

VANIJYA

Vol. 25

2015

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DECLARATION

Name of the Journal : **VANIJYA**
Language : English
Time of Publication : 2015
Name of the Publisher : Registrar
Dibrugarh University
(a) Nationality : Indian
(b) Address : Dibrugarh University
Dibrugarh - 786 004
Assam.
Place of Publication : Rajabgheta, Dibrugarh
Name of the Printer : N. Chetia
(a) Nationality : Indian
(b) Address : D.U. Market Complex
Dibrugarh
Name of the Press : AC Computer Networkd
(ACCN Print)
Name of the Editor : A. Saha
(a) Nationality : Indian
(b) Address : Dibrugarh University
Dibrugarh - 786 004
Assam
Owner of the Publication : Dibrugarh University
Dibrugarh.

The above declaration is true to the best of my knowledge.

Editor.

VANIJYA

ISSN 0972-6594, Vol. 25, 2015

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DEPARTMENT OF COMMERCE

DIBRUGARH UNIVERSITY, DIBRUGARH, ASSAM, INDIA

VANIJYA

ISSN 0972-6594, Vol. 25, 2015

Dibrugarh University Refereed Journal of Business Studies

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Individual	Rs. 200	US \$ 15	Rs. 1000	US \$ 100
Student	Rs. 100	US \$ 10		

Payment should be made by crossed bank draft favouring the Registrar, Dibrugarh University payable at State Bank of India. Dibrugarh University Branch, Adequate postal charges should be added to the price.

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Printed at : AC Computer Network (ACCN Print)

Dibrugarh University Market Complex
Dibrugarh, Assam, India.
Phone : 9854260612 (M)

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Table 1: Factors of Stress related to Money

Factor	Statement
A. Status	1. I feel these days only a prosperous man is treated like a man
	2. I feel small when I compare my income with that of others
	3. I feel embarrassed when I have to ask for/accept monetary help from friends/relatives
	4. Insufficient money tells upon my dignity
B. Desire for money	1. Absence of money is a great cause of misery
	2. I am not able to meet my monthly expenses comfortably
	3. I often feel that I should make more efforts to increase my income
	4. I feel, I have excess money than my needs
	5. Money can solve all my problems
	6. More money will bring more pleasure to me
	7. Scarcity of money is the reason of all woes in my life
	8. I won't mind stretching extra working hours for extra money
	9. Money does not bring pleasure to me
C. Values	1. It is important to earn money, the means may be any
	2. Only those who earn money through honesty and hard work are happy and stress free
	3. I spend some of my income on charity on regular basis
	4. Spending some of my income on charity gives me happiness

A STUDY OF MONEY RELATED STRESS AMONG VARIOUS INCOME GROUPS

Alok Chakrawal*
Pratibha Goyal**

Abstract

Stress among people arises from a great variety of reasons. Among these sources of stress, in modern times, money can be the major one. Those who do not have money, want to attain it and those who have it, want to retain and multiply it. Some people may be stressful as they feel they have less money, others because they have too much of it and there may be still others who are worried that their neighbours are more rich. Young people want to start earning at the earliest while middle aged people may be worried to save for future. This paper analyses the money related stress among various income groups and the factors responsible for that.

Introduction

Money is seen as a means of attaining power, prestige and pleasure. Those who do not have money, want to attain it and those who have it, want to retain and multiply it. Therefore money can be a cause of stress. Some people may be stressful as they feel they have less money, others because they have too much of it and there may be still others who are worried that their neighbours are more rich. Young people want to start earning at the earliest while middle aged people may be worried to save for future.

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Researchers have tried to analyse the relationship between income and stress. *Easterlin* (1974) is of the opinion that rich people are happier than the poor, though the relationship between income and well-being is weak at best. *Myers*, 2000 and *Veenhoven* (1991) found that there is a positive relationship, but it tapers off or ceases to exist when a certain level of income is reached. *Deaton* (2008); *Diener, Diener, & Diener* (1995); *Stevenson & Wolfers* (2008) were of the view that the relationship is positive and linear. *Susan* found that when one is depressed, stuffing or buying something makes one happier. Researchers have been trying to find whether there is a satiation point with respect to money. While *Layard* (2013) believed that once people had enough money to meet their basic needs, happiness levelled out. But, *Stevenson and Wolfers* (2008) found that there is no satiation point in terms of money. Studies also found that when money comes, other related factors cause stress. It eases many aspects of life but makes some other aspects more difficult (*Novotney*, 2012). It gives temporal, spatial and psychological freedom which further causes many dilemmas also.

Perception of money as a status symbol, desire to earn more, conformity to social values regarding making an spending money, inability to devote time to family due to pursuits of money, balancing efforts to earn money with relational needs, inability to save or difficulty in managing savings etc can be the causes of money related stress. No research has been done so far on various factors of money related stress and their association with various income groups of people.

The present study was conducted with the following objectives:

1. To find out the money related stress in various income groups
2. To analyse the prominent factors of money related stress among people.

Methodology

Sample: A sample of 378 respondents was taken from two Indian states, *i.e.* Punjab and Gujarat, on the basis of willingness to participate in the survey.

Survey Instrument : Primary information was sought from respondents by conducting an extensive study to address research questions. Data was collected through self designed, pre-tested and non-disguised questionnaire. Prior studies on money and stress were

reviewed to identify various facets. The final survey instrument was developed to portray various elements of existing body of knowledge in the field. It consisted of five point *Likert* scale based 31 statements related to stress due to money. To ensure the accuracy and applicability of the scale, in the present study, all genuine efforts were made by relying on the validity and reliability techniques. For this purpose, survey instrument or questionnaire was presented in two stages. In stage one, three professors from the fields of psychology and research studies evaluated the questionnaire; and in stage two, a pilot survey was conducted on five respondents. After the pilot survey, certain modifications were again introduced in the questionnaire and finally the modified questionnaire was used for detailed study as a tool.

Since the reliability value of the scale should be at least 0.6, the *Cronbach* alpha reliability test was conducted by examining the item to total correlation to get a set of reliable scale items that finally yielded 31 statements with reliability value of 0.82.

Testing Methodology: The data was analysed with the help of mean scores, multiple correlation, ANOVA (f-test) and Factor Analysis. The data was put to statistical analysis using SPSS 16 and MS Office – Excel.

Results and Discussion

Money may cause stress in various ways. Stress may be due to desire to earn more or to save more. Money being a status symbol may be a source of stress. Depleting social values may increase stress. Inability to curtail expenses may also cause stress among people.

Factors of Money Related Stress

All 31 statements in the questionnaire were grouped into 6 factors of stress *i.e.* Status, Desire for Money, Values, Self, Family and Relationships, Expenses and Savings for Future as shown in Table 1.

Table 3: Money related stress on respondents from income groups

Income (Rs Lakh)	Mean	SD	95% Confidence Interval for Mean		Minimum	Maximum
			Lower Bound	Upper Bound		
< 2	90.39	15.06	87.01	93.76	45.00	119.00
2-5	90.08	14.43	87.97	92.20	48.00	122.00
5-8	86.26	13.34	83.44	89.13	60.00	114.00
8-10	88.70	17.94	79.48	97.93	68.00	125.00
>10	97.71	20.90	85.64	109.78	45.00	122.00
Total	89.49	14.86	87.99	91.00	45.00	125.00

Table 4: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1978.87	4	494.71	2.26*	.061
Within Groups	81321.62	373	218.02		
Total	83300.49	377			

*Insignificant at 5% level of significance

Table 4 shows the results of ANOVA test applied over scores available for 378 respondents regarding 31 statements on 5 point scale. The *F* Value acquired from the ANOVA test reveals that it is insignificant at 5% level of significance. Hence, the null hypothesis is accepted that there is no significant difference in the stress level of respondents having background of different Annual Family Income.

A. Self, Family and Relations hips	1. My work keeps me so busy that I have no time for family
	2. My work keeps me so busy that I have no time myself or for physical exercise
	3. Good relations are even more important than money
	4. I feel embarrassed when people ask for monetary help for their personal matters
	5. I feel it difficult to get my money back from the people who have taken it as loan from me
B. Expenses	1. I often feel that other members of my family/colleagues do not share expenses
	2. Despite the fact that my spouse earns well, I have to make most of the expenses
	3. Wasteful expenditure of my family members often make me tense
	4. I often feel that other members of my family/colleagues do not share expenses
C. Savings for future	1. I am not able to save much from my income
	2. I am afraid that I have not made wise investments for future
	3. I often get worried about achieving my financial goals in life
	4. My present job/business would not let me achieve my financial goals
	5. Managing my bank accounts and investments makes me stressful

The responses in terms of how people feel about these statements were taken on five point *Likert* scale ranging from 1 to 5 *i.e.* from never to always.

