and on the other hand the role of business performance is so weak in achieving the corporate sustainability.
3. In general as the important finding for the company policy is that the highest values of loading factors cover: the employment practice in corporate social responsibility, adaptability to corporate culture, scope and architecture in strategic alignment maturity, customer visit in business performance and the economic dimension in company sustainability. Meanwhile, the lowest value of loading factors among others are the company governance in corporate social responsibility, involvement of employee in corporate culture, communication between business unit and information technological unit in strategic alignment maturity, calls/contacts to customers having the low purchase criteria in business performance and environmental dimension in corporate sustainability.
4. Based on the outputs of validation or proving on the nine hypotheses, a conclusion can be made in integrated way that the influence of corporate social responsibility and corporate culture simultaneously through the strategic alignment maturity can achieve the company sustainability. The influence of corporate social responsibility and corporate culture simultaneously through the business performance can establish the corporate sustainability.

SUGGESTIONS

1. The Management of PT. Telekomunikasi Indonesia needs to pay attention to the highest value of loading factors, among others: the employment practice in corporate social responsibility, adaptability of employees to the corporate culture, scope and architecture in strategic alignment maturity, customer visit in business performance and the economic dimension in corporate sustainability.
2. The Management of PT. Telekomunikasi Indonesia needs to pay attention to the lowest value of loading factors, among others: the company governance in the program of corporate social responsibility, involvement of employee in corporate culture, communication between business unit and information technological unit in strategic alignment maturity, calls / contacts to customers having the low purchase criteria in business performance and environmental dimension in corporate sustainability.
3. The next research is expected to use the more various stakeholders, such as the customers, suppliers, shareholders, government and employees.

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HAS PARTICIPATION IN URBAN AND PERI-URBAN AGRICULTURE CONTRIBUTED TO POVERTY REDUCTION AND FOOD SECURITY? THE CASE OF BAHIR DAR CITY, ETHIOPIA

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ABSTRACT

The alarmingly growing urbanization and its associated problems are worsening the lives of many urban residents in sub-Saharan Africa (SSA). Particularly, poverty and food insecurity, which used to be much related with rural areas, are becoming huge urban challenges. Against expectation, slums in towns are expanding and purchasing powers are falling. One of the possible ways of tackling these evils could be expansion of urban and peri-urban agriculture (UPA). Using the available urban resources, urban farmers may supply markets with vegetables, fruits, animal products, etc. in addition to satisfying their own needs. This study, therefore, aims to assess households' participation in UPA in Bahir Dar city and its vicinities and to examine whether that has played any role in reducing urban poverty and achieving food security. Data were collected from 112 random households using semi-structured questionnaires. The results of the study reveal that the participation rate in UPA in and around the City is very low compared to the potential. The logistic regression results show that UPA has not contributed to reduction of poverty. It is found, however, that households practicing UPA are more likely to be food secure than non-UPA households. With the current setting, where there is no official recognition and support to the sector, it seems difficult to use UPA as a means to reduce poverty. Containing constraints related especially to land and water resource utilization may help UPA repeat its food security attainment role on poverty reduction.

KEYWORDS

Bahir Dar, Ethiopia, Food security, Poverty, Urban and peri-urban agriculture.

INTRODUCTION

For the first time in the history of mankind, more people worldwide have started to live in urban than in rural areas since 2008. According to UNFPA (2007), the world's urban population will reach 6.4 billion in 2050, and 60% of people will live in cities by 2030. Developing countries, especially those in SSA, register the highest recent urban growth rates. East African countries, for instance, had 6-8 % of urbanization rates during the last four decades (Mireri *et al*, 2005). Urbanization in these countries has been viewed by some development theorists as an integral part of economic growth and distributional change, including poverty reduction (Ravallion *et al*, 2007). Nonetheless, the urban growth trend is alarming in areas with limited resources for providing the necessary urban services (Cofie *et al*, 2003). Against expectation, the urbanization of SSA has resulted in more poverty, food insecurity, inflation, food shortage, urban violence, etc. The problems of poverty and food insecurity are the most important evils of it. For instance, globally, the urban share of the poor increased from 18.5% to 24.2% between 1993 and 2002. The contribution to this figure of SSA was huge as it grew from 24.3 to 30.2% during the same period (Ravallion *et al*, 2007). The urban population share in the region rose from 29.8 to 35.2% indicating that urbanization is strongly related to intensification of poverty. In most cities and towns of SSA, urbanization has become virtually synonymous to slum growth. The slum population in these countries doubled between 1990 and 2005 and reached 200 million (UNFPA, 2007). Increasing urban poverty also goes hand in hand with growing food insecurity, which is often overlooked since at aggregate level, economic and social conditions in urban areas are much better than those in rural areas (de Zeeuw and Dubbeling, 2009).

A number of other factors worsen the challenges of the urban poor. Rural-urban migration, coupled with fast urban population growth, raises the demand for urban food and the supply of labour. These have the impact of increasing food prices in the face of diminishing urban real wages, thereby endangering food access by the poor. Price increments and loss of jobs are also common when economic crises are set in. Another important factor is climate change (von Braun, 2008). Agricultural production and productivity could be reduced due to rainfall variability, temperature changes and losses in arable land. Eastern Africa will lose up to 15% of its cropland area within the next thirty years (Lotsch, 2007). City economies will suffer as agricultural production in the surrounding countryside is hit by storms, floods or water scarcity. The decline in agricultural productivity will thus not only affect the rural population but also the urban poor (de Zeeuw and Dubbeling, 2009).

One of the ways of reverting those urban challenges could be resorting to urban and peri-urban agriculture (UPA). The various contexts of production, resources and people involved make the precise definition of UPA difficult, leading to different definitions by different writers (such as Mougeot, 2000; Mlozi, 2000; Mireri *et al*, 2005). For this study, UPA is defined as the growing of plant and tree crops (vegetables, fruits, herbs and field crops) and raising of animals (dairy cattle, poultry, goats and sheep) for food or non-food purposes, including their processing and distribution, both within and around (peri-) urban areas. In most cases, UPA is a labour-intensive farming undertaken on vacant plots, outdoors, road strips, parks, etc. The current study, however, will concentrate only on vegetables. The role of UPA in the economy, particularly in SSA, is multifaceted. Some of the possible roles are summarized by Mougeot (2000): it helps to achieve poverty reduction, sustainable urban development and urban food security by improving urban food supply systems; and fosters adaptation to climate change through sustainable land and water use as well as waste management. The important ones that this study focuses on are reduction of poverty and attainment of food security as a possible contribution of urban vegetable production. Today, devaluated currencies, weakened purchasing power, frozen wages, retrenched public service and formal employment, and removed subsidies on food and other basic needs have curtailed the capacity of both the urban poor and middle class to purchase all the food they need (Mougeot, 2000). The urban poor, using labour and available land, may thus engage in various agricultural activities to produce for their own consumption and/or for sale to acquire extra income.

In Ethiopia, owing to the short history of urbanization, poverty and food insecurity have for long been related only with rural areas. However, the government's ignorance of urban areas until 2005, biased but less pragmatic focus on rural areas through a strategy called Agricultural Development-Led Industrialization (ADLI), stagnant industrial employment and rural-urban migration seem to contribute to the spiralling of those evils in urban areas as well. According to a recent report, the country's overall urban poverty incidence in 2010/11 is estimated as 26% and the urban food poverty incidence as 28% (MoFED, 2012). Over 40% of the population of Ethiopia is food insecure (Gebre-Selassie, 2004). With a population of over 210,000 in 2007 (CSA, 2008), Bahir Dar city is the sixth populous city in the country. The estimated poverty incidence in the City was 26% in 2000 (Gebremedhin and Whelan, 2005) and 44% in 2004 (Tadesse, 2012); no estimates of food in/security are yet available for the City. The fast urbanization rate of the City means that the pressure on the surrounding agricultural areas as

a source of food is on the rise. UPA may thus play a complementary role to that supply. Residents within the City and its peripheries may produce various types of vegetables and fruits and participate, even side by side, in animal husbandry. These, besides assisting households to become food-secure, may generate further income and thus help reduce urban poverty. One may say that Bahir Dar and its vicinities are suitable for UPA. Many *kebeles* (Kebele is the smallest administrative unit in Ethiopia) have idle lands, as can be seen from their low population density, and others are close to Blue Nile River (*Abay*) and Lake *Tana*. The surrounding areas have almost similar resource availability. The existence of cheap labour for the largely labour-intensive UPA is indisputable. In spite of the many benefits of UPA and untapped potentials of the city of Bahir Dar, a number of challenges constrain its development. The most pressing challenge emanates from being in a vacuum of semi-official recognition with limited active support from the City Administration. There is neither a separate office in charge of UPA nor a clear policy/strategy/plan concerning UPA in the City. This has a practical problem in using or asking to use idle urban lands for certain agricultural activities. The other challenge is urbanization itself. The increasing demand for land by the long-drawn-out urban population creates scarcity of urban land, which is usually solved by displacing UPA engagements. Besides very few studies link UPA to poverty and food security (Egziabher, 1994; Tefera, 2010) in other urban places in Ethiopia, no study could be found for Bahir Dar. However, urban authorities, policymakers, planners and other stakeholders need more data and analysis on the various contributions of UPA so that they issue the sector the appropriate support. To this end, the central theme of this study is to ascertain whether households involved in urban and peri-urban agricultural activities are better off in terms of reducing poverty and achieving food security.

LITERATURE REVIEW

There is ample literature on the theoretical significance of UPA in poverty reduction and food security at an aggregate level (Mougeot, 2000; Mireri et al, 2005; Chah et al, 2010; Mkwambisi et al, 2010). The mismatch in the growth rates of urbanization and economic growth East African countries have accelerated the growth of urban agriculture as a survival strategy by the poor urban households (Mireri et al, 2005). UPA has a significant share in the food supply of many cities in SSA and takes special care of urban diets, which include exotic or perishable vegetables, fresh milk and poultry products (Cofie et al, 2003). For instance, 60-75% of the vegetable consumption needs of two Nigerian cities, Lagos and Abuja, come from production within the cities (Egbuna, 2009). The livelihood of about 0.18% of the population of Addis Ababa depends solely or wholly on vegetable production (Egziabher, 1994). By 2020, at least 35-40 million urban residents in Ethiopia, Eritrea, Kenya, Tanzania, Uganda and Zambia will depend on UPA to feed themselves (Mougeot, 2000).

Not much studies have applied econometric models to empirically test the significance of UPA in poverty reduction and food security (such as Yusuf et al, 2008; Mutonodzo, 2009; Tefera, 2010). Using a sample of 200 urban farmers in Ibadan metropolis of Nigeria, Yusuf et al (2008) run a logistic regression to ascertain the determinants of household poverty. They found an unexpected result that urban agriculture has a significant and negative effect in poverty reduction. According to their estimates, households engaged in urban crop farming activities have higher likelihood of being poor. Following their descriptive finding that lower poverty level is related to livestock farming and mixed farming compared to crop farming, they ended up recommending that mixed farming and livestock farming are antidotes to reducing poverty among urban farmers in the metropolis. According to Mutonodzo (2009), practising UA was found to be significantly related to energy adequacy, a proxy for food security, in Harare. Tefera (2010) also applied ordinary least squares estimation method to find the correlates of household food security, captured by dietary calorie intake, in Adama town of central Ethiopia. He estimates that ownership of both oxen and other livestock significantly influence the food security status of households positively.

In summary, the empirical microeconomic aspect of whether UPA significantly contributes to poverty reduction and food security attainment at household level provides mixed results. And very importantly, in Ethiopia, very little has been done so far. The few available literature (Egziabher, 1994; Tefera, 2010) do not provide in-depth quantitative relationships. Further, no study has yet examined the matter for Bahir Dar city and its peripheries. Hence, the present study will also be of a significant start-up contribution in that regard.

OBJECTIVES

- To assess households' participation in urban and peri-urban agriculture in Bahir Dar city and its peripheries; and
- To find out whether participation in urban and peri-urban agriculture has contributed to poverty reduction and food security.

HYPOTHESES

It is hypothesized that participation in urban and peri-urban agriculture significantly contributes to (i) poverty reduction at household level in Bahir Dar city and its peripheries; and (ii) food security attainment at household level in Bahir Dar city and its peripheries.

RESEARCH METHODOLOGY

The study is made at a household level. It uses multi-stage sampling technique for selecting the representative households. Firstly, two strata were identified - urban Bahir Dar and peripheral Bahir Dar. Secondly, from the nine *kebeles* in urban Bahir Dar, four *kebeles* were randomly selected, namely, *Ginbot 20*, *Shimbt*, *Hidar 11* and *Belay Zeleke*; and from the peripheries of the City, one *kebele*, namely, *Jigina*, was selected. Thirdly, sample households were chosen using simple random sampling. A total of 125 households were eventually interviewed of which 112 were found analyzable, making the response rate to be 89.5%. Semi-structured questionnaire was used in the study and administered on cross-sectional basis. It asked, among others, about various household characteristics, household expenditure, income and asset ownership, engagement in UPA, possessions of resources suitable for UPA and general food security/insecurity questions. In analyzing the data, descriptive statistics are used to primarily assess the characteristics of sample households and the participation rates in UPA. The econometric analysis of the study consists of models estimated using logistic regression in an effort to find out whether participation in UPA has contributed to a variation in (i) household expenditure and asset ownership, which are used here as a proxy for socioeconomic status, thereby measuring whether a household is in poverty or not; and (ii) household food security status. Control variables in the above two estimations include gender of the household head, household size, educational achievement of the head, migration, employment status, etc.

The logistic regression models of the study take the general form:

$$Poverty = \alpha_p + \theta_p(UPA) + X_p\beta_p + \varepsilon_p \quad (1)$$

$$Food\ Security = \alpha_f + \theta_f(UPA) + X_f\beta_f + \varepsilon_f \quad (2)$$

Where

Poverty is a dummy for the poverty status of a household (=1 if poor), based on both average household consumption expenditure and assets ownership;

Food Security is a dummy for the self-reported food security status of the household (=1 if food secure);

UPA is a dummy for the participation of a household in urban and peri-urban agriculture (=1 if any household member participates); it is the variable of interest;

X is vector of control variables;

α and θ are parameters and β is a vector of parameters to be estimated;

ε is an error term; and the subscripts *p* and *f* are used to identify poverty and food security equations.

According to the above hypotheses, the coefficient estimate and the marginal effect of the UPA variable in the poverty equation are expected to be negative while those in the food security equation are expected to be positive.

RESULTS AND DISCUSSION

DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS OF SAMPLE HOUSEHOLDS

The study obtained analyzable responses from 112 households. Out of these, 75% were male-headed and the rest were female-headed (*Table 1*). In terms of marital status, the majority of the approached household heads (over 88%) were married during the time of the survey. Over a fifth of the household heads did not attend any formal school while some 30% went beyond high school education. The majority of the families could be regarded as big, with about three-fourth of them having four or more members. Exactly a quarter of the responding household heads was sidelined from work due to lack of it or old age. A good proportion of those who were working ran their own business, while the private sector employed only about a tenth of the working respondents.

Table 2 summarizes information on expenditure and ownership of some household assets and utilities. Measured relatively on their average daily expenditure, over 23% of respondents were among the bottom 20% poorest group while about 20% were in the top 20% richest. However, incorporating ownership of assets and utilities by households in the poverty variable calculation, we come to an absolute measure that some 29% live in poverty. This finding is comparable with the regional urban poverty incidence of 29% (MoFED, 2012). One household in six reported that they are food insecure. And yet, over a third and a fifth of respondents are deprived of the utility of having their own piped water and electricity respectively.