In order to find the prominent contributory factor to money related stress, ***R Square*** (Multiple Correlation Coefficient or Coefficient of Determination) was calculated on the

stress values available from six factors in relation with total scores acquired as dependent variable. Table 2 shows that Saving for Future is the most prominent factor causing money related stress among people. Second most prominent factor is Desire for Money because people think that more money would mean more comfort, better fulfilment of desires and solution of all problems and thus they should make more efforts to earn more. The third most prominent factor is Status because respondents think that these days only a rich man is treated like a human being, money brings improvement in social status and lack of money causes embarrassment and tells upon human dignity.

Table 2: Ranking of Factors of Money related Stress in their order of Prominence

Factor	R	R Square	Adjusted R Square	Std. Error	Ranking of Factors in Order of Prominence
Saving for Future	.769 ^a	.591	.590	9.51	1
Desire for Money	.760 ^a	.578	.576	9.67	2
Status	.706 ^a	.499	.498	10.53	3
Self, Family and Relationship	.703 ^a	.494	.493	10.58	4
Expenses	.653 ^a	.426	.424	11.27	5
Values	.554 ^a	.306	.305	12.39	6

In terms of money related stress the least dominant factor is Values. Respondents did not agree much with the statements that they spend some part of their income on charity on regular basis or giving some money in charity gives them happiness. It means the old value of keeping a part of money aside for charity has somehow lost among people. They do not feel stressed due to the loss of this value. Second least prominent

factor is Expenses. On the whole the respondents do not have much stress on account of sharing the burden of expenses with other family members.

Annual Family Income and Money Related Stress

On the basis of annual family income, the respondents in the present study, belonged to five income groups i.e. less than Rs 2 lakh, 2-5 lakh, 5-8 lakh, 8-10 lakh and more than 10 lakh. An attempt was made to analyse the difference in the level of stress on individuals of different income groups.

Null Hypothesis = There is no significant difference in the level of stress of individuals of different income levels.

Alternate Hypothesis = There is significant difference in the level of stress of individuals of different income levels.

As shown in Table 3 the highest level of money related stress with *mean score 97.71* is in case of people with annual family income of more than Rs 10 lakh per annum. Respondents with annual family income of Rs 5- 8 lakh have the lowest level of stress. The respondents with annual family income Rs. 5 – 8 lakh and Rs. 8 – 10 lakh have the stress score below the total sample average. If the income groups under study are divided into three categories i.e., low (annual family income upto Rs 5 lakh per annum), middle (annual family income Rs 5-10 lakh per annum) (and high (annual family income more than Rs 10 lakh per annum), the lowest level of stress is among middle income people. Though it is high among the low income people yet the highest level is among the high income people.

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Table 5: Post Hoc Test for Multiple Comparisons

Annual Family income (I)	Annual Family income (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
< 2	2-5	0.30	1.99	1.00	-5.15	5.76
	5-8	4.10	2.29	0.38	-2.18	10.39
	8-10	1.68	3.94	0.99	-9.13	12.50
	>10	-7.32	4.28	0.42	-19.05	4.41
2-5	<2	-0.30	1.99	1.00	-5.76	5.15
	5-8	3.80	1.92	0.28	-1.47	9.08
	8-10	1.38	3.74	0.99	-8.88	11.64
5-8	>10	-7.62	4.09	0.34	-18.85	3.60
	<2	-4.10	2.29	0.38	-10.39	2.18
	2-5	-3.80	1.92	0.28	-9.08	1.47
	8-10	-2.41	3.91	0.97	-13.15	8.31
8-10	>10	-11.42	4.25	0.05	-23.08	0.22
	<2	-1.68	3.94	0.99	-12.50	9.13
	2-5	-1.38	3.74	0.99	-11.64	8.88
	5-8	2.41	3.91	0.97	-8.31	13.15
>10	>10	-9.00	5.32	0.44	-23.61	5.59
	<2	7.32	4.28	0.42	-4.41	19.05
	2-5	7.62	4.09	0.34	-3.60	18.85
	5-8	11.42	4.25	0.05	-0.22	23.08
	8-10	9.00	5.32	0.44	-5.59	23.61

The table no. 5 shows the Post Hoc test values for multiple comparisons. It is tested at 5% level significance which is insignificant; and henceforth there is no significant difference of impact of money related stress on the respondents of various Annual Family Income backgrounds.

Factors of Money Related Stress among Various Income Groups

An effort was made to study stress due to various money related factors among different income groups. Mean scores of responses to various statements were taken on

five point linear scale. As given in Table 6, stress due to perceived status value of money is the highest in the highest income group (>10 lakh). As the level of income goes on increasing, stress due to status factor goes on increasing. Stress due to Desire for Money is almost at the same level among the low and the high income people. Values create the highest level of stress among the lowest income group people. Money related stress due to self, family and relationships is the maximum among the highest income people. People earning > 10 lakh per annum had the highest level of stress due to expenses and savings.

The respondents with family income less than Rs 2 lakh have maximum stress due to desire for money, while those in the income category of Rs 2-5 lakh have maximum level of stress due to status and desire for money. Among middle income respondents also maximum score of stress is for the factors of status and desire for money while in the high income group the highest scoring factors are status and savings for future.

Table 6: Impact of Annual Family Income on Factors of Money Related Stress

	Means of Factors					
	Status	Desire for Money	Values	Self, Family and Relationship	Expenses	Savings for Future
< 2	3.18	3.21	2.48	2.67	2.61	2.99
2-5	3.18	3.17	2.33	2.74	2.68	2.99
5-8	3.22	3.02	2.18	2.60	2.43	2.93
8-10	3.25	3.00	2.20	2.71	2.83	2.98
>10	3.50	3.22	2.33	2.97	3.16	3.50
<i>F-value</i>	0.775	1.745	1.928	1.270	3.594*	1.592
<i>Sig.</i>	0.542	0.139	0.105	0.281	0.007*	0.176

* Significant at 5 % level of Significance.

The *F* Values and its significance level show that the differences in the level of stress among various income groups for the factor of **Expenses** as it is highly significant at 5% level of significance. As the income level rises more number of people feel that family members and colleagues avoid sharing expenses, the earning spouse is not supportive

in terms of expenses sharing, family members make wasteful expenses or the respondents himself/herself incurs wasteful expenses. The interesting revelation is that those who are in the highest income bracket are more stressful in terms of 'Expenses' factor; and those who are in the middle income group are the least stressed respondents.

Conclusion

The study regarding the prominent factors of money related stress among various income groups shows that Saving for Future is the most prominent factor while Desire for Money is the second most prominent factor because people think that more money would mean more comfort, and would be a solution for most of the problems and thus they should make more efforts to earn more. The third most prominent factor is Status because respondents think that these days only a rich man is treated like a human being, money brings improvement in social status and lack of money causes embarrassment and tells upon human dignity. The least important factor for the respondents is Values. The old value of keeping a part of money aside for charity has somehow lost among people. They do not feel stressed due to the loss of this value. Income level wise analysis shows that maximum level of money related stress is among the high income (annual family income > Rs10 lakh per annum) people while the middle income people (annual family income Rs 5-10 lakh per annum) are least stressed. As the level of income goes on increasing, stress due to status factor goes on increasing. Stress due to Desire for Money is almost at the same level among the low and the high income people. Values create the highest level of stress among the lowest income group people. Money related stress due to self, family and relationships is the maximum among the highest income people. People earning > Rs 10 lakh per annum had the highest level of stress due to expenses and savings. Various income groups have significantly different level of stress related to expenses.