TABLE 1: SOME SOCIOECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF SAMPLE HOUSEHOLDS (%)

Description	Group/Response	Percent
Sex of the household head	male	75.00
	female	25.00
Marital status	single	4.46
	married	88.39
	divorced	2.68
	widowed	4.46
Educational achievement of the household head	illiterate	21.43
	primary	30.36
	high school	17.86
	above high school	30.36
Household size	1-3 members	25.89
	4-6 members	51.79
	6+ members	22.32
Household head currently working?	no	25.00
	yes	75.00
Employment type	own business	47.06
	civil servant	38.82
	employee of private sector	9.41
	employee of an NGO	4.71

Source: Field survey, October 2012

TABLE 2: SUMMARY OF POVERTY, FOOD SECURITY AND UTILITIES OWNERSHIP INDICATORS (% OF HOUSEHOLDS)

Description	Group/ Response	Percent
Quintiles of daily per capita consumption expenditure (household average)	poorest	23.21
	2nd poorest	18.75
	middle	19.64
	2nd richest	18.75
	richest	19.64
Poverty	poor	29.46
	non-poor	70.54
Household food secured (self reported)	no	16.07
	yes	83.93
Household owns piped water	no	32.14
	yes	67.86
Household owns electricity	no	21.43
	yes	78.57

Source: Field survey, October 2012

PARTICIPATION IN URBAN AND PERI-URBAN AGRICULTURE VERSUS POVERTY AND FOOD SECURITY

The study finds that the UPA participation rate of households in Bahir Dar city and its fringes is minimal. Only 23% and 17% of the sample households practice urban vegetable production and livestock/poultry keeping respectively (*Table 3*). These figures are low given the potential of the study areas and compared to some other African cities, for instance, Kumasi (57%), Accra (46%), Lusaka (45%) and Nairobi (30%) in overall UPA (Cofie et al, 2003). In the City and its peripheries, there are vacant lands, at least temporarily, here and there; youth labour is also cheap; the water sources of rivers *Abay* (Blue Nile) and *Gumara* as well as Lake *Tana* are very close to the study areas. Quite lacking, however, seem to be societal awareness, institutional commitments and supports which help efficiently utilize the available resources.

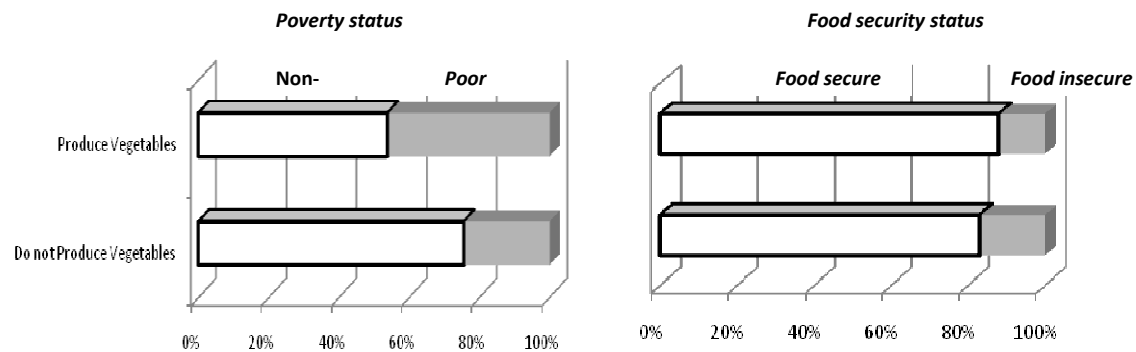
TABLE 3: PARTICIPATION RATES IN URBAN AND PERI-URBAN AGRICULTURE (% OF HOUSEHOLDS)

Any member participates in vegetable production?			Any member participates in keeping of livestock/poultry?		
	No. of households	Percent		No. of households	Percent
Yes	26	23.21	19	17	16.96
No	86	76.79	93	83	83.04
Total	112	100.00	112	100	100.00

Source: Field survey, October 2012

The disaggregation summaries of participation in vegetable production by socioeconomic and food security status are presented in Figure 1. Not much difference seems to exist between the producing poor (46%) and non-poor (54%) households. It is found also that the majority of non-participating households are those that are non-poor. Though over 80% of UPA participating households self-reported to be food secure, they are only slightly better off compared to non-participants.

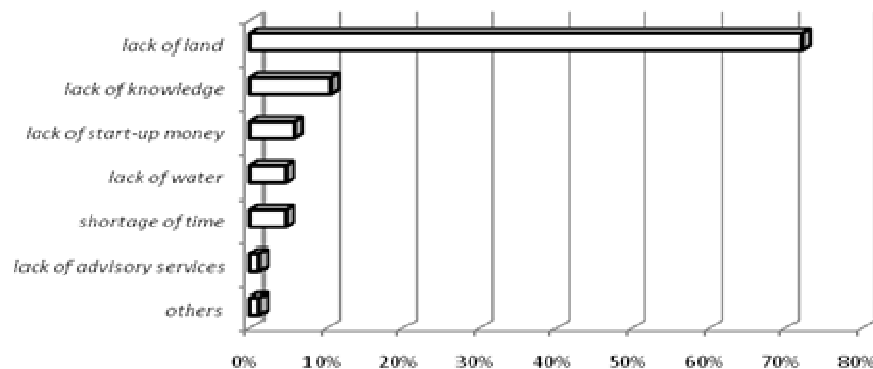
FIGURE 1: DISAGGREGATION OF PARTICIPATION IN UPA BY POVERTY AND FOOD SECURITY STATUS



Source: Field survey, October 2012

Households that did not produce vegetables were asked what major factors hindered them not to participate. Accordingly, the vast majority (72%) of the 86 households responded that the problem of land was their significant reason (Figure 2). The problem may be a huge constraint since certain households are do not have their own house and even those owning houses may not have adequate land to undertake urban agricultural activities. This problem is also identified as one of the big challenges for Nigerian urban farmers as indicated by Kareem and Raheem (2012). Major constraints in Kumasi are security of land rights and quality and regular supply of water (Cofie et al, 2003). Some respondents were not able to produce vegetables because they did not have the required knowledge to do so. Other obstacles cited were related to lack of start-up capital, water, time and advisory services.

FIGURE 2: MAJOR REASONS FOR NOT TO PARTICIPATE IN VEGETABLE PRODUCTION (% OF HOUSEHOLDS)



Source: Field survey, October 2012

In what follows, we present the econometric analysis where two logistic regressions were run to measure the effect, if any, of a household member's engagement in UPA on the probability of being in poverty as well as food secure.

Table 4 presents some of the covariates of poverty in and around Bahir Dar city and their corresponding marginal effects. The variable of interest - any household member participates in vegetable production - is statistically significant at the 5% level. This positive coefficient, however, is in disagreement with our expectation, at least theoretically, that people who engage in some sort of UPA are more likely to be out of poverty. It is found, other things kept constant, that participation in vegetable production in and the peripheries of Bahir Dar city even exacerbates an average household's chance of becoming poor. The estimation shows that engagement in vegetable production has the highest marginal effect on the probability of being in poverty compared to all other covariates included in the model. In fact, such a finding is not unique to our study. Yusuf et al (2008) also estimated for Ibadan metropolis of Nigeria that households participating in crop farming have higher chance of being poor. Mkwambisi et al (2010) also noted that, at the current level of practice, urban agriculture is an underutilised strategy for reducing poverty in Malawi.

A great deal of factors may be held responsible for such a rather unexpected finding. One may be the very perishable and seasonal nature of vegetables. It could be the case that vegetables produced for market perish or receive a lower price before they result in an improvement in household expenditure or asset ownership. Urban and peri-urban farmers may even bear costs to dispose their rotten vegetables off. Shifts in urban feeding habits may also be accounted for. Traditionally, vegetables in Ethiopia used to be pro-poor because of their cheap accessibility. But these days, many vegetables are increasingly becoming more pro-rich. As input costs of vegetable production are on the increase, even production for own consumption may be difficult for the poor. Vegetable production is highly water-intensive and partly land-intensive. These resources are hardly possessed by the urban poor. The poor could be renting private or public houses and/or purchasing water from other households. Further, stating their major reason for not to participate in vegetable production, the vast majority of the poor claimed lack of land as an obstacle. Even those poor who could use natural water sources and some vacant public lands may not do so due to lack of complementary inputs or official support. Such things could make the production to disproportionately be in favour only of the non-poor thereby eclipsing the roles of such a UPA in pulling people out of poverty.

TABLE 4: LOGISTIC REGRESSION RESULTS FOR THE EFFECT OF UPA ON HOUSEHOLD POVERTY

<i>Dependent variable: Household in poverty (=1 if poor)</i>			
<i>Independent variable</i>	<i>Coefficient</i>	<i>z-value</i>	<i>Marginal effect</i>
Any household member participates in vegetable production	2.582	2.65	0.3933**
Any household member keeps livestock or poultry	0.166	0.14	0.0151
Household head is female	3.584	2.85	0.1631**
Age of the household head	-0.253	-5.14	-0.0218***
Log of household size	1.00	0.99	0.0865
Log of years of schooling of the household head	-2.406	-2.79	-0.2081**
Household head is not a migrant	0.831	0.95	0.0832
Monthly household saving	-0.0015	-3.64	-0.0001***
Household head is currently working	-2.480	-2.29	-0.3721*
Household is food secure (self-reported)	-2.276	-1.81	-0.3537
Constant	18.15***	4.28	
No. of observations		88	
Log pseudo-likelihood		-25.00	
Wald chi2(10)		39.87***	
Pseudo R ²		0.5151	

*, **, *** means significance at 10%, 5%, 1% levels respectively.

Control variables found significantly explaining the probability of a household to be in poverty include sex, age and years of schooling of the household head, monthly household saving as well as the employment status of household the head. The other UPA activity incorporated in the model – participation in urban or peri-urban keeping of livestock and poultry – is found to be statistically insignificant.

Despite the finding that participation in urban vegetable production has a negative impact on poverty reduction, we here find that it has the expected role of improving the food security status of households. The marginal effect of the dummy variable measuring the engagement in vegetable production of any household member, including the head, is estimated to be positive and statistically significant at the 1% level (Table 5). This implies that households allocating some time for such UPA activity have a higher likelihood, on the average, of reporting that they are food secure during the previous year. Numerically, families participating in vegetable production are about 11% more probable in being food secure compared to non-participants. This positive contribution of UPA to food security goes in line with the findings of Mutonodzo (2009) and Tefera (2010).

Obviously, vegetables enter into the nutritional requirements of human beings and producing them at home or nearby facilitates their access and consumption. This goes in line with a descriptive finding that households producing vegetables do so primarily for their own consumption and for both own consumption and market. Many also express the role of their participation on their families' food security status as either just good or very good. Participating households may also enjoy the benefit of exchanging their agricultural products with other food items which they do not produce. It is therefore possible to argue that vegetable production caters household food security in Bahir Dar city and its peripheries.

TABLE 5: LOGISTIC REGRESSION RESULTS FOR THE EFFECT OF UPA ON HOUSEHOLD FOOD SECURITY

<i>Dependent variable: Food security status of a household during the previous 12 months (=1 if self-reported to be food secure)</i>			
<i>Independent variable</i>	<i>Coefficient</i>	<i>z-value</i>	<i>Marginal effect</i>
Any household member participates in vegetable production	8.105	3.79	0.1088***
Any household member keeps livestock or poultry	-3.578	-2.89	-0.3243**
Household head is female	-2.923	-2.02	-0.1892*
Age of the household head	-0.185	-4.03	-0.0041***
Log of household size	-1.138	-1.21	-0.0253
Log of years of schooling of the household head	-0.085	-0.11	-0.0019
Household head is not a migrant	1.072	1.27	0.0201
Monthly household saving	0.00042	0.71	0.0000
Household head is currently working	-1.735	-1.65	-0.0263
Household has own water	6.283	4.74	0.5912***
Constant	10.19**	3.20	
No. of observations		88	
Log pseudo-likelihood		-21.46	
Wald chi2(10)		28.29***	
Pseudo R ²		0.4176	

*, **, *** means significance at 10%, 5%, 1% levels respectively.

On the other hand, however, participation in animal husbandry and poultry contributes inversely to household food security. This might have happened because the livestock are only oxen in the case of the peripheries. Further, it is estimated that the likelihood of household-level food security is expectedly and significantly higher, ceteris paribus, for those headed by males and the young as well as for households having access to own piped water.

CONCLUSIONS AND RECOMMENDATIONS

In an attempt to assess households' participation in UPA and its contribution to poverty reduction and food security in Bahir Dar city and its vicinities, this study has analysed data from 112 randomly-selected households. The study identifies that there is a shallow participation in urban and peri-urban agricultural activities in the study area. It is also found that UPA in the form of vegetable production is not pro-poor at the current practice. The sector, nonetheless, has been found to have a significant role to play in making urban residents to be food secure. Under the current setting in which there is no official recognition and support to the sector, it seems difficult to use UPA as a poverty-reducing means. It is, therefore, imperative that the country in general and the City Administration of Bahir Dar in particular have a clear policy on urban and peri-urban agriculture. It would be good to establish a separate office for urban agriculture under the City Administration and also to publicize its activities.

The study finds that the scanty participation in UPA of urban residents in the study area is greatly resource-related. As long as there is the determination and willingness to cultivate, and the necessary official support, the potential for maximum use of the existing vacant lands in the City and its fringes could be enhanced to satisfy the basic food needs of the majority of the population in the City. In this connection, the City Administration might be expected to facilitate the use of idle urban lands (such as those reserved for *green areas* in many *kebeles*) to the youth together with credit and advisory services. It may also be vital to search for and maintain non-governmental organizations' projects that target the poor to participate in UPA. Creation of public awareness (for example through entrepreneurial training) on the utilization of available resources such as land and water might also do well. Supporting wealthier ones participating in UPA to increase employment opportunities in the sector cannot also be ruled out. Generally, coordination of efforts of the government, stakeholders and the

society aimed at reducing resource- and knowledge-related constraints might bring the desired outcome of repeating the food security attainment roles of UPA on poverty reduction as well.

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INSURANCE MARKET DEVELOPMENT AND ECONOMIC GROWTH IN ETHIOPIA

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ABSTRACT

It has been noted that insurance market not only facilitates economic transactions through risk transfer and indemnification but also, it promotes financial intermediation (Ward and Zurbrugg, 2000; Skipper, 2001). Hence, the growth of insurance sector is indispensable for economic growth of nations (Arestis and Demetriades, 1997). However, existing empirical studies on the relationship between insurance market development and economic growth gave mixed evidences, rely on aggregate data to measure insurance market development and hence, neglecting the different market forces to be considered in disaggregation and carried out mostly in developed countries while, evidences on the developing countries, like Ethiopia, are very limited. The objective of this study is hence to examine the relationship between the insurance market development (measured based on aggregate and disaggregated -components of insurance premium) and economic growth in Ethiopia. Based on the data collected over the period of 1996 to 2011, estimation has been made using time series econometric model. Specific procedures followed here in estimation include stationery tests of the time series, co-integration test using the Johansen procedures and causality test. The co-integration test result revealed the existence of long run relationship between insurance market development measured both as aggregate and disaggregated insurance premium and economic growth. The causality test result showed the existing long run and short run relationship between insurance market development and GDP growth, in line with demand following hypothesis at aggregation and in disaggregation of insurance market.

JEL CLASSIFICATION CODES

C23, E44, G22, O11, O16.

KEYWORDS

Economic Growth, Insurance, Premium.

1. INTRODUCTION

The finance-growth nexus theoretical studies conceived and numerous empirical studies (Gertler, 1988; Pagano, 1993; King and Levine, 1993; Levine, 1999; Levine and Zervos, 1998; Beck and Levine, 2004) posited that nations with better developed financial systems able to ensure faster and more stable long run economic growth (Levin, 2005; Haiss & Sumegi, 2008). The presence of well developed financial system will provide improved financial functions that may influence factor productivity, saving and investment decisions and then, long run economic growth (Levin, 2005; Curack *et al*, 2009).

Hence, the development of insurance industry, which is an important part of the financial system, enhances the provision of key financial functions and expected to influence the economic growth. More specifically, insurance market activity or functions, both as a provider of risk transfer and indemnification and as financial intermediary, may contribute to economic growth in the following ways: (a) mobilizing savings; (b) allowing different risks to be managed more efficiently, thereby encouraging the accumulation of new capital; (c) boosting financial stability; (d) fostering a more efficient allocation of capital (Skipper, 1997; 2001; Skipper and Kwon, 2007; Dorfman, 2008; Ward and Zurbrugg, 2000). But still, the contending view in the dichotomy that insurance market development may be the response to the real sector development and demand for financial services of insurance (demand following) may hold (Kugler and Ofoghi, 2005). Over the post financial sector reform period, market development in the insurance sector of Ethiopia has been notable. Hence, this article examines the relationship between the insurance market development and economic growth of Ethiopia.

2. REVIEW OF LITERATURE

Various empirical studies on the relationship between insurance sector and economy growth have been documented. Hence, this section presents the review of major empirical studies that examine the relationship between insurance sector and economic growth in perspectives. Beenstock, Dickinson and Khajuria (1988) apply pooled time series and cross-section analysis on 1970- 1981 data in 12 industrialized countries. In the study, Beenstock *et al* (1988) regress premiums for property liability insurance against GNP, income and interest rate development. They find that premiums are correlated to interest rate and GNP; marginal propensity to insure (short and long-run) rises with income per capita and is always higher in the long run. Outreville (1990) conducts a cross-section analysis on property liability insurance premiums for the years 1983 and 1984 for 55 developing countries onto GDP, insurance price and other macroeconomic figures. The results are similar to Beenstock *et al* (1988) that found a positive relationship between property liability insurance and GDP and, support the significance of income and financial development. Other explanatory variables don't seem to be important.

Browne & Kim (1993) analyze the factors which may affect life insurance demand for 45 countries for the years 1980 and 1987. Their result shown that income, dependency and social security expenses are positively, inflation is negatively correlated and significant in both years. The religious origin – i.e. being a Muslim country – is always negatively connected to insurance consumption. Outreville (1996) investigates the correlation of life insurance premiums to GDP and other factors for the year 1986 for 48 developing countries. The results of the cross-sectional analysis contradict his former work (Outreville 1990) by showing no significance for real interest rate or financial development (M2/GDP). Only the income elasticity is similar to those found in former works (Beenstock *et al*, 1988, Outreville, 1990 & Browne & Kim, 1993).

Ward and Zurbrugg (2000) examined the possible relationship between growth in insurance activity, defined as annual total premium written, and economic growth, defined as the annual real GDP, in OECD countries over the period of 1961 to 1996. In testing time series properties of data, Philips-Perron unit root test showed real insurance premium and real GDP were non-stationary in levels but stationary in their first difference. Based on Johansen co-integration trace test, there was no co-integrative relationship for Austria, Switzerland, the UK and the US. For Australia, Canada, France, Italy and Japan the null hypothesis of no co-integration relationship was rejected. They apply bivariate VAR methodology to test for Granger causality. Causality tests from VAR in levels show that the insurance activity leads economic growth in two countries (Canada and Japan), while in the case of Italy there is a bidirectional relationship between insurance and economic activity. However, this relationship was weak for Italy and significant at 90 % confidence interval. Causality tests from the error-correction models show similar results as previous tests. Besides, they concluded that the causal relationships between insurance and economic growth might well vary across countries because of the possible influence of number of country specific factors, such as cultural, regulatory and legal environment, the improvement in financial intermediation and the moral hazard effect in insurance.

Based on the cross country data of 55 developed and developing countries for the period of 1980-1996, Webb, Grace and Skipper (2005) examine whether banks and insurance (life and nonlife insurance individually and collectively) contribute to economic growth by facilitating the efficient allocation of capital. In the study, the insurance variable is measured by average insurance penetration (insurance premiums relative to GDP) of life and non-life insurance respectively. In estimations, firstly, assuming exogenous financial variables, they use OLS estimation method, and found the positive effect of banking development on economic growth, while insurance variables do not enter significantly. Then, assuming endogenous relationship between financial activity and economic growth,

they use an iterated 3SLS simultaneous estimation and found that higher levels of banking and life insurance penetration predict higher rates of economic growth. On the other direction, economic growth affects life insurance penetration while it does not predict banking development. However, they found no link between economic growth and non life insurance in any direction.

In UK, Kugler and Ofoghi (2005) evaluate a long run relationship between development in insurance market size and economic growth by using disaggregated data, of net insurance premium, for long-term insurance that includes yearly and single premium (including life insurance, annuities, individual pensions and other pensions) for the period 1966-2003 and for general business insurance, that includes motor, accident and health, liability, property, pecuniary loss, reinsurance and Marine, Aviation and Transport for the period 1971-2003. Using Johansen's λ_{trace} and λ_{max} co integration tests, they confirmed a long-run relationship between development in insurance market size and economic growth for most of components of insurance markets and at least at 5% level of significance. Besides, their causality tests results show that, for eight out of nine insurance markets (the exception is pecuniary loss insurance), the presence of their long run relationship with economic growth. While in the short run, growth in life (both yearly and single premium), liability and pecuniary loss insurance causes economic growth. Further, there is an evidence of bidirectional causal relationship in the long-run between GDP growth and insurance market size for the three insurance categories, with more powerful causality from economic growth to insurance development than the causality from the other direction.

Haiss and Sumegi (2008) examine the impact of insurance on economic growth, measured by GDP, using the cross country panel data from sample 29 European countries during the period of 1995 to 2005. Taking insurance, as one of the explanatory variables, it is measured by premium income and total net investment of insurance companies. Premium income is split into life and non-life premium income. In estimation, they use OLS on unbalanced panel with unobserved country and time effects and found a positive impact of life insurance on GDP growth in the EU-15 countries, Switzerland, Norway and Iceland, while non-life insurance has a larger impact in Central and Eastern Europe.

The causal relationship between insurance market activity has been examined by Arena(2008) using dynamic models of panel data from 55 countries (including high, middle and low income countries), for the period 1976-2004. Arena(2008) uses data for total and non-life and life insurance premiums in order to assess potentially different effects on economic growth, measured by growth in real GDP per capita, controlling for additional factors that may affect economic growth including private credit, stock market turnover, initial GDP per capita, openness, government consumption, inflation, human capital, and terms of trade changes data. In estimations, the study uses the generalized method of moment for dynamic models of panel data and the results show a positive and significant effect of total, life and non-life insurance market activity on economic growth. However, the research results evidence different impact of life and non-life insurance on economic growth. While life insurance premiums positive effect on economic growth is driven by high-income countries only, non-life insurance premiums effect on economic growth is driven by all countries, although a larger effect is found in high-income countries. Additionally, the study found that life insurance would have a bigger impact on economic growth at low levels of economic development and non-life insurance at middle levels.

Adams et al. (2009) analyze the dynamic historical relation between banking, insurance and economic growth in Sweden using time-series data from 1830 to 1998. Insurance development is measured by annual aggregate (non-life and life) insurance premiums. They use log of annual per capita growth in the rate of real GDP to measure national economic growth, data for the total (central, commercial and savings) annualized amount of real bank lending to the non-bank public on a per capita basis to represent bank credit variable. In the study, they use time-series data and econometric tests for co-integration and Granger causality, considering the sub period and whole period of time series. The results show that the development of banking, but not insurance, preceded economic growth during the nineteenth century, while it was reversed in the twentieth century. Insurance development appears to be driven more by the pace of growth in the economy rather than leading economic development over the entire period of analysis. In India, Wadlamannati (2008) examines the effects of insurance growth and reforms along with other relevant control variables on economic development in the period from 1980 to 2006. Growth of insurance penetration (life, non-life and total) is used as proxies of insurance sector growth. The study applies OLS, co-integration analysis and error correction models. The study confirms positive contribution of insurance sector to economic development and a long run equilibrium relationship between the variables. While the reforms in the insurance sector do not affect economic activity, their growth has positive impact on economic development.

In general, as it is evidenced in the previous studies, the dichotomy view still works regarding the role of insurance sector in facilitating long run economic growth (Outreville, 1990; Browne, Chung and Frees, 2000; Beck and Webb, 2003), on the one hand, and the effect of economic growth in achieving insurance sector development(Ward and Zurbruegg, 2000; Webb, Grace and Skipper, 2002; Kugler and Ofoghi, 2005; Vadlamannati, 2008; Arena, 2008; Adams et al., 2009),on the other hand. Besides, the results of past empirical studies are mixed and, mostly past empirical studies use the aggregate total insurance premium that may fail to take into account the different market forces in disaggregation. Further, existing studies on the insurance-growth nexus is mainly focused in developed countries and less evidences documented in least developing countries like Ethiopia.

3. IMPORTANCE OF THE STUDY

This study investigates the relationship between insurance market development, using both aggregated and disaggregated data, and economic growth of Ethiopia in order to contribute to fill a gap in the finance-growth nexus literatures and to the policy makers who seek a better understanding of whether economic growth leads insurance market development('demand following') or insurance market development leads economic growth('supply leading') or bidirectional relationship exist in the insurance-growth nexus in Ethiopia. Evidence about the relationship of insurance sector and economic growth will also influence the priority that policy makers attach to reforming financial sector policies in general, insurance industry, in particular, in the efforts towards economic growth and system stability(Haiss & Sumegi,2008).

4. STATEMENT OF THE PROBLEM

Despite the importance of insurance sector to the economic growth, the empirical studies that investigate the relationship between insurance sector development and economic growth are unparallel with the plethora of studies on the relationship between banking sector development and economic growth (Haiss and Sumegi,2008). Besides, the existing limited empirical studies on the relationship of insurance industry growth and economic growth (Outreville, 1990; Browne, Chung and Frees, 2000; Beck and Webb, 2003; Ward and Zurbruegg, 2000; Webb, Grace and Skipper, 2002; Kugler and Ofoghi, 2005; Vadlamannati, 2008; Arena, 2008; Adams et al., 2009) provide inconclusive, mixed results. Moreover, these studies investigate the relationship mainly based on the use of aggregate total insurance premium (Ward and Zurbruegg, 2000), ignoring possible differences of relations in disaggregation of insurance premium variable, or use of the property-liability insurance premium (Beenstock et al, 1988; Outreville, 1990) as indicator of insurance sector activities or market size, ignoring other activities or markets of insurance industry. Further, available studies on the link between insurance sector and economic growth (Ward and Zurbruegg, 2000; Webb, Grace and Skipper, 2002; Kugler and Ofoghi, 2005; Vadlamannati, 2008; Arena, 2008; Adams et al., 2009) are based on data available in developed and developing economies, excluding least developing countries like Ethiopia. Over the post financial sector reform period, insurance sector in Ethiopia has shown notable expansions and development (NBE, 2010/11). But, as to my knowledge, the relationship between the insurance market development and the recorded economic growth of Ethiopia has not yet examined.

5. OBJECTIVE OF THE STUDY

The objective of the study is to investigate the relationship between insurance market development, using both aggregated and disaggregated data of insurance premium, and economic growth of Ethiopia over the period of 1996 to 2011.

6. HYPOTHESIS

H₀ : *Insurance market development has no relationship with the economic growth of Ethiopia*

7. RESEARCH METHODOLOGY

7.1. DATA AND VARIABLES

In order to examine the relationship between insurance market development and economic growth, the study has set variables to be used. In the study, the variables of interests are the economic growth and insurance market development.

Economic growth- Following previous studies (Ward and Zurbrugg, 2000; Kugler and Ofoghi, 2005), the study uses log of annual growth rate real GDP, as a measure that depicts economic growth.

Insurance market development- As insurers collect premiums for their risk transfer and indemnification services, insurance premiums are used as a standard measure of insurance market development in insurance literature. However, previous studies use total premiums (Ward and Zurbrugg, 2000; Adams et al., 2009) while others use disaggregated data for life and non-life insurance (Webb, Grace and Skipper, 2002; Haiss and Sumegi, 2008; Arena, 2008) and disaggregated data for life and components of non-life insurance (Kugler and Ofoghi, 2005). As the different insurance policies offer different protection services to the insured, their effect to economic growth might be different and hence, by using total insurance premiums we may fail to account for different market forces in each parts of insurance industry. Hence, the study use log of the annual gross insurance premium as a measure that depicts insurance market development, at different level of aggregation and disaggregation of data. Specifically, the study uses the aggregate annual gross total insurance premium to capture the insurance market development of Ethiopia as a whole. Then, the insurance market development is considered at the disaggregated level of annual gross non life (general) insurance and life insurance premium. This disaggregation is based on the facts that life and non-life insurance policies offer different protection services to the insured. While **life insurance** offers medium and long-term protection products with savings elements, **non-life insurance** offers medium and short-term indemnification products. Thus, use of this disaggregated measure of insurance market development helps to take into account different market forces in life and non life insurance market and hence, possibly affect economic growth differently (Browne and Kim, 1993).

But still, further disaggregation of non life (general) insurance premium is considered, as the nonlife insurance market encompasses insurance markets of Motor, Accident and health, liability, property, pecuniary loss, Marine, Aviation, engineering, workmen's compensation and others. **Motor insurance** policies cover the legal liabilities arising from the use of a motor vehicle (including Private car, motorcycle, commercial vehicles and fleets) and also cover damage to the vehicle (in comprehensive policies). **Liability insurance** covers legal responsibility for causing loss to someone else by injuring them or damaging their property. **Property (Fire) insurance** cover specified property that may be damaged or destroyed by events or peril of fire. **Accident and Health** covers personal accident insurance (policies that will pay in the event of accidental death or a specified injury) and medical expenses insurance (policies that will pay the costs of treatment for acute conditions). **Pecuniary Loss** relates to financial losses that may have occurred, e.g. Consequential Loss Indemnity policies. **Marine insurance and Aviation insurance** covers damage to both the hull and cargo of ships and airplane respectively, along with the liability for property damage, injury and death to passengers and others. Indemnities are also provided for the goods that may be lost or damaged whilst in transit. **Engineering-** covers losses made to someone else or damage of the property in relation with engineering activities. **Workmen's compensation-** pays for any worker who sustains death or bodily injury by an accident or disease arising from working of insured employer. Hence, the insurance market development is also measured by using the log of yearly gross insurance premiums of components of non life insurance (Motor, Accident and health, liability, property (fire), pecuniary loss, Marine, Aviation, Engineering, Workmen's compensation). Data series on all variables are used in the natural logarithm transformation in estimations.

Data for annual insurance premium collected from the audited annual reports of insurance companies in Ethiopia. For checking data consistency, data on insurance premium are also collected from reports of insurance companies available in the National Bank of Ethiopia. These data are available on an annual basis and cover period 1996 to 2011 for all insurance companies in Ethiopia. Data for GDP comes from the Ministry of Finance and Economic development (MoFED) of Ethiopia and World Bank data set.

7.2. ECONOMETRIC MODEL ESTIMATION PROCEDURES

In estimations of time series econometric models, the study begins by testing the properties of the stochastic time series data generating process (which may be stationary or non stationary). Stationary time series exist when it has time invariant mean, variance and auto covariance (at various lags), on the contrary, non stationary time series, otherwise (Gujarti, 2004; Green, 2004). Testing for the presence of stationary time series is particularly important for the very reasons that non stationary time series may result in meaningless spurious regression, shocks of the system are persistent and the standard assumptions of asymptotic analysis will not be valid (Gujarti, 2004; Brook, 2008). Hence, the study use two unit root tests: the augmented Dickey-Fuller (ADF) test and, Philips and Perron (PP) test. Both the ADF test and the non parametric PP test will test the null hypothesis of unit roots against the alternative of stationary by comparing test results and the critical value from tau distribution.