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different facets of job and identified five key elements of job satisfaction, namely, nature of the work, supervision, present pay, promotion opportunities and relation with co-workers. Malik (2011) found that the factor “work itself” was the most motivating aspect for faculty members of university of Baluchistan and the least motivating aspect was “working conditions”. Latif, et al (2011) revealed that the teachers of public sector were more satisfied with working hours, benefits, opportunities for promotion, salary and job security than the teachers working in private sector. Nigam and Jain (2014) found that faculty members in Delhi University were generally satisfied with their job. But there was no significant difference in job satisfaction level of male and female faculty members. Mangi, et.al. (2011) observed high degree of correlation between demographic background of teachers and their job satisfaction. The study also showed that large number of non-Ph.D faculties was not satisfied with the promotion chances, job advancement, opportunities for the professional development.

Objectives of the Study

- 1) To assess the organisational factor wise degree of job satisfaction /dissatisfaction of the faculty members working in Diphu campus of Assam University;
- 2) To analyse the influence of select organisational factors influencing job satisfaction /dissatisfaction of faculty members under consideration

Data Source and Methodology

The study is mainly based on primary data. The study has been conducted on the faculty members working in the Diphu campus of Assam University. The target population of the study includes all the faculty members of Assam University, Diphu campus except the ones who are also performing the roles of Head of the Departments or other administrative officers for the reason that their responses might be mixed with their feelings as administrators and therefore, may exhibit misleading results. Simple random sampling technique was used to select the respondents for the study. Teachers from various departments and hailing from different parts of the country were considered for the purpose of the survey. The information and the opinion of the faculty members on selected components were collected through a structured schedule. A five point rating scale ranging

DETERMINANTS OF JOB SATISFACTION: A STUDY ON FACULTY MEMBERS WORKING IN DIPHU CAMPUS OF ASSAM UNIVERSITY

Kingshuk Adhikari*
Subit Dutta**

Abstract

Attainment of the objectives of any University depends to a large extent on the wilful contribution of its teachers towards its operations and functioning. Faculty members of a University, in order to achieve the objectives of the University, needs to be duly and timely lured to by having been provided their requirements apart from orders and directions. The experiences suggest that administrations which do not carry on the exercise of knowing the revised needs and preferences of its employees at due intervals often fail to provide requisite job satisfaction to its faculty members. The administrations which carry on such exercises are able to find out the gaps, if any, between what it is and what it should be and are in a better position to master the requisite quality and quantity of contribution from its faculty members.

The present study is carved out in a manner which may help the University administration to know the degree of satisfaction/dissatisfaction of faculty members working in Diphu Campus of Assam University, the second campus of the said central university

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located in a hill district of Assam. Based on primary data, the study makes a modest attempt not only to assess the degree of satisfaction or dissatisfaction of faculty members with different facets of their job but also makes effort to analyse the influence of select factors on overall job satisfaction of faculty members working in Diphu Campus of Assam University.

Key words: Promotion, Administration, Infrastructural Facilities, Welfare Facilities.

Introduction

Job satisfaction is a multifaceted concept and has been defined by various authors in different ways. Precisely, it is a state of mind and evaluative response to different facets of a job. In simple words, it is the extent to which people like or dislike their jobs (Spector: 1997). Positive and favourable attitudes towards the job indicate job satisfaction while negative and unfavourable attitudes towards the job indicate job dissatisfaction (Armstrong: 2006). Job satisfaction can also be described as a summation of attitudes about specific factors of the job. Employees can simultaneously be satisfied with some elements of their job while dissatisfied with others (Mcshane, L. S. et.al: 2000).

Job satisfaction is a combination of psychological, physiological and environmental circumstances that cause a person to say that he/she has been satisfied with his/her job (Hoppock: 1935). It is a pleasurable or positive emotional response resulting from appraisal of one's job or job experience (Locke: 1976). Job satisfaction is the outcome of an employee's judgement of how well his or her job fulfils those aspects which are considered important by him or her (Luthans: 2005). Thus, job satisfaction is a multi-dimensional phenomenon and the degree of job satisfaction or dissatisfaction depends upon a number of inter-related factors. Job satisfaction is distinctive to each individual and guided by both psychological and demographic factors. It is related to an individual's unique status like mental state, values and aspirations.

Job satisfaction is generally perceived to be directly linked to productivity as well as to personal well-being. Job satisfaction of employees is important because from the existing literature it is found that high job satisfaction may lead to improved performance.

A teacher can perform to the maximum of the capacity if he/she is satisfied with his/her job. Job satisfaction of faculty members is extremely important because faculty members' performance in the institutions of higher learning is to a great extent is dependent upon faculty members' satisfaction with their job. An effective educational system thus naturally requires a contented group of teaching staffs. . When a teacher is satisfied with their job then they can perform their responsibilities sincerely. Now a day in changing environment job satisfaction of faculty members has become a more important issue and it is very important for the qualitative development of educational institutions in the long run.

Keeping in mind the above significance of job satisfaction of faculty members serving in the institutions of higher learning, the present paper makes an attempt to analyse the degree of job satisfaction of faculty members serving in Diphu campus of Assam (Central) University.

Review of Literature

Commencing from Hawthorne Experiments since 1920s, a lot of research work has been undertaken to analyse the factors influencing job satisfaction of employees. As job constitutes a major part of activity of a person's life it is very interesting to note that there is an enormous impact of employment life on one's personal life, productivity and social relations. A large number of studies have been carried out on different issues relating to job satisfaction and also in the area of faculty members' job satisfaction. A brief review of literature is given below:

Herzberg, Mausner and Synderman (1959) developed 'Two Factor Theory' that identifies two sets of factors contributing to Job satisfaction and dissatisfaction. Wong and Heng (2009) found that the major sources of job satisfaction for Malaysian faculty members were policy, administration and salary whereas the sources of dissatisfaction were interpersonal relations, recognition, supervision and the overall working conditions. Deshwal (2011) revealed that faculty members were satisfied with compensation, work itself, colleagues' co-operation, responsibility and social status of job, job security, achievement and students' interaction. Further the faculty members were found dissatisfied working conditions and recognition. Robbins (1997) conducted a study on job satisfaction regarding

Table 3
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.800 ^a	.640	.449	.846

a. Predictors: (Constant), Student Quality, Relationship with Colleagues, Administration, Promotion, Infrastructural Facilities, Welfare Facilities, Pay and Allowances, Work Itself

The value of R^2 (0.640) suggests that 64.00% of the variation in the level of overall job satisfaction can be explained by explanatory variables, i.e. the select organisational factors capable of influencing job satisfaction of faculty members.. The adjusted R^2 value (0.449) also indicates that 44.90% of the variation in the degree of customer satisfaction is explained by predictors. Thus, the organisational factors selected for the study could explain a fairly good amount of variation in overall job satisfaction. However, the difference between R^2 and adjusted R^2 implies that if the model were derived from the population, it would account for less variation in the outcome.

Table 4
Result of ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.108	8	2.388	3.340	.021 ^a
	Residual	10.725	15	.715		
	Total	29.833	23			

a. Predictors: (Constant), Student Quality, Relationship with Colleagues, Administration, Promotion, Infrastructural Facilities, Welfare Facilities, Pay and Allowances, Work Itself

b. Dependent Variable: Overall Job Satisfaction

The overall predictability of the model is also calculated. The F statistics (3.34) giving p- value as 0.000 shows that the regression model is highly significant which implies that the data are well suited in explaining the influence of organisational factors on overall job satisfaction of faculty members working in Diphu campus of Assam University.

from Highly Satisfied (5) to Highly Dissatisfied (1) was employed. To analyse the responses of faculty members, mean and standard deviation have been used. Apart from this, multiple regression has been employed applied to explain the influence of the select factors on overall job satisfaction of faculty members in Diphu Campus of Assam University.

Brief Profile of Assam University (Diphu Campus)

Assam University, Silchar, Assam was established by an Act of Parliament promulgated in 1989 (Act 13) and enforced by a notification of the Government of India on 21st January, 1994. In the last week of March 2007, the University Grants Commission, New Delhi, approved six academic departments to be set up for a campus at Diphu in Karbi Anglong district of Assam. Establishment of Assam University campus at Diphu was long felt demand of the people of Karbi Anglong, Assam. The Permanent Campus is located in the hilly terrain spreading over 273 bighas allotted by Karbi-Anglong Autonomous District Council authority with Mikir, Naga and the Barail ranges of hills at the backdrop. It is about 8 km westward from downtown Diphu towards Lumding. With the approval of the University Grants Commission, New Delhi, at present PG courses in ten academic departments are running in Diphu Campus. The departments are (i) English, (ii) Political Science, (iii) History, (iv) Physics, (v) Life Science (vi) Commerce (vii) Assamese, (viii) Anthropology (ix) Hindi and (x) Geography. A centre for Tribal Studies has also been functioning. (www.aus.ac.in)

Table 1
Designation Wise Number of Faculty Members in Diphu Campus of Assam (Central) University, 2014

Designation	Number of faculty members	Percentage of faculty members
Professor	4	8.70
Associate Professor	10	21.70
Assistant Professor	32	69.60
Total	46	100.00

Source: Assam University.