Based the result on the unit root tests, the next step in estimating the time series econometric model is to carry out co-integration tests of variables found to be non-stationary in levels¹⁷. Variables are said to be co-integrated when a linear combination of two (more) non stationary time series in levels with same order of integration is stationary or integrated of order zero (Green, 2004; Gujarati, 2004). The economic implication of the co-integration in estimations shows the existing long run relationship between variables which are co-integrated (Wooldridge, 2000; Gujarati, 2004). In econometric literature, the most common co-integration tests are the Engle Granger and Johnson co-integration tests. The Engle-Granger test is a two step co-integration test procedure proposed by Engle-Granger (1987) and addresses the issue of integrating the short-run dynamics with the long run equilibrium between two variables. However, this test has been criticized as it makes use of residuals of static model that is susceptible to spurious relation and its implicit assumption of only one co-integrating vector. Hence, the study is based on the Johnson co-integration test. Johansen presented the likelihood methods for the analysis of co-integration in VAR models. In this method, the test for the number of the co-integrating vector can be obtained using the following two test statistics:

- **Trace statistics** $= -\lambda_{\text{trace}(r)} = -T \sum_{i=r+1}^n \ln(1 - \hat{\lambda}_i)$
- **The Maximum Eigen values** $= \lambda_{\text{max}}(r, r+1) = -T \ln(1 - \hat{\lambda}_{r+1})$

Where, $\hat{\lambda}_i$ are the estimated values of the characteristic roots (or Eigen values). Trace statistics (TS) tests the null hypothesis that the number of distinct co-integrating vectors is less than or equal to r against alternative. The Maximum Eigen value (ME) statistic tests the null hypothesis that the number of the co-integrating vectors is r against the alternative of $r+1$ co-integrating vectors. However, the result of this co-integration test tends to be sensitive to the order of the VAR model. Hence, the proper choice of lag length for the VAR is critical and selection of lag length be made to the length that gives the smallest of various information criteria (Akaike information criterion (AIC), Schwarz Bayesian information criterion (SBIC), and Hannan-Quinn information criterion (HQIC)). But when difference arises between or among the tests, the study uses AIC as lag length selections for the simple reason that it gives the smallest information criterion compared to others.

Finally, the study tests the causal relationship between insurance sector development and economic growth. The Granger causality test of the study depends on the results of unit root test and co-integration tests of time series variables. If the unit root test result reveals the presence of stationary variables in levels then by applying VAR in levels causality test can be obtained. Alternatively, if the variables found to be non stationary in levels in unit root test but failed to reject the null hypothesis of no co-integration then by applying VAR in first difference causality test can be obtained. In the presence of non stationary variables in level in unit root tests and these variables are co-integrated; the causality test is to be worked with the error correction model (ECM). Because co-integration test is used to find evidence for long-run relationship and Granger's causality test is concerned with short-run relationship, we can consider both of these different concepts in an error correction model (Maddala and Kim, 1998 cited in Kugler and Ofoghi, 2005). Besides, inclusion of error correction term in modeling co-integrated unit root processes is important for proper specification of models under which causality testing can lead to erroneous conclusions. Hence, for the possible presence of non-stationary co-integrated variables, following Kugler and Ofoghi (2005) approach for causality test, the Granger equations are re-parameterized to achieve VECM equations as follows:-

¹⁷ There are no co-integration tests to be made for variables found to be integrated of order zero in levels.

$$\Delta y_{1t} = q_1 + g_{11}(L) \Delta y_{1t-1} + g_{12}(L) \Delta y_{2t-1} + \alpha_1 ECM_{t-1} + \varepsilon_{1t} \quad (3)$$

$$\Delta y_{2t} = q_2 + g_{21}(L) \Delta y_{1t-1} + g_{22}(L) \Delta y_{2t-1} + \alpha_2 ECM_{t-1} + \varepsilon_{2t} \quad (4)$$

Based on the equations above, there are two sources of causal relationship between variables, either through lagged dynamic terms (Short-Run), or through the lagged co-integrating vector (Long-Run). In addition, joint significance of both short-run and long-run can be tested. In each case, null hypothesis of no-causal relationship can be tested using the significance of p-values of the estimated coefficients (g_{12} , g_{21} , α_1 , α_2).

8. RESULTS

To test the data generating process of time series, two unit root tests are used in the study. In the augmented Dickey-Fuller (ADF), the lag length is determined by sequentially testing down starting from a general model with k max lags and tests whether of the coefficients of the last lags are significant and repeat the procedure until a rejection occurs or the sequential testing leads to the boundary zero (Green, 2004). The max lags to be considered for sequential testing is determined based on Schwert criteria (Green, 2004). In Phillips and Perron (PP) unit root test, the study used the Newey and West (1994) to determine the lags length. This method indicated to be useful as it show how to select the band width optimally when the form of autocorrelation was unknown. The results of the ADF and PP unit root tests of time series variables in levels and first difference found to be as shown below in Table 8. 1.

TABLE 8.1: UNIT ROOT TEST

Variable	Unit root test on levels		Unit root test on first difference	
	ADF	PP	ADF	PP
Real GDP growth	-1.900	-2.519	-7.159 ***	-3.336*
Total insurance premium	-1.540	0.097	-5.126***	-2.308
Life insurance premium	-2.433	-1.262	-3.961***	-3.872***
Nonlife insurance premium	-1.497	0.089	-4.599***	-2.703
Motor insurance premium	-0.788	0.175	-3.899**	-2.241
Liability insurance premium	-2.874	-1.861	-2.632	-3.697**
Aviation insurance premium	-1.784	-2.097	-2.399	-3.550*
Engineering insurance premium	-1.976	-2.369	-3.396***	-3.053
Fire insurance premium	-3.161	-1.794	-0.827	-3.936**
Marine Insurance premium	-2.014	-1.863	-2.992	-4.679***
Accident and Health insurance premium	-2.094	-3.463*	-2.508	-5.093***
Pecuniary insurance premium	-1.003	-0.489	3.284 *	-4.127**
Workmen's compensation premium	-1.095	-1.226	-1.869	-4.317**

Note: *, ** and *** indicates test statistic is significant at the 10%, 5% and 1% level.

Lag length selection is based on sequential testing for augmented Dickey-Fuller and the Newey and West (1994) for Philips Perron unit root tests. All regressions include a constant and linear time trend.

The unit root tests on levels of time series variables indicate that the null hypothesis of unit root cannot be rejected in both ADF and PP tests. Both the ADF and PP tests failed to reject the null hypothesis of unit root in Real GDP variable in level, while, both tests reject the null hypothesis of unit root in Real GDP variable in first difference. Hence, the real GDP growth variable is non stationary in level and stationary in the first difference.

Both the ADF and PP unit root tests consistently failed to reject the null hypothesis of unit root in insurance market development proxies (variables) in level at both the aggregate and disaggregate gross insurance premium, except the accident and health insurance that in ADF test, the null hypothesis can't be rejected but PP test shows the rejection of the null hypothesis of unit root. Thus, the unit test result revealed the existing non-stationary, in level, time series variables of insurance market development proxies at different level of aggregation and disaggregation, except the accident and health insurance premium found to be stationary in PP test. On the contrary, the PP unit root test in first difference, though conflicting with the result of ADF test, rejects the null hypothesis of unit roots in all variables considered, except total insurance, non life insurance and motor insurance premium variables considered.

Based on the all of the non stationary variables in levels characterized as being integrated of same order found in the unit root tests, one can evaluate the long run relationship between insurance premium, measured at different level of aggregations and disaggregation and real GDP using co-integration test. The study used Johansen's procedure to find whether there exists a co-integration in non stationary variables in VAR model. However, the co-integration of variables is highly sensitive to the lag length. Hence, firstly, the study selects the appropriate lag length based on information criteria, while consideration given to the over consumption of degrees of freedom. Then, at the chosen lag length 2, tests of trace statistics (TS) and the maximum Eigen value (ME) used to examine the number of co-integrating relationships are estimated as shown in Table 8.2.

TABLE 8.2: BI-VARIATE CO-INTEGRATION TEST

Variable	Johnson I_{Trace}	Johnson I_{Max}
	$H_0: r=0$	$H_0: r=0$
Total insurance premium	20.6897***	11.8302
Life insurance premium	24.6570***	22.7073***
Nonlife insurance premium	22.4506***	13.6574
Motor insurance premium	15.4728**	12.0822
Liability insurance premium	14.6087	14.1142**
Aviation insurance premium	9.2981	7.0335
Engineering insurance premium	19.8568**	18.3429**
Fire insurance premium	41.1931***	32.1275***
Marine Insurance premium	16.9467**	13.2066
Accident and Health insurance premium	29.8537***	29.8424***
Pecuniary insurance premium	14.7619	13.8262
Workmen's compensation premium	19.6109**	16.4607**

Note: *, ** and *** indicates test statistic is significant at the 10%, 5% and 1% level. Lag length selection as suggested by information criteria. All regressions include a constant and linear time trend.

As there is bi-variate VARs, taking one insurance development variable at a time, measured at different levels of aggregation and disaggregation with GDP growth, for co-integration test, the maximum possible number of co-integrating vector is 1. Hence, the study tests the null hypothesis of no co-integrating vector and the alternative hypothesis of presence of one co-integrating vector. In testing the null hypothesis, comparison of the TS and ME statistics values with their respective t-statistic values has been made. As the co-integration tests results shown above, the TS and ME values exceed the t-statistics and hence, consistently rejects the null hypothesis of no co-integration ($r = 0$) between real GDP growth and insurance market development, measured at levels of Life insurance and sub components of non insurance (Engineering insurance, fire insurance, accident and health insurance, workmen's compensation insurance and life insurance) at 5% and 1% significant level. While, the TS test indicate the rejection of the null hypothesis of no co-integration of GDP growth and insurance market development, measured at levels of total insurance, nonlife insurance, motor insurance and marine insurance market at 5%, the ME test failed to reject the null hypothesis absence of co-integration between these time series. On the other way round, the ME test reject the null hypothesis of no co-integration between liability insurance and real GDP growth at 5% significance level, but, the TS tests failed to reject the absence of co-integration of these time series. However, both TS and ME tests consistently failed to reject the null hypothesis of no co-integration between real GDP growth and remaining insurance market development, measured at levels of aviation insurance and pecuniary insurance market. The existence of co-integration in ten out of twelve proxies of insurance development measured at different levels of aggregation and disaggregation indicate the existing long run relationship between variables in the vector.

Based on the unit root test results and co-integration test results, the study investigates the causality test based on the VAR models. If the variables are non stationary in levels and found to be co-integrated in their linear combinations, the causality test is to be made based on the vector error correction model (VECM). Hence, from the unit root test and co-integration test results, insurance market development measured at levels of total insurance market premium, life insurance premium, non life insurance premium and components of non-life insurance premium (specifically, motor insurance, engineering, fire, marine, accident and health, workmen's compensation and liability insurance premiums) found to be non-stationary series and co-integrated with the real GDP, the study used the VECM for testing the null hypothesis of no causal relationship, from these insurance market development to GDP or vice versa, in the short run and long run, as shown in Table 4.3. For the variables found to be non stationary in levels in unit root tests but not co-integrated, the causality test can be made based on estimating the VAR in first differences. Thus, from unit root and co-integration test results, insurance market development, measured at levels of aviation insurance and pecuniary insurance premiums are non-stationary variables in levels but not co-integrated with the real GDP growth, the study use the VAR in first difference for the null hypothesis of no causal relationship for short run has been estimated and tested, appropriately, as shown below in Table 8.3.

TABLE 8.3: CAUSALITY TEST

TABLE 6.5: CAUSALITY TEST													
Variable	GDP doesn't cause insurance premium							Insurance premium doesn't cause GDP					
		Coef.	Std.err	z	P>z	χ^2	P-val	Coef.	Std.err	z	P>z	χ^2	P-val
Total insurance	g_{12}, g_{21} α_1, α_2	-16.02315 .0678456	9.336638 .021099	-1.72 3.22	0.086 0.001	120.01	0.000	-.02345 .42917	.0225922 .4825063	-1.04 0.89	0.299 0.374	4.314	0.365
Life insurance	g_{12}, g_{21} α_1, α_2	-.04217 .10718	.0185992 .025406	-2.27 4.22	0.023 0.000	207.24	0.000	.1627749 -.884107	8.293124 .6309687	0.02 -1.40	0.984 0.161	4.425	0.352
Non life insurance	g_{12}, g_{21} α_1, α_2	-.0398139 .0909179	.0214616 .0218181	-1.86 4.17	0.064 0.000	144.47	0.000	-7.6946 .04544	9.685884 .6211937	-0.79 0.07	0.427 0.942	2.013	0.733
Motor Insurance	g_{12}, g_{21} α_1, α_2	-.0286533 .0364973	.0221418 .0271067	-1.29 1.35	0.196 0.178	66.433	0.000	9.654872 -1.05432	5.306034 .4271154	1.82 -2.47	0.069 0.014	6.827	0.145
Engineering Insuranc	$g_{12}, g_{21}, \alpha_1, \alpha_2$	-.2897921 .459168	.1497042 .1348992	-1.94 3.40	0.053 0.001	19.73	0.001	2.147506 -1.32446	.7779544 .2766573	2.76 -4.79	0.006 0.000	30.76	0.000
Fire insurance	g_{12}, g_{21} α_1, α_2	-.011405 .0104163	.0038762 .0012552	-2.94 8.30	0.003 0.000	90.13	0.000	49.89473 -224292	23.84318 .115817	2.09 -1.94	0.036 0.053	4.776	0.311
Marine Insurance	g_{12}, g_{21} α_1, α_2	.0123509 .0153778	.0383335 .050659	0.32 0.30	0.747 0.761	28.19	0.000	5.604634 -1.46535	3.039033 .365199	1.84 -4.01	0.065 0.000	19.02	0.001
Accid & Health Ins.	$g_{12}, g_{21}, \alpha_1, \alpha_2$	-.1207567 .1051531	.0388367 .0519009	-3.11 2.03	0.002 0.043	35.40	0.000	-1.19734 -1.33232	1.923881 .4382333	-0.62 -3.04	0.534 0.002	9.82	0.043
Workmen'comp. Ins.	$g_{12}, g_{21}, \alpha_1, \alpha_2$	-.0516279 .0412436	.0209294 .0263524	-2.47 1.57	0.014 0.118	44.53	0.000	1.58071 -1.07667	5.244725 .478299	0.30 -2.25	0.763 0.024	5.51	0.238
Liability insurance	g_{12}, g_{21} α_1, α_2	.0087708 .0234298	.0941625 .1237885	0.09 0.19	0.926 0.850	13.281	0.010	-2.44714 -1.34345	1.00093 .315469	-2.44 -4.26	0.014 0.000	23.553	0.0001
Aviation insurance	g_{12}, g_{21}	.0120941	.2895105	0.04	0.967	.5265	0.971	-.4456528	.6740795	-0.66	0.509	2.427	0.658
Pecuniary insurance	g_{12}, g_{21}	.1655381	.1060244	1.56	0.118	2.823	0.588	-1.281266	1.675063	-0.76	0.444	3.788	0.436

Note: g_{12}, g_{21} are coefficients of lagged dynamic terms (Short run) in differenced eqs. of each insurance premium and GDP growth respectively

α_1, α_2 are coefficients of lagged co-integrated vector (Long run) in differenced eqs. of each insurance premium and GDP growth respectively

The causality test is based on the significance of the coefficients of lagged co-integrating vector (α_1, α_2) and the lagged dynamic terms (g_{12}, g_{21}) in the estimation of VECM. As shown in estimation result, the coefficient of lagged co-integrating vector and lagged dynamic terms in differenced equations of total insurance premium, life insurance premium and non-life insurance premium found to be significant. But, the coefficients found to be, consistently, insignificant in differenced GDP equation. Hence, these test results revealed the presence of unidirectional causality from the GDP growth to insurance market development measured as total insurance premium, life insurance premium and non life insurance premium. Consistently, in using the aggregate total insurance premium and disaggregate life and non life insurance, the study found the existence of both short run and long run causality from real GDP to insurance market development. These evidences confirm the existence of demand following pattern that economic growth leads to the rise in demand of insurance.

However, at the level of disaggregated components of non-life insurance market, the test results indicate the unidirectional causality from insurance market development to real GDP and bidirectional causality. More specifically, the coefficients of lagged co-integrating vector and lagged dynamic terms in differenced equations of real GDP found to be significant but not, in differenced equations of motor insurance premium and marine insurance premium. Hence, there is unidirectional causality from insurance development, measured as motor insurance and marine insurance, to real GDP growth of Ethiopia. The study confirms the existence of short run and long run causality from motor insurance market development and marine insurance market development to real GDP growth. These results confirm the existence of supply leading that growth in insurance smoothes short-term economic volatility and thus, induce economic growth in the long run. On the contrary, consistent with finding in using non-insurance premium, there exists the short run unidirectional causality from the GDP growth to accident and health insurance market development and workmen's compensation insurance market development. Further, the interdependence of economic growth and insurance development was also revealed in the existing evidence of bidirectional causality of GDP growth and, engineering insurance development and fire insurance market development. However, there are no causal links (dependency) found between GDP growth and insurance development measured as aviation insurance and pecuniary insurance premium. In VAR first difference estimation, the χ^2 found to be 0.5265 (p value= 0.971) for the causality from GDP growth to Aviation insurance and the χ^2 found to be 2.427 (p value= 0.658) for the causality from Aviation insurance to GDP growth. Similarly, the χ^2 found to be 2.823 (p value= 0.588) for the causality from GDP growth to Pecuniary insurance and the χ^2 found to be 3.788 (p value= 0.436) for the causality from Pecuniary insurance to GDP growth. These results re-enforces the findings of the co-integration test.

9. CONCLUDING REMARKS

From different financial-growth theoretical studies and empirical studies, it has been noted that a general consensus reached that financial development facilitates economic growth. As the part of the financial system, insurance sector development can have an effect on the economy growth through risk transfer and indemnification and also promote financial intermediation. Nevertheless, past studies on the relationship between financial development and economic growth mainly focus on the banking firms and less consideration has been given to the insurance sector. Besides, the existing empirical literatures on the relationship between insurance and economic growth provide mixed evidences, use data of developed countries and neglect data on the least developing countries and, except a few studies which have considered relationship between some parts of insurance industry (disaggregated data) and economic growth, nothing has been done to evaluate this claim empirically, particularly in least developing countries.

In the study, potential relationship between growth in insurance industry and economic growth was examined. In this regard, economic growth measured as the log of annual real GDP growth rate and insurance market development measured at different level of aggregation and disaggregation. In estimating time series econometric model, the unit root test, co-integration tests and causality tests has been carried out. The result showed the existing long run relationship between development in insurance market size and economic growth at all levels of aggregated and disaggregated measures of insurance market size development by using Johansen TS and ME co-integration tests, expect aviation insurance and pecuniary insurance premium. For most of variables, this relationship has been confirmed at least at 5% level of significance. In addition, because co-integration analysis does not provide information about possible patterns (demand-following and supply-leading), the study carried out causality tests. The causality test results reveal the existence of unidirectional causality both in the short run and long run from GDP growth to insurance market development measured at aggregate level using total insurance premium and at disaggregation using life insurance and non-life insurance premium. But, at the level of disaggregated components of non-life insurance market, the test results indicate the unidirectional causality from insurance market development (motor insurance and marine insurance) to real GDP and bidirectional causality (engineering insurance and fire insurance premium).

The existence of unidirectional causality from GDP to total insurance premium, life insurance premium and non life insurance premium imply the structure insurance market of Ethiopia, in aggregate terms, is characterized as working on the demand following hypothesis and hence, aggressive growth enhancing policy should directed to scale up the demand for financial services of the insurance sector of Ethiopia.

The existence of unidirectional causality from Insurance market development, measured at the level of disaggregated data, to GDP growth imply the existence supply leading hypothesis in sub markets of insurance industry of Ethiopia. Hence, policy makers should consider the contribution of growth of insurance market at disaggregate level(motor insurance and marine) to smooth out short run economic volatility and thus, induce economic growth in the long run. The bi-causality between real GDP growth and, engineering insurance market development and fire insurance market development imply the existing interdependence. Hence, the growth enhancing policy in the real sector should also consider the growth of these sub sector insurance market development.

10. LIMITATIONS

The study examines possible relationship between growth in insurance industry and economic growth based on the data obtained in a single country. Hence, the study failed to address and control the effect of conditional factors from cross country variations that may affect how the insurance sector development, at different level of aggregations and disaggregation of insurance market developments, related with the economic growth. Besides, this study is carried out based the relatively short span data points available only over the period of 1996 to 2011. This time periods may limit the conclusiveness of the findings in our time series econometric models estimations.

11. SCOPE FOR FURTHER RESEARCH

In existing gaps regarding the evidences in the insurance nexus growth, the need for further research on the insurance-growth is commanding by using different measures for insurance market developments (such as, insurance penetrations and insurance density, among others), economic growth, model specifications and reasonably longer time periods. Besides, in the future research of insurance market and economic growth, a panel of developing countries need to be considered to capture the effect of conditional factors, which may constitute economic, financial, demographic and regional conditions (Haiss & Sümegi, 2008), to enhance our understanding with respect to the nexus of finance-growth in general, and to the nexus of insurance market development and economic growth, in particular.

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IMPACT OF MACROECONOMIC VARIABLES ON STOCK MARKET RETURNS**AMARA****LECTURER****DEPARTMENT OF MANAGEMENT SCIENCES****VIRTUAL UNIVERSITY OF PAKISTAN****LAHORE****SHAHID ALI****RESEARCH SCHOLAR****SCHOOL OF ACCOUNTANCY & FINANCE****UNIVERSITY OF LAHORE****LAHORE****ABSTRACT**

The relationship between stock market and various macroeconomic variables has always been divisive. Studies indicate that stock market is influenced by changes in macroeconomic variables. Some of which affect the stock market returns and index positively while others have an adverse impact on stock market returns and index. This paper examines the impact of macroeconomic variables like GDP per capita, gross domestic savings, inflation and interest rate on stock market returns. Studies included in this paper published during 2000-2011. These studies revealed that macro economy's effects on stock exchange are not in one direction only. Some macro economic variables like GDP, gross domestic savings influence positively while some other like inflation and interest rate influence negatively the stock market returns. Based upon these studies, it is also suggested in the end of this paper that governments should take remedial measures to control inflation and to improve GDP. Also it should work on maintaining appropriate interest rates. There should be a balance between excessive high and low interest rates. It will boost investments in stock markets and consequently the stock returns.

KEYWORDS

Inflation, GDP, Interest Rate, Gross Domestic Savings, CPI.

INTRODUCTION

 stock markets play vital role in development and growth of any modern economy. It is hard to imagine a prosperous economy in the absence of stock markets. Role of these markets is important in the way that they mobilize the domestic resources of the economy and channel them to productive investment. The performance of stock market is gauged through movements in its index which is influenced by many factors such as companies' specific factors, domestic factors (macroeconomic, social & political) and international factors.

The focus of this study is to determine the impact of certain macroeconomic variables on stock market returns. There are many macroeconomic variables that can affect stock market index such as exchange rates, inflation, foreign exchange remittances, domestic & international oil prices, gross domestic products (GDP), interest rates, money supply, trade balances, country reserves, foreign direct investment etc. Most important and crucial economic variables that may affect the developing countries like Bangladesh, Pakistan are inflation, interest rate, exchange rate, GDP per capital and gross domestic savings. Massive number of studies reveals the relationship of these variables with stock market index. The relationship between macroeconomic variables and stock market index has always been of immense attraction for finance practitioners since many years. Relationship between stock market returns and macro economy is not entirely in one direction. Some macro-economic variables positively influence while some other negatively influence the market returns. Studies show that inflation and interest rates have negative relationship with stock market index whereas GDP growth has a positive relation with stock market index (Sohail and Hussain, 2011).

RELATIONSHIP OF DIFFERENT MACRO-ECONOMIC VARIABLES ON STOCK MARKET

Inflation is defined as the upward movement in prices of goods and services in an economy due to excessive demand of goods and services exceeding their money supply. It affects the purchasing power of the people and results in less saving which consequently results in increased money supply. Condensed saving reduces the economic growth by limiting investment in the economy. For measuring the effect of inflation on the economy, Consumer Price Index (CPI) can be used. Consumer Price Index is the weighted average of prices of consumer goods and services. It is calculated by taking changes in prices for each item and then averaging them.

Interest rate is the interest rate charged by central banks from commercial banks on the provision of credit/loan to commercial banks. It is used as a tool of monetary policy to control inflation i.e. in the regime of higher inflation; central bank increases this rate for commercial banks. It is for the purpose of controlling excessive money supply in the country. With limited funds, banks will trim down provision of loans to the customers which will ultimately affect further investments and businesses. This study will determine how interest rate can affect investment in stock market as stock market plays vital role in economic growth and how it is related to stock market index.

Gross Domestic Product Per Capita is a measure to gauge the standard of living of people in a country. It is among one of the major macroeconomic variables used to access total goods produced per person by a country. It is an indicator of economic financial condition.

Gross Domestic Savings (% of GDP) are calculated by subtracting final consumption expenditure (total consumption) from GDP. Higher GDP per capita and gross domestic savings indicates economy growth meaning by higher investment in capital and money markets. This study will counter check this concept in context of impact of GDP per capita and gross domestic savings on Stock Exchange index.

The motive of this study is to explore the influence of major macroeconomic variables like inflation (measured through CPI), interest rate, gross domestic product per capita (GDPPC) and gross domestic savings as %age of GDP on stock market returns. Various studies have been carried out in the past to study such relationships by using different macroeconomic variables according to researchers' choice like Taulbee (2001), Nishat & Shaheen (2004), Ali (2011) and Sohail and Hussain (2011).

It is enduring discussion whether macroeconomic variables significantly affect the stock market index or not. However, studies reveal that there is not much divergence among the researchers. Inflation has a negative impact on stock market prices and has causal relationship explored by Nishat & Shaheen (2004) & Ali Bazeed (2011). Stock market index is positively affected by growth in real GDP and consequently in GDP per capita and it is the largest determinant of stock prices (Taulbee, 2001).

Aims of the study are to determine and ascertain correlation and causal relationship between Stock Market returns and macroeconomic variables by conducting content analysis. It is intended:

- ♦ To ascertain the dependency of stock index and its returns on macroeconomic variables

- ♦ To determine the positive/negative relationships between macroeconomic variables and stock index

HOW INFLATION EFFECT STOCK MARKET RETURNS AND ITS INDEX

Ali (2011) explored the relationship between some macroeconomic variables on stock market return in Dhaka. Multi Regression Model was used to trace down the relationship between stock market return and macroeconomic variables. Inflation, foreign remittances, market PE and industrial production index were repressors whereas stock market return was dependent variable in the study. Only one unilateral causal relationship was revealed between stock market return and market PE by Granger Test. Inflation and foreign remittances were having negative relation; on the other hand, industrial production index and market PE were having positive influence on stock market return. Less information efficient market was also proved by the result of less causality relationship among variables through Granger Test.

Another study conducted by Hosseini, Ahmad and Lai (2011) on stock markets indices of China and India. The selected macroeconomic variables in the study were crude oil price, money supply, industrial production and inflation rate of China and India. Findings disclosed that in long run, crude oil price, money supply and industrial production have positive impact on China stock market index but negative in case of India. However rise in inflation rate negatively affect the stock market index in case of both countries

On other hand, in short run, crude oil price has positive impact on Bombay stock market (India) while it is negative but also insignificant when considered the Shanghai stock market (China). Money supply has positive impact on Chinese stock market index and negative on Indian stock market index, however, in both countries, these effects are insignificant. Inflation has positive significant effect on Chinese stock market but has negative insignificant relation with index of Indian market

Sharma and Mahendru (2010) studied the impact of macroeconomic variables on Bombay stock exchange (BSE). The explanatory variables included in study were inflation rate, foreign exchange reserves, exchange rates and gold prices. Explained variable was the stock prices of BSE. Simple regression analysis had been applied to study the relation. Results of the study revealed that exchange rates have high negative correlation with stock prices; inflation rate has low negative correlation with stock prices and does not affect the stock prices. Foreign exchange reserves have positive correlation while the gold prices have moderate correlation with stock prices.

Research by Boyd, Levine and Smith (2000) supported the impact of inflation on financial sector performance. Financial sector performance was measured through banking sector performance and equity market returns. Research showed that there is negative relationship between inflation (being measured through changes in CPI on aggregate) and financial sector performance. Also their relationship is nonlinear. It also showed that when inflation rate exceeds the threshold rate, the marginal impact of inflation on stock market returns and banking sector performance diminishes.

IMPACT OF GDP ON STOCK MARKET

One of the studies to find out the impact of Macroeconomic variables on stock market index was conducted by Hsing (2011). Exponential GARCH (Nelson, 1991) model was used to study the impact of various economic variables that cause fluctuation in South Africa's stock market index. Findings of the study were that index of South Africa stock market has positive relation with growth in real GDP, US market index and the ratio of M3 money supply to GDP but has the negative relation with government deficit to GDP ratio, the domestic real interest rate and the inflation rate, the nominal effective exchange rate and the U.S. government bond yield.

Gan, Lee, Yong and Zhang (2006) studied the relationship and interactions between stock market returns and macroeconomic on New Zealand stock market for 1990-2003. They used co-integration tests for determining the relationship among variables, Johansen Maximum Likelihood and Granger-causality tests to determine whether stock return is leading factor for changed in macroeconomic variables and innovation accounting analysis to check the linkages among the variables. The seven macroeconomic variables under study included Inflation rate, GDP, Exchange rate, Money supply, Long term interest rate, Short term interest rate and Domestic Retail Oil price (ROIL). Results of the study showed that there is a significant relationship (positive as well as negative) between macroeconomic variables and stock returns. Also it revealed that stock return is not a leading factor for changes in macroeconomic variables

Taulbee (2001) explored relationship of interest rate, unemployment, real GDP and fisher effect on S&P 500 index. The study also revealed some effects of other indexes in the S&P500 like transportation index, utility index etc. The paper also examined the relationship in economy and four types of industry i.e. defensive, growth, cyclical and interest sensitive. In the paper, S&P 500 Index (sp500) was dependent variable and Real GDP, unemployment fisher effect were independent variables. The paper used Double Log (GLS) regression model and it showed that Real GDP was the largest determinant of stock prices and it was having positive influence on stock index. During boom, economy's maximum return was possible by investing growth industry. Investor might get best return by investing in defensive industry during good economic condition.

EFFECT OF INTEREST RATE ON STOCK MARKET

Khan, Ahmad & Abbas (2011) studied the impact of macro-economic variables on stock return in Pakistan. Macro economy's variables like exchange rate, inflation, T-Bill rate, money supply and Interest rate were selected as independent variables in their study while stock market return was the dependent variable. Ordinary least square method was used to study this impact and the results revealed that exchange rate has negative significant influence on stock returns because when local currency devalued as compared to dollar, foreign investors withdraw their funds that result in decreased stock returns. Interest rate also has negative but T-Bills have the positive significant influence on stock returns.