Table 1 shows the designation wise number of faculty members serving in Diphu campus of Assam University. Out of the total faculty members 69.6% are Assistant Professor, 21.7% Associate Professor and 8.7% are Professors.

Results and Discussion

The data obtained with the help of structured questionnaire is generally evaluated to judge the reliability of the instrument before making any kind of analysis and interpretation. The reliability test has been applied in the present study to examine the internal consistency among the variables in the instrument. In order to determine the reliability of the construct, Cronbach's alpha is generally employed. Cronbach's alpha is the most widely used measurement tool with a generally agreed lower limit of 0.70 (Hair, et.al., 1998). Since the value of Cronbach's alpha is 0.859, which is much higher than 0.70, so, it can be concluded that there is a good internal consistency among the items included in the questionnaire.

Table 2

Factor-wise Job Satisfaction of Faculty Members

Factors	Mean Score	SD	Rank
Pay and Allowances	3.72	1.06	3 rd
Welfare Facilities	2.72	.72	7 th
Promotion	3.29	.89	6 th
Work Itself	3.67	.93	4 th
Infrastructural Facilities	2.34	.72	8 th
Relationship with Colleagues	4.30	.62	1 st
Students' Quality	3.93	.56	2 nd
Administration	3.51	.79	5 th
Overall job satisfaction	3.58	1.139	-

Source: Field Survey

Table 2 shows that the mean score for overall job satisfaction of faculty members working in Diphu campus of Assam University is 3.58 with a SD of 1.139. The mean scores of different factors imply that faculty members are by and large satisfied with most of the factors except infrastructural facilities and welfare facilities. Faculty members have recorded highest degree of satisfaction with respect to "Relationship with Colleagues". On The contrary, faculty members have expressed serious concern about "Infrastructural Facilities" and on the basis of mean scores lowest rank has been assigned to this particular factor.

Infact, "Infrastructural Facilities" and "Welfare facilities" are the sources of dissatisfaction for the majority of the respondents. It seems that the current "Infrastructural Facilities" is quite inadequate and has created negative feelings in the minds of the respondents. There is no "canteen facilities" in the campus. "Library facilities" and available "internet facilities" are the other sources of dissatisfaction on this front. Many faculty members expressed their intense negative feelings about the lack of justice and fairness in the current system in providing faculty members appropriate Medical Reimbursement Facility as well as reimbursement of T.A./D.A. for attending academic events. The value of standard deviation (0.56) with respect to the factor 'students' quality' is the lowest which implies that the opinion of the faculty members is more concentrated about this factor. On the contrary, the value of the standard deviation (1.06) with respect to the factor 'pay and allowances' since is the highest it denotes that the tilt of the views of the respondents is bent more towards this.

The influence of different organisational factors (predictors) on overall job satisfaction (dependent variable) of faculty members working in Diphu campus of Assam University has been analyzed by employing multiple regression technique.

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Table 5
Multiple Regression Results of the Selected Variables

Model	Unstandardized Coefficients		t-values	p- values.	
	B	Std. Error			
1	(Constant)	-.797	1.881	-.424	.678
	Pay and Allowances	.028	.265	.107	.916
	Welfare Facilities	.285	.321	.887	.389
	Promotion	3.29	.261	2.490	.025
	Work Itself	-.224	.318	-.706	.491
	Infrastructural Facilities	.191	.314	.608	.552
	Relationship with Colleagues	-.206	.392	-.525	.607
	Students' Quality Administration	.095	.436	.219	.830
a. Dependent Variable: Overall Job Satisfaction					

Source: Field Survey

Table 5 discloses the regression results of explanatory variables which reveals that all the select factors positively influence the overall job satisfaction of faculty members working in Diphu campus of Assam University, except two factors, namely, ‘relationship with colleagues’ and ‘work itself’. The b values indicate that the influence of the factor named ‘administration’ on overall job satisfaction is the highest if the effects of other dimensions are held constant. Similarly, it is observed from the table that influence of the factor named ‘pay and allowance’ on overall job satisfaction of faculty members is the lowest out of the eight predictors. The result of corresponding t value and p value make it crystal clear that two important factors that significantly influence job satisfaction of faculty members are ‘promotion matters’ and ‘administration’. But there exists no significant cause and effect relationship between other organisational factors and overall job satisfaction at 5% level of significance.

Summary of Major Findings

1. The mean scores of satisfaction of faculty members with respect to individual organisational factors influencing job satisfaction indicate that faculty members of Diphu campus of Assam University are by and large satisfied. However, faculty members expressed their dissatisfaction with respect to two organisational factors, namely, "Infrastructural Facilities" and "Welfare Facilities". There is no "canteen facilities" in the campus. "Library facilities" and available "internet facilities" are the other sources of dissatisfaction on this front. The rate of reimbursement of medical expenses is often too low and the payment is often delayed due to cumbersome procedural formalities. Employees also do not get TA/DA for attending academic events even with prior permission from the authority.
2. The value of standard deviation (0.56) with respect to the factor 'students' quality' is the lowest which implies that the opinion of the faculty members is more concentrated about this factor. On the contrary, the value of the standard deviation (1.06) with respect to the factor 'pay and allowances' since is the highest it denotes that the tilt of the views of the respondents is bent more towards this.
3. The relationship among the colleagues in the Diphu campus of Assam University is quite satisfactory. Faculty members not only experienced co-operation from the fellow faculty members of the department but also they expressed their satisfaction with the degree of support they receive from non-teaching employees. Apart from these, majority of the faculty members opined that inter-personal relationship among the teachers even beyond the department is quite satisfactory.
4. Majority of the select factors positively influence the satisfaction of faculty members under study except two factors, namely, "Work Itself" and "Relationship with Colleagues". The influence of "issues related to administration" and "issues related to promotion" on faculty members' overall job satisfaction are significant at 5% level of significance. Most of the faculty members' satisfaction/dissatisfaction are highly contingent upon the style of functioning of the administration and the behaviour of the administrators at different levels.

Conclusion

Job satisfaction is an important subject of research because of its relevance to the physical and mental wellbeing of employees. Hence, an understanding of the factors relating to job satisfaction is important. Based on the findings of the study, it may be concluded that there is general feeling of contentment among majority of the faculty members in Diphu campus of Assam University although there exists discontentment about certain facets of their job. A satisfied work force is essential for the success of organizations and their businesses. Dissatisfied employees make organizations gradually dysfunctional. If faculty members of university experience job satisfaction, they will generally be inspired to create environments conducive to learning. So, job satisfaction among university teachers is necessary not only for themselves but also for the society as a whole. So, it is expected that the concerned authorities at different levels will adopt necessary steps which will ensure higher degree of job satisfaction of faculty members of the Diphu campus of Assam University.

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Total investment in SEZs as on February 2006 was Rs. 4035.51 Cr. Which has increased to Rs. 2, 92,627.49 Cr in 2013-2014. Thus the investment has increased by 73 times since February 2006.The total number of employment was 1, 34,704 person in February 2006. This has increased to 12, 83,309 on 31-03-2014. The employment has increased by 9.5 times since February 2014. At present there are 192 operational SEZs in India. The state wise distribution of exporting zone as on 06.08.2011 (Financial Year 2014-15) are -Andhra Pradesh - 42, Chandigarh - 03,Chhattisgarh -01,Gujrat-18,Haryana-06, Karnataka-25, Kerala-14 ,Madhya Pradesh- 02,Maharashtra- 25, Odessa – 01,Punjab-02,Rajasthan- 04 ,Tamil Nadu- 35,Uttar Pradesh- 10 ,West Bengal- 06.

Objectives of the study & Methodology

The objectives and methodology of the study are described as hereunder-

Objectives- The Objectives of the study is to analyze the performance of export from SEZs in India and also to analyze the trend of export from SEZs in India.