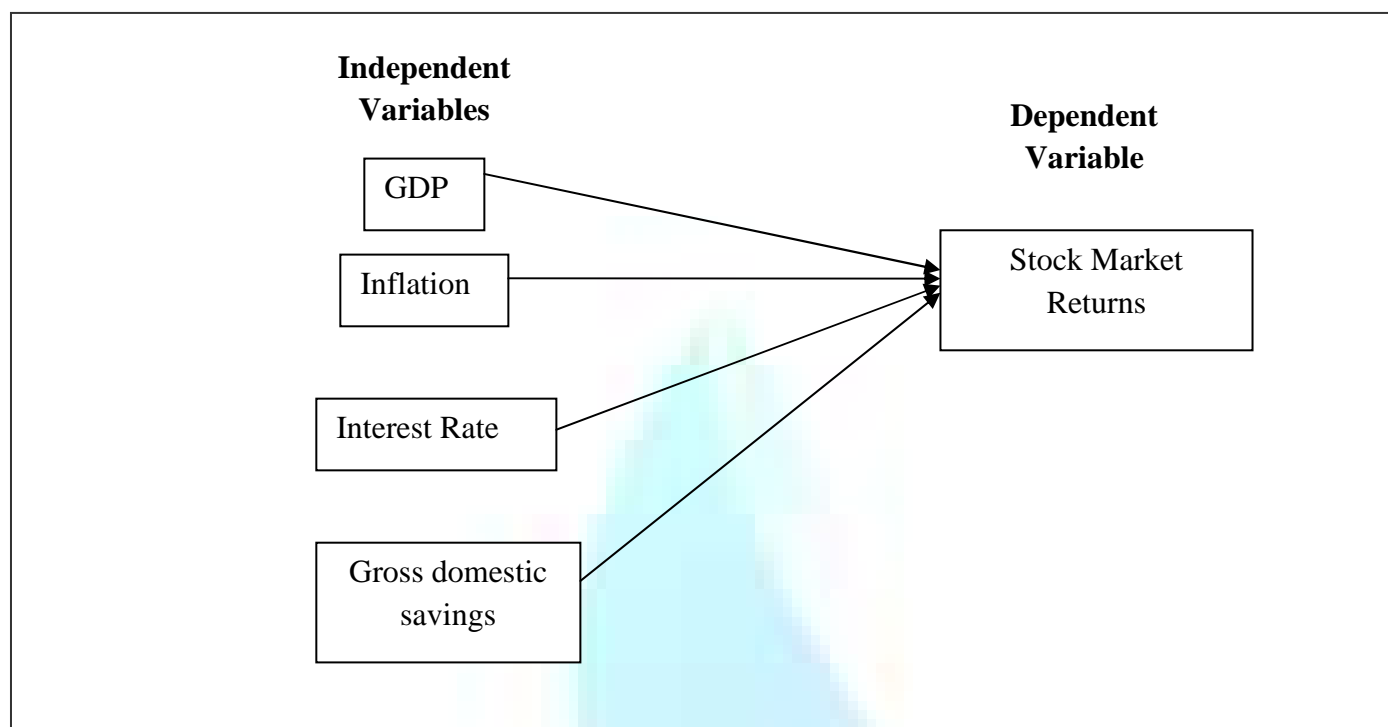
Gay (2008) studied the effect of macroeconomic variables on stock market returns on four emerging countries namely Brazil, Russia, India and China (BRIC). The independent variables under study included exchange rates and oil prices whereas stock market returns was the dependent variable. Box-Jenkins ARIMA model was applied on moving averages of time series data of exchange rates, oil prices and stock returns comprising a total of 1080 observations. Results of this research found that no significant relationship between exchange rates and oil prices on stock market returns exist. This may be due to the ignorance of domestic and international macroeconomic factors such as inflation, production, dividend yield, interest rates, etc. Also it revealed that there was no significant relationship between present and past stock returns indicating that BRIC have weak form of market efficiency.

Léon (2008) studied the effects of interest rates volatility on stock market returns and volatility in Korea. GARCH model was used in the analysis. Results showed that interest rates have strong predictive force for stock market return but a weak predictive force for volatility. Meaning by that there is a negative relationship between interest rates and stock market returns. A high interest rate leads to increased savings and less investment towards stock market.

IMPACT OF INFLATION, GDP AND INTEREST RATE IN DEVELOPING COUNTRIES

Emmanuel and Samuel (2009) studied the impact of real GDP, inflation rate and interest rates (independent variables) on stock market returns (dependent variable) in Nigeria. They applied multiple regression analysis technique for their analysis comprising ten years longitudinal data of the said variables. The results of the study showed that there is significant relationship among these variables. Increase in inflation and interest rates adversely affect the stock market returns whereas there is positive relation between real GDP and stock market returns. About 95.6% of the variations in stock market returns were explained by real GDP, inflation rate and interest rates

THEORETICAL FRAMEWORK



CONCLUSION

Aim of this paper was to analyze the relationship between macro economy and the stock market returns' behavior and studies conducted by different researchers reveal that stock markets' responses are different for different macro economic variables. The economic corollary is that major macro-economic variables like inflation and interest rate have negative relation with stock exchange index and returns.

High inflation reduces the savings per capita and leads to high nominal interest rates (high borrowing cost) that ultimately results in decreased investments in stock markets and reduces the stocks' returns. Similarly, increased interest rate results in higher risk and required rate of return of investments by the investor. Due to this, high required rate of return, profits of the firms are negatively effected which ultimately leads to fall in stock value.

In context of developing countries, economic survey reports reveal that such countries are economically instable and face the issues of high inflation, low GDP etc. Fore example, in Pakistan, inflation is continuously rising and recorded about 14% in 2011-2012. On the other hand, due to political instability, any mega project has not been done during last two decades in this country because of which, Pakistan fails to improve its GDP which was recorded only about 2.4% in 2011-2012. This situation is negatively hitting the investments in stock markets.

Stable inflation and interest rate will lead the investors towards investment in capital markets. On the other hand, increased GDP and gross domestic savings indicate economy growth meaning by higher investment in capital and money markets and thus positively affect stock returns as held by the analysis of literature.

RECOMMENDATIONS

Many developing countries like Pakistan, Bangladesh are facing the issues of high inflation and interest rates while low GDP and gross domestic savings which negatively effect the investments in stock markets and thus push the stock returns to decline. Some of key recommendations based upon study for policy makers are:

If policy makers control the inflation rate and interest rate in the economy, they can boost the Stock market returns toward defined target. Increase the stock exchange return will lead to the investor willingness to invest in the stock market which is very helpful for monetary and fiscal purposes of the government.

Stock market is very sensitive to the movements in inflation rate. This study indicates that negative relationship exists between Stock market returns and inflation. Higher inflation leads to higher interest rates and subsequently investors require higher rate of return on their equity investments and it lowers the value of the equity stocks. Rational investors avoid investing in a bear market and those who invest require to be compensated for extra risk. Consequently, stock market index fall down. Governments should take measures to control inflation through infrastructural development. There should be stable and low inflationary environment.

Also the studies indicate negative relationship between interest rate and Stock market returns. There should be a balance between extremely high and low interest rate. On one side, reducing interest rate will increase the money supply in the country so more investment opportunities will be available. This is because banks will ascent towards giving loans to the customers. As a result, investors will invest in stock market keeping in view the perception of bull market. It will boost the stock market index. While on the other side, lowering interest rate will cause excessive money supply in the country which in turn will cause inflation. Therefore, special attention should be given by the Government to maintain balance between extremely high and low interest rate.

Similarly by increasing the Per capita income and percentage to GDP may also increase stock market returns significantly.

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IMPACT OF CHANGE AGENT'S ASSOCIATION IN CHANGE PROCESS

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ABSTRACT

The organization continuously interacts with the environment. The environmental forces force the organization to make changes in itself. At one point of time organization feel in affirmative and try to make changes. Change making is not so simple as seems to be. They have to look for a person who can make the change in the organization. The present study provides theory and evidence of the benefits of change agents' closeness to drivers and resistors for change adoption. The literature on organizational change has suggested that closeness to change drivers plays an important role in organizational change. On the analysis upon the contingent effect of strong ties to resistors on change adoption indicate that the business principle that efforts to convert resistors of change are futile should not be applied indiscriminately to all types of change. The present study indicates that when the change does not diverge from the institutional status quo, change agents who divert their influence efforts away from resistors may be ill-advised, as our findings says that strong ties to resistors may in this case facilitate change adoption. The study shows that change initiatives should be systematically considered for the extent to which they diverge from the present institutional status.

KEYWORDS

change agent, change process.

INTRODUCTION

Change is a type of organizational development while the members of the organization change by the input of new strategies, which in turn leads to behavioral change. The change will develop the organization to better fit predicted future environments (Porras & Silvers, 1991). Nonas (2005), and Silvers (1991) theory indicates that the organization has complete control over its development. Organizations are open systems meaning that they are characterized by continuously ongoing processes of input, transformation and output interacting with a surrounding environment. It is impossible to achieve complete control over an open system, while it is affected by external forces consisting of surrounding systems, like customer, supplier, society etc. (Katz & Kahn, 1987). Change is constant modification that comes about of unexpected events in everyday work. This theory assumes that it is impossible to have complete control over the organization's development and that the result of a change will normally not be exactly as the predicted result. To realize effective and successful change, organizations need both management and leadership. Management is a set of processes that keep a complicated system of people and technology running smoothly. The most important aspects of management include planning, budgeting, organizing, staffing, controlling and problem solving. Leadership on the other hand, is a set of processes that creates organizations in the first place or adapts them to significantly changing circumstances. Leadership defines what the future should look like, aligns people with that vision and inspires them to make it happen despite the obstacles. To perform change it is important with competent management and without this, the transformation process can get out of control. But for most organizations, the bigger challenge is to lead change. It is only leadership that can motivate the actions needed to alter behavior in a significant way and anchor the change in the culture of an organization. In modern, complex organizations it is not enough with only one leader; many people need to assist the leadership task. The risk with too much focus on management rather than leadership leads to an inward focus and bureaucracy takes over. In companies with success that creates some degree of market dominance that then leads to company growth, the physical expansion of the organization leads to a much greater need for management. This focus, together with arrogant managers who over evaluate their current performance and competitive position; can result in a "slow" organization that has great difficulty in making any transformation or change. This above described pattern is especially evident in large, established firms where getting a transformation process started proves often more difficult. It is also a risk that, in these kinds of companies, the change programs are over managed and under led. (Kotter, 1996). The foremost important ethical issue that the organization and its leader should deal with before implementing any change strategy is that of defining the goals, behavioral outcomes or expected change objectives. In a large organization, it is likely that this kind of process will break down making it impossible to realize the change. The spreading of too much information within the organization can be a problem in a change process as the information may generate resistance that there is often not enough resources to deal with. It is better to introduce the change gradually within the organization and in smaller groups, thereby allowing for clear and correct explanations and avoiding misunderstandings. (Brown, 1991). When a change is needed, the leader must often take the role as a change agent. He or she must guide the organization through changes, implement changes and support organizational members in adapting to the changes. Today, when change is always present, leadership can be defined as the process of managing change. It is the leaders' responsibility to ensure that the organization and its members are flexible enough to manage an adaptation of behaviors and skills to fit environment changes. If the individual will manage to contribute to their changing organization, the leader must emphasize, encourage and provide continuous education and learning. (Howell & Costley, 2006). The group for the change normally only involves a small number of people and is expected to delimit the risks that the change process may develop in an unexpected direction. (Norrgren 1996) Organizations using learning strategy see change as a pattern of constant modifications. While they do not believe it is possible to create complete control over the change process and the organizations development, they do not see the value of deciding exact final results in advance.

REACTIONS TO CHANGE

The hazard of organizational failure increases with organizational change and such a change increases the likelihood of an additional change of the same type. Both these effects decline over time (Amburgey, 1993). Kelly and Barnett (1993) research study is based on a model that was presented by Hannan and Freeman in 1984, which includes both internal and external constraints on organizational change. Organizations exist as long as they are reliable and act rationally. When organizational goals are strong and institutionalized and the activities are routines, the reliability and accountability are high within the organization. However institutionalization and reutilization also generate strong pressure against organizational change. This means, that the characteristics of organizations stability also generates resistance to changes. Changes disturb internal routines as well as connection with external stakeholders and both internal and external stakeholders prefer reliable and predictable performance. This means, that organizational change is hazardous and normally disturbs the equilibrium of the organization. Organizational change increases the failure rate of organizations, independent of the effects of the changed characteristics. The reason for this statement is as stated above, that a change disturbs the routines in the company. (Barnett, 1993).

CAUSES OF EMPLOYEES' RESISTANCE

One or some of the causes can lead the change to severe resistance from employees. The consequences of employees' resistance are very important to be mentioned here, to reveal the miseries of resistance for organization and the change program. The consequences of employee's resistance to change range from; slow down of the change (and thus increase in cost) (Bryant, 2006), less productivity (outcome), employees corruption, high employees' turnover, disturbance & trouble in change program, failure of change program, and in extreme situation it can even lead the organization to destabilization & breakdown

(Coetsee, 1999; Coch and French, 1948). Organizations may face the above problems in change due to employees' resistance. It should not be denied that resistance to change might be a valuable employees' passion that can be channeled more constructively (Dent Eric, 1999).

THE CHANGE AGENT

The change agent is often a person whose mission is to build the motivation to make the change and help the organization to identify changes in functions that must be done. The change agent also helps the organization to carry out necessary changes for the future. The agent's task starts with a diagnostic phase where the agent tries to evolve a model with existing theory that is adapted to the particular organization. In short, the change agent's role is to act as transducer between scientific knowledge regarding organizational functioning and change processes and the particular situation during this phase. The developed model must be reasonably complete, predictive and adequate to provide the organization with useful information. (Bowers & Franklin, 1972). The model must be presented to the members of the organization in an excellent way, because the issue of acceptance is critical. Even if it is a really good model, it has no value without a good understanding of the members of the organization. To realize this, the change agent must be a good communicator and has enough knowledge about the groups' tasks to relate the model with these tasks, that is to say an understanding of the organizations reality. In later stages, the change agent often helps the organizations members with skill acquisition and perfection. The agent must not only know which skills are necessary, but also be competent in guiding the acquisition.

ASSOCIATION OF A CHANGE AGENT

The association strength is a combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie (Granovetter 1973). Organizational scholars following on Granovetter's footsteps have highlighted the informational implications of strong ties, arguing that emotional closeness between two actors motivates them to invest time and energy in sharing complex, tacit or confidential knowledge (Hansen 1999). The foundation of trust has been shown to increase cooperation among organizational subunits during a crisis, boosting an organization's adaptive performance in response to exogenous and endogenous shocks (Stern 1998). Building on this research, we argue that strong association provide a change agent with a relational basis to overcome resistance when attempting to institute organizational change. Below we specify mechanisms through which strong ties to organization members with the potential to derail change allow the change agent to reduce resistance and thus boost the chances of change adoption. We then identify conditions under which such mechanisms are likely to affect fence-sitters and resisters differently. Strong ties can increase an actor's ability to introduce organizational change by providing her with an affective basis for the cooptation of actors capable of influencing the outcome of the change initiative.

REVIEW OF LITERATURE

Different authors have discussed the importance of causes/antecedents of employees' resistance to change to know the right problem and develop strategies to overcome it. Kurt Lewin discussed first the employees' resistance to change in 1940's. His early work focused on the aspects of individual behavior that must be addressed in order to bring about effective organizational change (Kurt 1945). Different studies are being conducted on a various issues concerning resistance by the employees. A few of them are reviewed here.

Bryant (2006), in his study on employee's resistance to change found different causes responsible for resistance to change. One or some of the below causes can lead the change to severe resistance from employees. The author opined that the consequences of employees' resistance are very important to be studied to reveal the miseries of resistance for organization and the change program. The consequences of employee's resistance to change range from; slow down of the change and thus increase in cost, less productivity (outcome), employees corruption, high employees' turnover, disturbance & trouble in change program, failure of change program, and in extreme situation it can even lead the organization to destabilization & breakdown. Organizations may face the above problems in change due to employees' resistance.

Kegan & Lahey (2001) described the resistance to change a psychological dynamic called a "competing commitment" as the real reason for employee resistance to organizational change. The change is not challenged, but rather it is resisted, or not implemented at all because the employee faces additional issue or concerns related to the change. When an employee's hidden competing commitment is uncovered, behavior that seems irrational and ineffective suddenly becomes stunningly sensible and masterful - but unfortunately, on behalf of a goal that conflicts with what you and even the employee are trying to achieve". Competing commitments should not be viewed as a weakness, but as a version of self-protection. If these competing commitments are a form of self-protection, then what are employees protecting themselves from? Kegan & Lahey believe the answer usually lies in what they call "big assumptions" - deeply rooted beliefs people have about themselves and the world around them. Many rarely realize they hold big assumptions because they are woven into the very fabric of people's existence, and thus they accept them as reality. "These assumptions put an order to the world and at the same time suggest ways in which the world can go out of order.