Sources of Data-Relevant data and information have been collected from Department of Commerce and Industries Government of India (<http://www.sezindia.nic.in/about-fi.asp>) and Economic Survey (various issues) and from various books and journals published by Government and non-Government agencies.

Parameter used-Parameter used for the measurement of export performance from SEZs in India are-Volume of export from SEZs, Growth of export from SEZs (over previous year),Percentage share of export from SEZs to total export from India.

SPECIAL ECONOMIC ZONE IN INDIA AND ITS EXPORT PERFORMANCE -AN ANALYTICAL STUDY

Sankar Sarma*

Abstract

The first EPZ in Asia was established in India. Gandhi Dham, Gujrat during 1960s to enhance export from India. But the EPZs could not achieve the desired result due to some deficiencies in EPZ policy. To overcome these lacunas Government of India has passed SEZ policy in May 2005 and got the presidential assent in February 2006. The aim of this paper is to measure the performance of export from SEZ in India by using certain parameters.

Key word: Export processing Zone, Special Economic Zone and export.

Introduction

India is one of the pioneers in the field of establishing Export Processing Zone (EPZ) in Asia to promote the country's export. The first EPZ was set up in Kandala, Gandhi Dham, Gujrat. EPZ can be termed as duty free area in which the operating unit gets various fiscal benefits and concession to produce and export goods and services. It was operated within the framework of Export Import policy and was under the control of the Government. The intention behind the establishing the EPZs was to enhance the country's export but could not produce the desired result as the contribution of EPZ towards the total export was marginal. The reasons for poor performance was that these EPZs were not free from various short comings namely multiplicity of control and clearance,

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lack of world class infrastructure, etc. As a result could not attract FDI as expected and fail to cut a niche in the world export market. To overcome this shortcoming Government of India has announced Special Economic Zone Policy in April 2000 and took the initiative to convert the existing EPZ in to SEZ and EPZ was discontinued with effect from April 1, 2003. The SEZ Act was passed by parliament in May 2005 and the Presidential assent was received on 23rd June 2005. The SEZ came into force from 10th February 2006.

Definition and meaning of SEZ

According to Section 53 of the SEZ Act an SEZ shall be “Deemed to be a territory outside. The custom territory of India for the purpose of undertaking authorized operation.” Special Economic Zone also can be termed as deemed territory where special rule prevails for attracting FDI for export oriented production and for purposes of trade and custom duties.

Why do we need Special Economic Zone?

We need the SEZ for the following reasons-

- SEZ act as a catalyst for economic growth and development- through export.
- To attract more and more FDI in India.
- It helps to create world class infrastructure.
- To generate employment opportunities.
- To enhance managerial and technical skill.
- SEZ acts as a net foreign exchange earner.
- For promotion of export of goods and services.
- For promotion of investment from domestic and foreign sources.
- 100% FDI allowed through automatic rout

Benefits of establishing SEZ

The incentives and facilities offered to the units in SEZs for attracting investments into the SEZs, including foreign investment include [Department of Commerce and Industries Government of India (<http://www.sezindia.nic.in/about-fi.asp>)] :-

- Duty free import/domestic procurement of goods for development, operation and maintenance of SEZ units

- 100% Income Tax exemption on export income for SEZ units under Section 10AA of the Income Tax Act for first 5 years, 50% for next 5 years thereafter and 50% of the ploughed back export profit for next 5 years.
- Exemption from minimum alternate tax under section 115JB of the Income Tax Act.
- External commercial borrowing by SEZ unit’s up to US \$ 500 million in a year without any maturity restriction through recognized banking channels.
- Exemption from Central Sales Tax.
- Exemption from Service Tax.
- Single window clearance for Central and State level approvals.
- Exemption from State sales tax and other levies as extended by the respective State Governments.
- Exemption from customs/excise duties for development of SEZs for authorized operation Approved by the BOA
- Income Tax exemption on income derived from the business of development of the SEZ in a block of 10 years in 15 years under Section 80-IAB of the Income Tax Act.
- Exemption from minimum alternate tax under Section 115 JB of the Income Tax Act.
- Exemption from dividend distribution tax under Section 115O of the Income Tax Act.
- Exemption from Central Sales Tax (CST).
- Exemption from Service Tax (Section 7, 26 and Second Schedule of the SEZ Act).

The scenario of SEZ in India

The number of approved units of SEZs as on 31-314 is 3799 but at present we have only 183 operational SEZ .The breakup of these operational SEZs are [Department of Commerce and Industries Government of India (<http://www.sezindia.nic.in/about-fi.asp>)] -

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Study period-The present study is confined to five years i.e. from 2005-2006to 2013-2014We have selected study period from 2005-2006 because the SEZ Act was passed in May 2005.

Analysis

Export is considered the engine of economic growth. Most of the countries adopted various measure to enhance their share in the world export market. India is not an exception to that. To world class infrastructure attract FDI for the production of exportable commodities. To facilitate the export and to occupy a respectable position in world export market Government has established SEZ. To get a candid idea about the performance of export from SEZin India following table is being constructed:-

Table – Export performance SEZs from India.

Year	Export from SEZ in India (Rs. In Crore)	Growth rate of export from SEZ (Growth over previous year)	Total export from India (Rs. In Crore)	Percentage share of export from SEZ to total export from India
2005-2006	22,840		4,56,418	5.00%
2006-2007	34,615	52%	5,71,779	6.05%
2007-2008	66,638	93%	6,55,864	10.16%
2008-2009	99,689	50%	8,40,755	11.45%
2009-2010	2,20,711	121%	8,45,534	26.10%
2010-2011	3,15,868	43.11%	11,42,922	27.64%
2011-2012	3,64,478	15.39%	14,65,959	24.86%
2012-2013	4,76,159	31%	16,34,319	29.14%
2013-2014(P)	4,94,077	4%	18,94,182	26.08%

Source: Export from SEZs collected from Department of Commerce and Industries Government of India (<http://www.sezindia.nic.in/about-fi.asp>) and Total export from India collected from Economic Survey -2013-2014.

(p)-Provisional Data.

**Analysis of the above table reveals that
Regarding volume of trade**

The volume of export from SEZ has shown an upward trend. The volume of export was Rs. 22,840 Cr in the year 2005-06 which has gone up to Rs. 4,94,077 Cr in 2013-14, thus registering an increase by Rs. 4,71,237 Cr. The volume of trade has increased by 22 times (approx.) since 2005-06.

Regarding Growth Rate

The growth rate of export (over previous year) from SEZ has shown a wide fluctuation and ranges between 4% to 121%. The highest growth rate was 121% in the year 2009-2010 and lowest growth rate registered at 4% in the year 2013-14.

Regarding percentage share of export from SEZ to total export from India

The percentage share of export has shown an upward trend except in the year 2011-12 and 2013-14. The percentage share of export to the total export from India was 5% in 2005-06 which has increased to 26.08% in 2013-14. The contribution to our national export was highest in the year 2012-13 (29.14%). Thus registering an increase of 21.08% during 2005-06 to 2013-14.

Limitations of SEZ in India

Though export from SEZs in India has shown a tremendous performance since 2005-2006, it is not free from limitations. Some of the limitations encountered by SEZs in India are described as hereunder-

- SEZ in India are concentrated in few states, out of 192 operational SEZ as on 06.08.14, 159 are situated in 6 states (Andhra Pradesh – Gujarat, Karnataka, Kerala, and Maharashtra & Tamil Nadu). Out of 28 states (Considering undivided Andhra Pradesh) only 15 states are having SEZ (Operational).
- Uneven sector wise distribution of SEZs is another major problem in India. Out of total 185 operational SEZ on 31-3-14, Only IT/ITES – constitute about 55% of SEZs (Number of SEZ in IT is 102) followed by multi product having 19, Pharma & Engineering having 11 numbers of SEZs respectively. Gems and Jewellery and leather & leather product are having 3 numbers of SEZ respectively.

- Agricultural product is one of the important constituent of India's merchandise export but unfortunately till date we don't have any operational SEZ for agro product.
- Acquisition of land is the major hurdle for establishing SEZ in India. Land laws vary from state to state. Therefore acquisition of land by the government even after providing adequate compensation takes long time and sometimes the owner refuses to part with their land. Availability of non- double cropped agricultural land and vacant land is also a difficult task.
- Most of the SEZs are concentrated in urban areas or nearby urban areas leaving the remote corner of our country/state. So those remote areas remain underdeveloped which affects the connectivity with those remote areas and hinterland throughout year.
- Many states Government do not have adequate SEZ policy/ Act.

Conclusion

It is evident from the above study that SEZs in India has contributed a lot towards the development of the different sectors namely total export, investment, employment etc. If we compare the export performance of SEZ in India with that of China and other developed countries, their performance is much better than our country. So to be at par with china or other developed countries we have to remove the difficulties like acquisition of land, concentration of SEZs in few states, uneven distribution of SEZs in different sector etc. A uniform law regarding acquisition of land throughout the country for the purpose of SEZ may be introduced. Initiatives should be taken to establish SEZs in remote and underdeveloped areas and preference should be given to establish SEZs in sectors like agro based produced, plastic product etc. which will improve the export performance of SEZs and lead to over all development of the country.

decrease the financial results of the company. As the economic performance of the company was already negative, further decreasing the performance does not have negative impact on the judgment of the users of the financial statement.

3.2 Income Minimisation: This sort of creative accounting is quite similar to big bath accounting. One objective of this type of accounting is public or political visibility of the firm. If companies report relative high earnings, the company is expected to attract more attention from public attention from public groups regarding the environmental policies of the company. Additionally, a company with relative high earnings is expected to attract more attention from competitors. (Stolowy and Breton, 2004). The management of the company prefers to attract as little attention as possible. A related main motive can be certain income tax consideration.

3.3 Income Maximisation: This is opposite of income minimization. The purpose of this type of earnings management is to report a positive result. According to Dechow, Richardson and Tuna (2003), it is expected that management of companies with a small negative result or result that is close to zero will perform income maximization. By reporting, a positive result, the management tries to influence the judgment of the users of financial statements (Hoogendoorn, 2004).

3.4 Income Smoothing: The managers will take actions to increase earnings when earnings are relatively low and to decrease earnings when earnings are relatively high (Bao and Bao, 2004). Usually the dampening in earnings variability is chosen by the management of the company to report a gradual growth in earnings that is in line with the private information of the management about future earnings.

4. Motives of Creative Accounting

There are many factors motivating creative accounting practices.

4.1 First of all, the system of company type of business where the management act as representative of investors, give undue advantage to them to manipulate the accounts. There is a trust and faith kind of relationship between management and investors. Separate entity concept motivates board and management to get personal gain instead of economic advantage.

INCOME SMOOTHING PRACTICES: INDIAN EVIDENCE

Jutimala Bora*

Abstract

Financial reporting is one of the most important way for most business to communicate their performance and status to investors, regulators and employees alike (Elliott, B. et al. 2005). The users of the financial reports are several parties inside or outside the company. Without the financial reporting of the company, the interested parties would not be able to obtain the information about the company which is the basis for many economic decisions. The flexibility in financial reporting enables the management to make subjective decisions. By acting this way; the management is not reporting the actual figures and the earnings of the company. This discretionary practice of the management is qualified as earnings management / creative accounting. Income smoothing is one of the techniques of creative accounting.

Income smoothing is defined as a deliberate dampening of fluctuations about some level of earnings considered to be normal for the firm, Barnea (1976). On the other hand, Beidleman (1973) defined income-smoothing as an attempt on the part of the firm's management to reduce abnormal variations in earnings to the extent allowed under sound accounting and management principles. Koch (1981) defined income smoothing as a means used by the management to diminish the variability stream of reported income numbers relative to some perceived target stream by manipulation of artificial (accounting) or real (transactional) variables.

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The present study is made with the objective of finding out the presence of income smoothing among the NSE listed companies. The present study is based on both primary as well as secondary data. The presence of income smoothing practice among the sample companies has been determined using one Income Smoothing Index.

1. Prologue

Financial reporting is one of the most important way for most business to communicate their performance and status to investors, regulators and employees alike (Elliott, B. et al. 2005). The users of the financial reports are several parties inside or outside the company. Without the financial reporting of the company, the interested parties would not be able to obtain the information about the company which is the basis for many economic decisions. Because of the importance of the financial reporting process, several regulatory bodies globally regulate the financial reporting such as the IASB and the FASB. At the national level, Accounting Standard Board of India has been regulating the financial reporting process of the company. These regulatory bodies have introduced accounting standards and principles to standardize the financial reporting. However the current accounting standard and principles require the judgment to prepare the financial reporting. Consequently, the flexibility in financial reporting enables the management to make subjective decisions. By acting this way; the management is not reporting the actual figures and the earnings of the company. This discretionary practice of the management is qualified as earnings management / creative accounting.

2. Creative Accounting

There are different notions about creative accounting.

2.1 Copeland (1968) observes creative accounting involves the repetitive selection of accounting measurement or reporting rules in a particular pattern, the effect of which is to report a stream of income with a smaller variation from trend than would otherwise have appeared.

2.2 Griffiths (1986), observes, every company in the country is fiddling its profits. Every set of published accounts is based on books which have been gently cooked or completely roasted. The figures which are fed twice a year to the investing public have all been changed in order to protect the guilty. It is the biggest con trick since the Trojan horse. In

fact this deception is all in perfectly good taste. It is totally legitimate. It is creative accounting.

2.3 Schipper (1989) observes, Creative Accounting can be equated with “Disclosure Management” in the sense of a purposeful intervention in the financial reporting process. According to Smith (1992) an investment analyst “we felt that much of the apparent growth in profits which had occurred in the 1980s was the result of accounting sleight of hand rather than genuine economic growth and we set out to expose the main techniques involved, and to give live examples of companies using those techniques.

2.4 Naser (1993), observes, “Creative accounting is the transformation of financial accounting figures from what they actually are to what prepares desire by taking advantage of the existing rules and / or ignoring some or all of them. Merchant and Rockness (1994) observes “Is any action on the part of management which affects reported income & which provides no true economic advantage to the organization & may in fact in the long term be detrimental.

2.5 Blake *et al* (1998) stated some ways whereby creative accounting practices are arise. Like when we are having alternative way of accounting practices we may employ any one according to the need of the business. Common examples which he stated in choosing between write off or capitalize research and development expenditure. Secondly, by timing genuine transaction so as to manipulate the accounts and finally in estimation of life of the assets for depreciation.

2.6 Creative accounting is the process whereby accountants use their knowledge of accounting rules to manipulate the figures reported in the accounts of a business (Amat, O. et al, 1999)

3. Types of Creative Accounting

Based on the situation, the management is likely to prefer different types of creative accounting practices. According to Scott (2006), there are four main patterns or types of creative accounting/ earning management. These patterns are

3.1 Taking a Bath : This kind of accounting is also known as big bath accounting. This actually takes place during a period of losses or reorganization within accounting. If a company is in a period of losses, it is often not useful for the management to take actions that transform the losses into profits. Consequently, the management often prefers to

7.4 Shamsul *et al.*(2002) examined on whether Extra ordinary item(EI) disclosure were associated with income-smoothing behavior and the extent to which disclosure of Extra-ordinary item was related to political cost, gearing and management interest. The study found that the incidence EI was very high. However, the results showed no evidence of management using EI as a tool to smooth income. Further EI disclosures were not explained by political cost, gearing and management interest.

7.5 Khairul *et al* examined the relationship between income-smoothing practices and firms value in Malaysia. This research also studied the effect of firm size on the tendency to smooth income. The result of the study indicated that income smoothing was present although its percentage is low. It also found that smaller firms have greater tendency to smooth income rather than larger firms.

7.6 Apart from the above mentioned studies, previous studies have also investigated income smoothing instruments such as dividend incomes, changes in accounting policies, pension cost, investment tax credit, depreciation and fixed charges, discretionary accounting decision and many other possible income-smoothing tools.

7.7 Gordon *et al.*, (1966) examined the relationship between the method of accounting for investment tax credits (income-smoothing instrument) and the growth rates of earnings per share and the returns on the stockholders' equity (income smoothing objective). The results of the study indicated a significant relationship between the two, suggesting the existence of income-smoothing practices.

7.8 Archibald (1967) studied on depreciation methods and Cushing (1969) on accounting changes. Dascher, *et al.*, (1970), Barnea *et al.*(1975) and Ronen, *et al.*, (1975) studied on extra ordinary items also reported income smoothing behavior among sample companies. Beidleman (1973) provided evidence to show that incentive compensation, pension and retirement expenses, research and development cost, sales and advertising expenses were also used by companies to smooth income. Ma (1988) concluded that banks used loan loss provisions and charge offs to smooth income. White (1970) studied the discretionary accounting decisions and could not detect any income smoothing behaviour among the sample companies.