Amburgey, Kelly and Barnett (1993) research study is based on a model that was presented by Hannan and Freeman in 1984, which includes both internal and external constraints on organizational change. Organizations exist as long as they are reliable and act rationally. When organizational goals are strong and institutionalized and the activities are routines, the reliability and accountability are high within the organization. However institutionalization and routinization also generate strong pressure against organizational change. This means, that the characteristics of organizations stability also generates resistance to changes. Changes disturb internal routines as well as connection with external stakeholders and both internal and external stakeholders prefer reliable and predictable performance. This means, that organizational change is hazardous and normally disturbs the equilibrium of the organization.

OBJECTIVES OF THE STUDY

The objectives of the present study are to find out the impact of relationship of a change agent with the employees in reducing the resistance and increase the likelihood of change adoption. It also studies as to whether any diverge from institutional status quo lead to decreasing in the likelihood of change adoption.

SAMPLE

A sample of 50 professionals working at different level has been put in the study. All participants had clinical backgrounds as well as managerial responsibilities, their levels of responsibility varying from mid- to top-level management. The participants also represented a variety of departments in their institutions.

ANALYSIS

The change itself has no substantive upside in the eyes of resisters, complying with the change agent's request for support requires resisters to refrain from acting on their unambiguously negative attitude toward the change solely for the sake of their relationship with the change agent. Likewise, to push the change through, the change agent has to disappoint close contacts, knowing that they see no benefit from the change. The intensity of a negative attitude toward a change initiative is shaped in part by the content of what is being resisted. Understanding resistance thus requires understanding what the change entails. Organizations embedded in the same environment, and thus subject to the same institutional pressures, tend to adopt similar practices. We propose that the degree to which the change diverges from the institutional status quo in the organization's field of activity constitutes a boundary condition on change agents' realizing the benefits of strong ties to potential resisters. Namely, when implementing less divergent changes, affective cooptation is likely to favor a change agent, because it may persuade resisters to tolerate a change that does not alter significantly the functioning of the organization. When the degree of change divergence is much lower, the advantages of strong ties accruing to the change agent are weaker, and may turn into liabilities that reduce the likelihood of change adoption. Two mechanisms account for this contingency. First, more divergent changes represent a greater threat for resisters, strengthening their

opposition. Fence-sitters have a balanced view of the change's potential upside and downside, irrespective of the extent to which the change diverges from the institutional status quo. In their perception, breaking with taken-for-granted practices may greatly upset the organization but may also greatly improve it.

FINDINGS AND CONCLUSIONS

In the study coefficient for mean tie strength with endorers, in particular, suggests that closeness to potential influencers who are positively disposed toward the change does not provide a change agent with distinctive advantages. Endorsers may well aid change adoption by championing the initiative and generating support for it (Markham 2000). The benevolence toward the change agent and desire for their personal approval are, however, unlikely to change their behavior, because their attitude toward the change is positive from the start, thereby posing no threat to their relationship with the change agent. Our qualitative data provided several illustrations of this behavioral pattern. These checks indicate that it is the overall positioning of a change agent in relation to resisters and fence-sitters that influences the likelihood of change adoption, rather than other features of the distribution of tie strength with resisters and fence-sitters, such as the variability of closeness, the absence of a particular alter type, or an especially close relationship to given individuals. To account for the possibility that a close personal connection may be particularly beneficial when potential resisters, endorers and fence-sitters occupy a high-rank position in the formal structure of the organization, we ran models including three interaction terms for mean tie strength with potential resisters, endorers and fence-sitters, respectively, and the mean hierarchical level of actors in each of these three groups. We found no evidence for any such pattern. In addition to formal status, the change agent's informal status in the organization may affect the probability of change adoption, because well-regarded actors may be more effective change agents and have more strong ties to influential members of the organization. To account for this possibility, we constructed a measure of an actor's prominence in the task-advice network using the difference between the number of received advice ties and the number of sent advice ties. The inclusion of prominence in the task-advice network altered neither the direction nor magnitude of the coefficients for our main predictors. The study found that the effects of strong ties to potentially influential resisters on change adoption are contingent upon the extent to which the change diverges from the institutional status quo. The lower the levels of divergence the change entails, the more affective cooptation favors the change agent, because it increases the chance that the benevolence felt by resisters toward the change agent may persuade them to tolerate a change they do not approve of but which is unlikely to alter significantly the functioning of the organization. As the degree of divergence increases, however, not only does closeness to resisters have decreasing positive effects on change adoption, but it can have detrimental effects too, as the intense disapproval of close contacts increases the psychic toll change implementation takes on the change agent, dampening her own drive toward change. The findings demonstrate that the effects of tie strength can be contingent on whom the actor establishes a social connection with. The beneficial effects of tie strength were confined to actors with the potential to resist the change. These findings indicate the need to theorize with greater nuance about the contingent effects of different targets of strong and weak social connections in organizations. It encourages network and organizational change scholars alike to consider the affective interpersonal dynamics that underlie the effectiveness of individual agency in organizations while accounting for the nature of the change.

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INDIA'S TRADE WITH BRAZIL: POWER AND LATENT FOR FUTURE ENHANCEMENTS IN TRADE

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ABSTRACT

India and Brazil are among the fastest growing economies of the world and are widely projected as major economies of future. Due to large size of economies and high growth rates plus growing political will from both sides, the bilateral trade will grow further and would have significant impact on global economy and trade. Relations between Brazil and India seem to be flowering recently, favored by a mix of domestic and international developments. Together with an expanded topography of common interests in multilateral political and economic matters, both countries share the trend of perceiving bilateralism as a stimulating and useful learning process. Brazil and India have become major actors in recent proposals aimed at simultaneously promoting a renewed configuration of bilateral trade. However, time and maturity are still needed to affirm that Brazil-India bilateral ties and converging interests will build up as a relevant dimension for each other's international supplement as well as for an effective renewal of relations in the twenty-first century. The trade between these two colossal economies has been identified as the most sensible and reliable instrument, in recognizing the impact on the dynamism of the global economy and its vibrant growth speed. It is in this purview of their fast changing behavior, the current paper makes an attempt to appraise that how the bilateral trade between the two nations becomes as a weapon in the arsenal in escalating their partnership for their mutual reward in the coming time.


JEL CLASSIFICATION

F14, F41, F43.

KEYWORDS

Brazil, India, Intensity, EII, and III.

INTRODUCTION

ince the beginning of the twenty-first century, insightful changes have been underway in the international perspective, brought about most noticeably by the advance of globalization, extensive technological changes and the emergence of new and powerful competitors, such as India and Brazil. It has been nearly ten years since the analyst (Jim O'Neill) of Goldman Sachs Company introduced the forecast for BRIC (Brazil, Russia, India, and China) emerging markets and pointed out their potential for future economic growth. It is obvious that BRIC countries have been increasing their economic as well as geopolitical power especially after the world economic recession since their economies recovered at a much quicker rate than the developed countries.

India and Brazil among the group are the fastest growing economies of the world and are widely projected as major economies of future (Goldman Sachs, 2003). Together the two countries represent 6.87 per cent of GDP value of global economy and 19.75 per cent of world population. Furthermore, the diplomatic relations between India and Brazil were established in 1948. In recent years, relations between Brazil and India have grown considerably and co-operation between the two countries has been extended to such diverse areas as science & technology, pharmaceuticals and space. The two-way trade in 2005 nearly doubled to US\$ 2.34 billion from US\$ 1,207 billion in 2004 (Indian Embassy, Brazil, 2008). India's trade with Brazil has jumped to 3.12 billion dollars in 2007, from a mere 488 million dollar in 2000 and the trade is further intensifying at a rapid pace.

Apart from being major bilateral trade partners, India and Brazil are the two most important members of the Group of 20, working for a balanced multilateral development of their respective economies. The Indian economy has gained considerable momentum over the last one decade, by following export promotion strategy, thus boosting the economy's profile. In the set of these conditions, the relations between India and Brazil have gained a fresh acceleration as the economies have felt the essence of positive political cooperation and the mutual benefits of their conjoint potential rather than on the self-burning policies. The bilateral trade between the two countries has shown a phenomenal growth and yet there is a lot of untapped future potential. In this regard the paper attempts to explore the intensity of trade relations between the nations and investigates the opportunities which can be tapped for the mutual benefit of both the economies. India and Brazil must continue to be close partners in the UN and WTO for issues such as social development, health care, sustainable economic development and poverty alleviation.

REVIEW OF LITERATURE

While conducting any research work, review of literature of the past theory is necessary. The literature review provides information of the work done in the related area and the theoretical framework on which the proposed solution of the problem can be based. Regarding the topic there is not ample availability of literature. In order to make the depth study of the problem under study "India's trade with Brazil: Power and Latent for future enhancements in trade", some significant studies have been taken up, that are most relevant for our analysis and finding the existing gap in this research area.

Cooper (2006) did a study under the heading, Brazil as a BRIC: Only a Dream. The study discusses the varied composition among the BRICs, the balance between resource-abundance and resource-dependence within the BRICs, and the global demographic tilt towards the BRICs. Fazl (2007) studied the efforts towards economic development in Brazil and India. From the beginning of the 1950s to the end of the 1980s, both countries adopted import substitution policies including high tariffs and non-tariff barriers. Since the beginning of the 1990s, liberalizing economic reforms have been implemented by the respective Governments. However, since the beginning of the 1980s, India has been showing better general economic performance than Brazil. This paper argues and gives some empirical evidence to show that India's performance is explained by its institutional capacity for coordinating conventional macroeconomic policies with

other policies related to its National Innovation System. Monica (2008) depicted the relations between Brazil and India which seem to be blooming recently, favored by a mix of domestic and international developments. Together with an expanded terrain of common interests in multilateral political and economic matters, both countries share the trend of perceiving bilateralism as a stimulating and useful learning process. Furthermore, they have assumed a leading role in the process of revival of South-South diplomacy in world affairs. Brazil and India have become major actors in recent proposals aimed at simultaneously promoting a renewed configuration of multilateral institutions and innovative inter-state coalition building among developing countries. Hirst (2008) discussed relations between Brazil and India. Both countries share the trend of perceiving bilateralism as a stimulating and useful learning process. Furthermore, they have assumed a leading role in the process of revival of South-South diplomacy in world affairs. Brazil and India have become major actors in recent proposals aimed at simultaneously promoting a renewed configuration of multilateral institutions and innovative inter-state coalition building among developing countries. However, time and maturity are still needed to assert that Brazil-India bilateral ties and converging interests will build up as a relevant dimension for each other's international insertion as well as for an effective renewal of South-South relations in the twenty-first century. Rajesh (2008) studied the Indo-Brazil trade relationship. Though the relationship between the two countries is more than five centuries old, the Indo-Brazil trade has not progressed much. Considering the potential that the region offers, an integrated programme "Focus: LAC" was launched in November, 1997 by the Commerce Ministry (Commerce Ministry, 2004). From a mere \$ 20 million in 1998 India's trade with Brazil has jumped to 3.12 billion dollars in 2007. The two sides have set a target of 10 billion dollars trade by 2010 (PTI, 2008). The major Indian exports to Brazil include mineral fuels, mineral oils and products of their distillation; organic chemicals; and, pharmaceutical products. Man-made staple fibers; electrical machinery and equipment and parts thereof; and, nuclear reactors, boilers, machinery and mechanical appliances has shown highest growth rate in 2006-2007. Ores, slag and ash; animal or vegetable fats and oils and their cleavage products; and, iron and steel are the major exports of Brazil to India. Bhattacharyya (2010) discussed the possible areas of India- China-Brazil cooperation and integration in the Eastern and Northeastern region of India and Southwestern provinces of China and Brazil. Stanley Noelle et al, (2010) compare the industry performance in India and Brazil. Australian Chamber of Commerce and Industry (2011) laid emphases on the integration of Indian and Brazilian economies. Bettina Dimaranan (2011) assumes that if India and China are integrated especially in their high-tech industries, they can provide a tough competition in global markets. Cheng et al (2011) did a study on Future global economy to be built by BRICs. This paper summarizes the features of each economy that justify this forecast, and highlights some of the country-specific obstacles that could prevent its realization.

NEED FOR THE STUDY

India-Brazil relations are vastly under-explored in both academic and policy circles, largely because they have been insignificant until recently. For the last two decades, Brazil and India have become very important players in the globalization process. Thus the need of the hour is to analyze the evolution of the drivers behind that process. World has witnessed economic miracles like that of Asian Tigers (Hong Kong, South Korea, Singapore and Taiwan) but none of these posed so much threat to the global economy as the world expects from these two economies. Since early 1990s, Brazil and India witnessed a period which added flavor to the favorable direction of their trade. The two giant economies of India and Brazil have achieved economic laurels by following their own growth strategies. In this regard, the study makes an attempt to explore the extent of trade relations between these two nations and hence explore the potential for future trade.

OBJECTIVES

The main objectives of the study are as follows:

1. Analysis of the trends and patterns of growth of India's trade with the Brazilian economy.
2. Estimate of the extent of intensity of trade relations between India and Brazil.

RESEARCH METHODOLOGY

The study is based on secondary data. The data will be collected through a wide variety of sources: journals on international trade; yearbooks publishing statistical data with respect to trade, viz World Bank, UN, UNESCAP, IMF, WTO and UNCOMTRADE; and through different online data sources, Websites, textbooks, magazines, etc.

MODELS APPLIED FOR THE STUDY

The analysis will be done by adopting the following methodology:

- 1) Export Intensity Index
- 2) Import Intensity Index
- 3) Year on Year Growth

(I) INTENSITY INDICES

Trade intensity Index can be divided into Export Intensity Index (EII) and Import Intensity Index (III) for looking the pattern of exports and imports. Following Kojima (1964) and Drysdale (1969) they can be defined as follows:

(A) EXPORT INTENSITY INDEX

The Ratio of export share of a country/region to the share of world exports going to a partner. EII can be defined as,

$$EII_{ij} = (X_{ij}/X_{iw}) / (X_{wj}/X_{ww})$$

Where X_{ij} is the dollar value of exports of country/region i to country/region j, X_{iw} is the dollar value of the exports of country/region i to the world, X_{wj} is the dollar value of world exports to country/region j, and X_{ww} is the dollar value of world exports. An index of more than one indicates that trade flow between countries/regions is larger than expected given their importance in world trade.

(B) IMPORT INTENSITY INDEX

The ratio of import share of a country of a country/region to the share of world imports going to a partner. III can be defined as,

$$III_{ij} = (M_{ij}/M_{iw}) / (M_{wj}/M_{ww})$$

Where M_{ij} is the dollar value of imports of country/region i to country/region j, M_{iw} is the dollar value of the imports of country/region i to the world, M_{wj} is the dollar value of world imports to country to country/region j, and M_{ww} is the dollar value of world imports. An index of more than one indicates higher import intensity between the nations.

(II) TRADE SHARE

It is the percentage of trade with a partner to total trade of a country/region. It is computed as the dollar value of total trade of country/region i with country/region j expressed as a percentage share of the dollar value of total trade of country/region i with the world. A higher share indicates a higher degree of integration between partner countries/regions. Here trade share of India's exports and imports with respect to Brazil are calculated for the purpose of analysis

INDO-BRAZIL TRADE

India -Brazil trade depicts a state of mismatch with India exporting less proportion of their exports to Brazil. However the bilateral trade between the economies has been growing at a steady rate during the last decade. This connotes the idea that Indian goods are making entry in Brazilian market at a rate faster than Brazil. Table presents the analysis for exports to and imports from Brazil as percentage of its total exports and total imports. The table portrays that there was a gradual rise in both the export category as well as imports from 1995-2011. The data with respect to exports present that the share of exports during 1995 were 0.27 per cent of the total value of India's exports, whereas total imports from Brazil provides a good figure with 0.72 per cent, however there was a decline with respect to import share in the succeeding years with 0.39 in 1996 and 0.51 per cent for 1998.

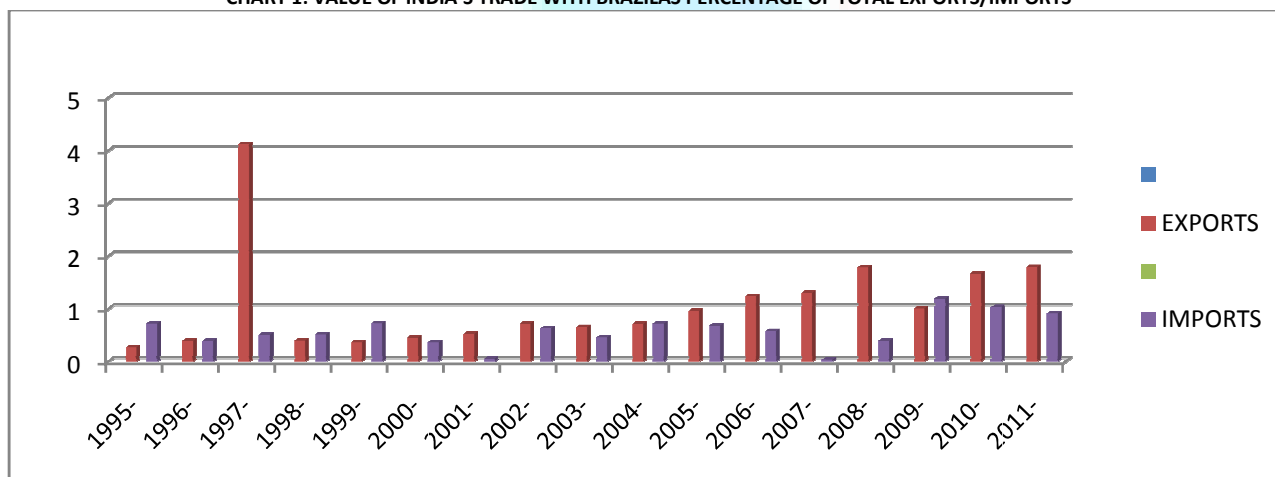
This is well described in the zigzag rising and declining share of imports from the Brazil from 1999 (0.725 %) to 2004 (0.72 %) and again an increase in 2009 (1.192%) followed by decrease in the succeeding year equal to 1.10 per cent and in 2011 the trend continued with share depicting a value of 0.91 per cent. In case of exports share, year 1997 dominated with value of 4.12 per cent, however the changing trend continued to flourish. The export share of India to Brazil continued to rise from 2006 (1.236%) to (1.787 %) in 2008. In year 2009 the export share decreased to 1.009 percent but an upswing resulted in 2011 with export share equal to 1.790. The increased growth in the exports and imports is mainly attributed to the amalgam of BRICS union which boosted the trade among the economies.

TABLE 1: PERCENTAGE SHARE OF INDIA'S EXPORTS/IMPORTS WITH BRAZIL

YEAR	EXPORTS	IMPORTS
1995	0.270	0.722
1996	0.395	0.396
1997	4.121	0.514
1998	0.401	0.517
1999	0.367	0.725
2000	0.453	0.367
2001	0.525	0.055
2002	0.720	0.630
2003	0.653	0.458
2004	0.712	0.722
2005	0.966	0.683
2006	1.236	0.575
2007	1.302	0.043
2008	1.787	0.392
2009	1.009	1.192
2010	1.665	1.033
2011	1.790	0.913

Source: Authors calculation based on various issues of UNCOMTRADE

CHART 1: VALUE OF INDIA'S TRADE WITH BRAZIL AS PERCENTAGE OF TOTAL EXPORTS/IMPORTS



Source: Authors Calculation based on Table 1

By 2011, India's export share increased to 1.790 of its total exports, presenting that Brazil is proving as one of the interesting destination for Indian export market. Similar is the case of exports of Brazil to India. Thus the two countries are boosting the joint flow of trade. These economic powerhouses are feeding resources to each other and are profiting from collaborative relationships that transcend barriers. It is no secret that Brazil and India will be the driving forces behind the global economy in the years to come. What we have yet to witness is how these huge economies will affect other developing regions around the world. Despite the geographical and cultural divide between the countries, the countries are in search of natural resources and production benefits. This trend appears likely to continue. And as India continue to grow and expand relations with Brazil, it is likely that Brazil will continue to grow as well. Indo-Brazilian trade continues to grow from year to year, but a stronger commercial relationship is required, with lines of credit to exports available on both countries. A more concerted effort is now required to ensure that commercial ties expand the cooperation, particularly in trade. By establishing common economic interests and ties, a joint action internationally will help create an even more important well-being in economic terms, which will strengthen both countries as they interact more intensively in well postulated economic partnerships. Great partnerships only happen after many successful negotiations take place, thus it is time to negotiate and secure greater cooperation.

INTENSITY OF TRADE BETWEEN THE NATIONS

Table 2 investigates the intensity of trade between India and Brazil (The detailed calculations of EII & III are provide in Annexures 3 and 4 respectively). The values of Export Intensity Index (EII) and Import Intensity Index (III) have been calculated for the time period of 17 years from 1995-2011, thus presents the growing intensity of trade between the two nations. (See annexure 1 for further help) The Export Intensity Index (EII) values for 10-year time period 1995 to 2004 presents an average value of 0.58, the index value which is lower than 1, which means a lower intensity of export trade of India with its partner, however from 2005 onwards there was a growth with respect to the export intensity indices values which were above 1.

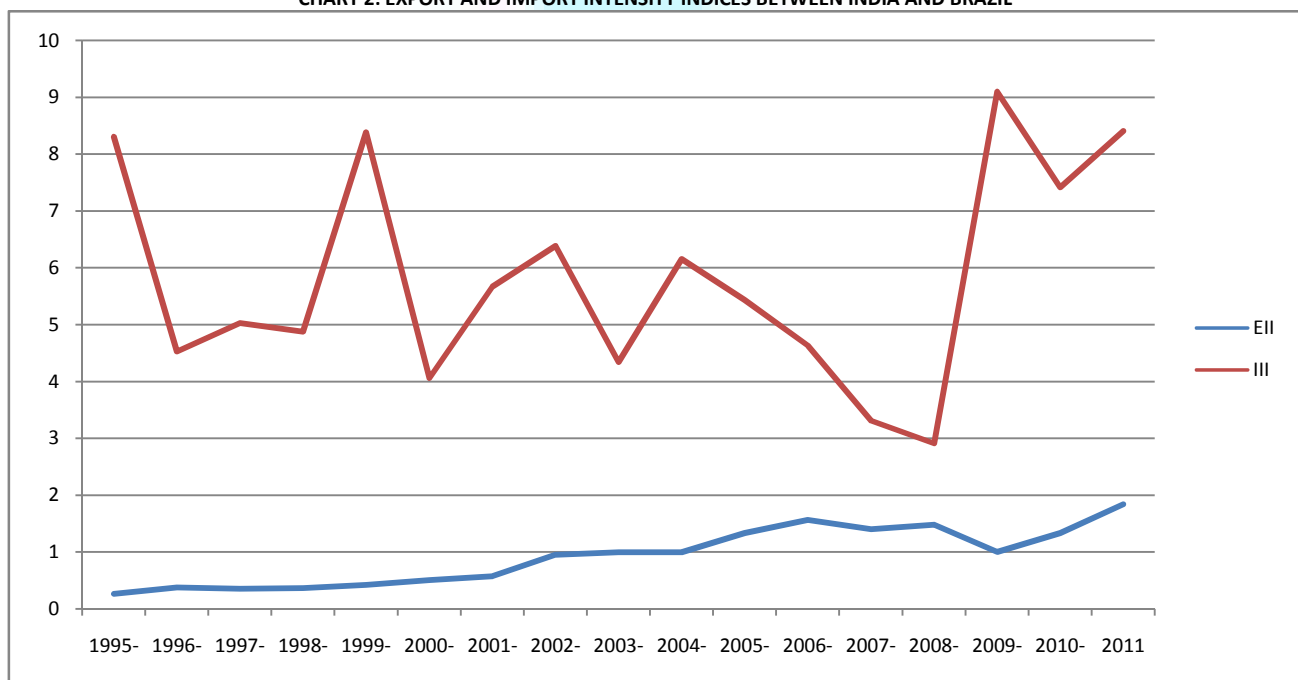
The Export Intensity indices values from 1995-2004 showed increasing trend at a snail's pace, but gradually there was a rise regarding these values, which registered a value of 1.33 in 2005, touched a peak of 1.84 in 2011. In addition to this, Brazil has been the important source of imports for India.

TABLE 2: TRADE INTENSITY INDEX

Year	EII	III
1995	0.2667	8.30332
1996	0.38165	4.52495
1997	0.35881	5.03015
1998	0.36666	4.8760
1999	0.42534	8.38354
2000	0.51046	4.05989
2001	0.57867	5.66689
2002	0.95249	6.38257
2003	0.99685	4.33888
2004	0.99699	6.15046
2005	1.33546	5.43172
2006	1.56452	4.63275
2007	1.40438	3.31263
2008	1.48091	2.91201
2009	1.00534	9.0956
2010	1.33397	7.41387
2011	1.84214	8.40133

Source: Authors calculation based on the data from unctad.org

CHART 2: EXPORT AND IMPORT INTENSITY INDICES BETWEEN INDIA AND BRAZIL



Source: Author's calculation based on the data from Table 2

As a result of global economic crisis, there has been decline in exports of India to Brazil, which can be seen from the declining export intensity indices from 1995 to 2004. However, the intensity index of exports of India from 2005 onwards showed an increasing trend with 2011 registering a value of 1.842. Brazil has been the important source of imports for India, which is well depicted from the registered intensity indices of imports for India from Brazil. Post liberalization period witnessed low values of intensity indices. The highest Import intensity index was registered in year 2009 which was 9.095. Although the Import Intensity Index values registered from 1995-2011 were greater than 1, showing a great intensity of India's import trade with Brazil.

CONCLUSION

India and Brazil are amongst the largest democracies of the world and major economic players in their respective regions. While Brazil is the sixth largest economy of the world and the fifth largest country in size, India is the eleventh largest economy and seventh largest country in terms of geographical area. Together the two nations contribute about 8.5 per cent to the world's GDP; the size of the economies coupled with the fact that they have a highly skilled workforce which allowed them to be recognized as significant emerging economies. The pre-eminence of Brazil and India in the global economy may signify both an opportunity and a significant risk in the medium and long terms. It will be a chance to the extent that it induces both countries to rethink their strategy to change their production model and to enter the global economy, as well as to introduce more practical policies for productive development, competitiveness and innovation. This will require significant escalation of technological capacities in order to compete on the global market front on the basis of higher value added products and knowledge-based goods and services. The trends in the growth rate of China-India trade shows a huge potential focused on their political achievements as well. Regarding their economic relations, it would be injustice if the bilateral trade is not regarded as the important inevitable one in the global trade scenario.

The emergence of Brazil-India relations must be eye opener for the new world order. Brazil and India will become major powerhouses, definitely altering the balance of power now existing in the world and shifting its center. Due to its commitment and historic respect for democracy and institutions, India should be regarded as a prime strategic partner for Brazil. Both countries, though different, can greatly benefit from a more intensive business, economic, cultural and political relationship. It is important for both the economies to understand clearly current challenges and perspectives, both domestically and internationally. A greater cooperation between India and Brazil, two of the world's largest democracies, is in order and will certainly benefit both countries, since their economies can share enormous synergies and supplement each other, particularly in agriculture, where Brazil, a major exporter, can become a reliable partner for India. To boost the trade flow with vigor and vitality, remaining trade barriers like customs rules and procedures, on tariff barriers and rules of origin and other impediments are to be relaxed. If minimization of these constraints is put into force, then there is no denying the fact that India and China will set a golden stage

for a magnificent jump regarding dominance in the global trade, which finally will increase synergies in the economic cooperation. Thus bilateral trade will have definitely significant impact on the economic scenario of global trade. Great partnerships only happen after many successful negotiations take place. It is time to negotiate and secure greater cooperation. Thus future will be bright for Brazil and India provided the condition that symbiosis comes into action, so that economic laurels salute their respective economies.

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ANNEXURE

ANNEXURE 1: EXPORT INTENSITY INDEX AND IMPORT INTENSITY INDEX

EXPORT INTENSITY INDEX									
YEAR	XIB	XI	XIB/XI	MB	Mw	MI	Mw-MI	MC/Mw-MI	(XIB/XI/MB/Mw-MI)
1995	85	30630	0.002775	54137	5237657	34707	5202950	0.010405	0.266703
1996	132	33105	0.003987	56981	5491959	37942	5454017	0.010448	0.381651
1997	143	35008	0.004085	64242	5684421	41432	5642989	0.011384	0.358805
1998	133	33437	0.003978	60652	5633935	42980	5590955	0.010848	0.366661
1999	135	35667	0.003785	51767	5864245	46979	5817266	0.008899	0.425337
2000	192	42379	0.004531	58643	6658904	51523	6607381	0.008875	0.510462
2001	230	43361	0.005304	58382	6419539	50392	6369147	0.009166	0.57867
2002	361	50372	0.007167	49723	6664958	56517	6608441	0.007524	0.952488
2003	388	58963	0.00658	50881	7780437	72558	7707879	0.006601	0.996854
2004	541	76649	0.007058	66433	9483656	99775	9383881	0.007079	0.996987
2005	969	99620	0.009727	77628	10800749	142842	10657907	0.007284	1.33546
2006	1498	121806	0.012298	95838	12370496	178474	12192022	0.007861	1.56452
2007	1899	149951	0.012664	126645	14272904	228686	14044218	0.009018	1.404382
2008	3250	194531	0.016707	182377	16486891	320785	16166106	0.011281	1.480914
2009	1781	164921	0.010799	133673	12701471	257187	12444284	0.010742	1.005343
2010	3669	216868	0.016918	191537	15426006	323624	15102382	0.012683	1.333967
2011	5391	223129	0.024161	236960	18379265	312345	18066920	0.013116	1.842139
IMPORT INTENSITY INDEX									
YEAR	MIB	MI	MIB/MI	XB	Xw	XI	Xw-XI	XB/Xw-XI	(MIB/MI/XB/Xw-XI)
1995	2604	34707	0.075028	46506	5177425	30630	5146795	0.009036	8.30332
1996	1525	37942	0.040193	47747	5408497	33105	5375392	0.008883	4.524949
1997	1989	41432	0.048006	52994	5587763	35008	5552755	0.009544	5.030147
1998	1959	42980	0.045579	51140	5504308	33437	5470871	0.009348	4.876001
1999	3327	46979	0.070819	48013	5719444	35667	5683777	0.008447	8.383536
2000	1801	51523	0.034955	55119	6444189	42379	6401810	0.00861	4.059888
2001	2709	50392	0.053759	58287	6187610	43361	6144249	0.009486	5.666886
2002	3392	56517	0.060017	60439	6477779	50372	6427407	0.009403	6.382565
2003	3071	72558	0.042325	73203	7563296	58963	7504333	0.009755	4.338881
2004	6512	99775	0.065267	96678	9187151	76649	9110502	0.010612	6.150456
2005	8831	142842	0.061824	118529	10513383	99620	10413763	0.011382	5.431716
2006	9485	178474	0.053145	137807	12134707	121806	12012901	0.011472	4.632751
2007	8777	228686	0.03838	160649	14015751	149951	13865800	0.011586	3.312634
2008	11598	320785	0.036155	197942	16137233	194531	15942702	0.012416	2.912011
2009	28972	257187	0.11265	152995	12518117	164921	12353196	0.012385	9.095604
2010	32209	323624	0.099526	201915	15257877	216868	15041009	0.013424	7.413869
2011	37351	312345	0.119583	256040	18211356	223129	17988227	0.014234	8.401333

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