7.9 Several researchers have come out with different argument on determining the income-smoothing objective. Copeland (1986) suggested that net income as the ultimate aim of

4.2 Secondly, system like income based bonus or target based promotion are also motivating management to construct the accounts in desired form.

4.3 Thirdly, competition is another factor where company as such is not motivated to indulge in creative accounting practices but is formed to employ such practices. In order to perform well they have to show higher profits which boost their market share and thus earn good rating from credit rating agencies.

4.4 Fourth, tax is another significant factor, motivating creative accounting. In order to pay less tax, companies usually show fictitious expenses in its accounts which lower its profits and hence less tax will be levied on firm.

4.5 Lack of information and knowledge of investors in understanding financial position of the firm is another factor motivating creative accounting practices. Investors are usually considered as layman which becomes their weak point and thus companies can manipulate data in their desired form, believing that people will not be able to understand them.

4.6 Companies facing the problem of labour union and laws related to it try to show less profit so that unions do not ask for increment in their wages. Moreover, to avoid expenses like charity and donation, companies prefer to show less profit. These situations become the motivating factor of creative accounting practice.

5. Presence of Creative Accounting in India

According to Nobel Research Report (Sep, 2008)-50 Good market capital size companies are indulged in creative accounting practices and investors have to carefully examine the books of accounts, its profits and cash flows. After the news of Satyam, question is raised on all the giant firms which were directly or indirectly related with company.

India is developing economy where corporate sector is contributing a major part in national income and it is spreading its wings all over world where they get lots of opportunities to go for creative accounting as all countries have different accounting system which creates ambiguity in investor's mind. Thus, the number of accounting scandals is increasing in India.

Creative accounting is prevailing in almost all the companies in India, the reason might be the increasing level of competition and loopholes or weaknesses of Indian

Accounting Standard are facilitating the corporate sector to indulge in creative accounting practices. Black *et al* (1998) examine non-current asset sales as creative accounting tools by using a very large data set of observation taken from countries like Australia, New Zealand and the UK. They find that where the relevant accounting standards are permissive managers will exploit the potential use of creative accounting. Such behaviour is curtailed once the provisions of accounting standards are tightened. But the loopholes are so common and prevailing in accounting standards in such a manner that even if certain loopholes are eliminated, the practice of creative accounting likely to exists.

Nobel Research Report highlighted the common manipulation in accounting in India

1. Revenue Manipulation

- Recording revenue ahead of time.
- Booking fictitious sales.

2. Expenditure Manipulation.

3. Cash Manipulation.

Most of the companies in India are taking undue advantage of weaknesses of accounting principles. Like as mentioned by Nobel Research Report, companies tend to show revenue which is not earned. This is also called as aggressive accounting technique whereby revenue is shown in the books of accounts before the project is completed in effect of which revenue increases. Cash Manipulation is one of the common practices followed by most of the companies.

6. Concept of Income Smoothing

There are various definitions of Income Smoothing-

6.1 Beattie *et al* (1994), “The reduction in earnings variability over a number of periods or, within a single period, as a movement towards an expected level of reported earnings.”

6.2 Fudenberg and Tirole (1995), “The process of manipulating the time profile of earnings reports to make the reported income stream less variable, while not increasing reported earnings over the long run.”

6.3 Ronen and Saden (1981), “An attempt by managers to manipulate numbers so as to impart to the resulting series a desirable and smooth trend.”

Based on these three definitions of income smoothing it is clear that to perform income smoothing, management of a company will try to report an increasing linear system

of earnings over the years. To accomplish this, management needs to increase earnings in periods with relative low earnings and needs to decrease earnings in periods with relative high earnings. Management of companies prefers to report a smooth stream of earnings because fluctuations in the profitability of the company are considered to have a negative effect on the companies risk profile (Hoogendoorn, 2004).

7. Review of Literature

Income smoothing has been a topic of interest among many researchers. Initially, the researchers started off with discussions and arguments as well as giving evidence on the existence of income smoothing activities. They developed various frameworks to distinguish between smoother and non smoother companies, (Gordon, 1968; Imhoff, 1977 and Eckel, 1981).The following are some of the research study

7.1 Michelson *et al*, (2000) used risk-adjusted returns for the firms in the S & P 500 to test whether the stock market response to accounting performance measures is related to the smoothness of companies reported earnings. The conclusion of the study revealed that companies that report smooth income have significantly higher cumulative average abnormal returns than firms that do not. When size is considered, market returns are higher for small companies than for large companies. There is also significant relationship between type of industry and income-smoothing.

7.2 Jennifer W. Tucker, *et al*, (2006) examined whether income smoothing garbles earnings informs or improves the informativeness of past and current earnings about future earnings and cash-flows. The result revealed that the change in the current stock price of higher – smoothing firms contains more information about their future earnings than does the change in the stock-price of lower-smoothing firms.

7.3 Andersson *et al*, (2002) examined the income-smoothing behavior of small Swedish firms by studying the impact of financial and contextual variables on income-smoothing in terms of how they appropriate funds to Accumulated Excess Depreciation Reserve (AEDR). Their results indicated that it is more probable for firms to appropriate to the AEDR if a firm is small and medium sized firm compared to singles and micro firms, profitable and capital intensive, the firm is newly established and its is operating in industries like manufacturing, wholesale and retail trade industry. They also found that firms which appropriate or have appropriated to Tax Allocation Reserve (TAR) are much more probable also to appropriate to AEDR.

The actual objectives of income-smoothing with respect to the income statement have been interpreted in various ways. Some studies (e.g. Copeland 1968) suggest net income as the ultimate aim of smoothing. Ronen and Sadan (1975, 1981) propose that the object of smoothing is ordinary income. Imhoff's (1981) possible measures of income-smoothing include net income, operating income. In the present study, the objective of income-smoothing has been taken as PBT

The present study modified the original Eckel's model and assumes a company as non-smoother if

$$CV_{\Delta I} = CV_{\Delta S}$$

The logic behind this assumption is that if the income figure and sales figure of a company are taken over a period of time, then, the Coefficient of Variation of income i.e. the variation of change in income and the Coefficient of Variation of sales i.e. the variation of change in sales should be same. So the company where the $CV_{\Delta I} > CV_{\Delta S}$ or $CV_{\Delta I} < CV_{\Delta S}$, it will be considered as a smoother company.

In the present study, a company is considered as a non-smoother even if-

$$CV_{\Delta I} \approx CV_{\Delta S} \text{ i.e. } \frac{CV_{\Delta I}}{CV_{\Delta S}} \approx 1$$

In the study, the ratio of CV of PBT to CV of sales is used as Eckel's Index (Income-Smoothing Detector) to identify the sample of the company's as smoother and non-smoother.

income smoothing. Imhoff (1981) suggested that possible measures of income – smoothing include fully diluted EPS, net income, net income before extra-ordinary items, operating income and gross margin. Beattie *et al.*, (1994) claimed that profit before tax as the income-smoothing objective. In a more recent study conducted by Michelson, *et al.* (2000), they assumed operating income after depreciation, pretax income, income before extra-ordinary items and net income as smoothing objective.²⁷

7.10 Several studies have also looked at the possible determinants of income – smoothing such as company size, industrial sector, bonus scheme, barrier to entry and ownership. For example Smith (1976) and Kamin, *et al.*, (1978) pointed out that compared to owner controlled companies, the manager-controlled ones tended to smooth income significantly more frequently. Ronen, *et al.*, (1981) concluded that companies in different industries smoothed their income in varying degrees. High degree of smoothing was found in the oil and gas and drug industries. Belkaoui and Picur (1984) found that companies in peripheral industrial sectors showed a greater incidence of income-smoothing behavior than companies in the core-industrial sectors. Moses (1987) found that income-smoothing was associated with company size, the divergence of actual earnings from expectations and the existence of bonus compensation plans. Ashari *et al.*, (1994) found that income-smoothing is greater in less profitable companies and the income-smoothing is associated with the company size, the industry and the nationality of the companies.²⁸

8. Research Gap and Rationale of the study

From the preceding section it transpires that study relating to Income Smoothing has not been extensively undertaken in the companies listed with the Indian Stock Exchanges. Taking these as research gap, effort has been made in this study to fill in the research gap and to add to the existing stock of knowledge. The topic of Income Smoothing has been studied with reference to the companies listed with the National Stock Exchange of India.

9. Objective of the Study

The present study has been undertaken taking into mind the following broad objectives:

- i. To determine the presence of Income Smoothing.
- ii. To determine the factors affecting Income Smoothing among the companies selected for the study

10 Hypothesis: The following null hypotheses have been framed for the present study:

H₀₁: Smoothing practice is not prevalent among the listed companies in India.

H₀₂: Income smoothing is independent of private and public sector.

11. Research Methodology

11.1 Size of the Population: During the tenure of the research study, the number of listed companies in the NSE as on 31st July 2014 has been 1652. In statistics, a **population** is a complete set of items that share at least one property in common that is the subject of a statistical analysis. However for the present study total population has been taken as the companies included in CNX Nifty because **criteria for selection of constituent stocks are common for all the stocks viz Liquidity (Impact Cost), Floating Stock etc.** The population consists of 50 companies and out of these 50 companies; finance sector companies have been excluded. The finance sector companies have been excluded from the study because of its unique characteristics of financial reporting practice. The number of companies included in CNX Nifty after excluding finance sector companies stands at 40. This has been taken as the population for the present study.

11.2 Size of the Sample: It has been decided on the basis of Cochran's model of sample determination. The sample has been fixed at 30 which have been decided on the basis Cochran's sample determination literature. Judgmental sampling technique has been used for drawing these 30 companies from the population of 40 companies. The sample size of 30 is 75% of total population of 40 and this 75% has been taken as the criterion to select sample companies proportionately from private and public sector. Accordingly, out of total 32 private sector companies, 24 (75% of 32) has been taken as the sample companies. Similarly, out of total 8 public sector companies, 6 (75% of 8) has been taken as the sample companies.

11.3 The Method of Data Collection adopted has been selected keeping in view the nature, scope and object of the present study. Primary data in the form of published Annual reports of the companies have been collected by post, fax and internet. Data has been collected for a period of 10 years i.e. 2003-2004 to 2012-2013.

11.4. Measuring income smoothing

To fulfill the first two objectives of the study and to test the first hypothesis of the study, measurement of the income smoothing is required. According to Bao and Bao

(2004) research on the use of income smoothing has been successful because researchers have been able to identify which companies use income smoothing and which companies do not use income smoothing. This implies that methods exists that successfully measure the use of income smoothing. According to Copeland (1968), three methods exists to research the use of income smoothing. First, researchers can inquire management, second researchers can contact third parties such as auditors, and third researchers can perform studies on ex post data. The majority of the academic research has chosen the third option; performed studies based on ex post data

In this research study, the procedure employed to determine the presence of Income Smoothing is the coefficient of variation method developed by Eckel (1981). Eckel's method measures smoothing by aggregating the effects of potential smoothing variables and considering over time (Ashari et al 1994). This aggregation of variables is important, as Zmijeaski and Hangerman (1981) suggest that companies select accounting procedures, not independently, but based upon their overall expected effects on income.

If, as is generally assumed, changes in income are the result of smoothing, then the coefficient of variation can be used as a measure of the variability of sales and other measures of income e.g. operating income (Imhoff 1977, 1981; Eckel 1981; Moses 1987). Several recent studies (Albrecht *et al* 1990; Ashari, *et al*; Wong 1994; Booth, *et al*, 1995; Michelson, *et al*, 1995) have used the coefficient of variation model to determine the presence of income smoothing. As per the model, a firm is not classified as an income smoother if

$$CV_{\Delta I} \geq CV_{\Delta S}$$

where

ŠI=One period change in income

ŠS=One period change in sales

CV=Coefficient of variation

$$CV = \frac{\text{Standard Deviation} \left(\frac{\sigma}{a} \right)}{\text{Mean}}$$

exercised by majority of the corporate houses. The accounting system recognized in India and abroad has not allowed such practice while finalizing financial statements of a business enterprise. But in spite of that some corporate houses are inclining to adopt income smoothing practices to a certain degree. It is observed that a very small degree of income smoothing may not be harmful for investors and at the same time the image of the enterprise keeps in high position. But, high degree of income smoothing is betrayal to the investors and the customers.

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12. Findings of the study

The findings of the study have been tabulated below:

Table 1 : Smoothing Status of Companies on PBT.

Serial No	Name of the Company	Eckel's Index/ Income Smoothing Index	Income -Smoothing Status
1	Bharat Heavy Electricals Ltd.	1.327435437	SMOOTHER
2	Grasim Industries Ltd.	4.89317422	SMOOTHER
3	Hero MotoCorp Ltd.	3.02383807	SMOOTHER
4	Larsen & Toubro Ltd.	0.983006758	NON-SMOOTHER
5	Lupin Ltd.	1.483491813	SMOOTHER
6	Mahindra & Mahindra Ltd.	1.183726574	SMOOTHER
7	Maruti Suzuki India Ltd.	3.957252211	SMOOTHER
8	NTPC Ltd.	3.720813	SMOOTHER
9	Oil & Natural Gas Corporation Ltd.	2.346261	SMOOTHER
10	Power Grid Corporation of India Ltd.	0.837914433	SMOOTHER
11	Reliance Industries Ltd.	0.821822832	SMOOTHER
12	Tata Motors Ltd.	3.231525	SMOOTHER
13	Tata Power Co. Ltd.	2.802849	SMOOTHER
14	UltraTech Cement Ltd.	1.128324655	NON-SMOOTHER
15	Hindalco Industries Ltd.	6.647791	SMOOTHER
16	Wipro Ltd.	6.409628	SMOOTHER
17	Tech Mahindra Ltd.	3.103297	SMOOTHER
18	Dr Reddys Laboratories	1.3592	SMOOTHER
19	Asian Paints Ltd	2.13554	SMOOTHER
20	Hindustan Unilever Ltd	0.853518	SMOOTHER
21	Infosys	0.810768	SMOOTHER
22	ITC	1.341504	SMOOTHER
23	Sun Pharmaceuticals Ltd	1.330993	SMOOTHER
24	Tata Consultancy Services Ltd	1.190329	SMOOTHER
25	ACC Ltd	4.466986	NON-SMOOTHER
26	NMDC	0.994454	NON-SMOOTHER
27	GAIL	1.695711	SMOOTHER
28	Ambuja Cements Ltd	2.758772	SMOOTHER
29	Bharti Airtel Ltd	5.769637	SMOOTHER
30	Sesa Sterlite Ltd	1.263059	SMOOTHER

12.1 Descriptive Statistics

Eckel's Index has been calculated as an indicator of income smoothing practice using ratio of Profit before Tax and sales. Out of the total 30 sample companies only 3 (10%) companies are found to be non-smoother as in case of these 3(10%) companies, the Eckel's Index is approximately equal to 1. At the same time, out of the 30 companies, 27(90%) are found to be smoother as Eckel's Index for these companies are either greater than 1 or equal to 1.

Inferential statistics

Table 2: Results of Chi-Square Test

Factors		Status		Chi-Square Test Statistics	P value
		Non Smoother	Smoother		
SECTOR (PRIVATE & PUBLIC)	PUBLIC	1 (16.7%)	5(83.3%)	.370	.543>0.05
	PRIVATE	2(8.3%)	22(91.7%)		
	TOTAL	3(100%)	27(100%)		

From the above Table 2, it can be observed that the Chi-square test has been done to test the hypothesis under study at 5% level of significance. The results of the test revealed that Income smoothing is independent of private and public sector company as the p value here is 0.543 which is much higher than 0.05 although the percentage of smoothing is more in case of private sector companies.

12.2 Overall Research Findings: This research study has been done with the objective of investigating regarding the presence of income smoothing in Indian listed companies. The study has been undertaken with two hypotheses to be tested for its validity.

H₀₁: Smoothing practice is not prevalent among the listed companies in India

The hypothesis of the study deals with the question of whether income smoothing is prevalent among the listed companies in India. However, from the descriptive statistics, it has been found that 27(90%) companies are involved in income smoothing activity whereas only 3(10%) companies are proved to be non-smoothers. Many previous studies proved the presence of income smoothing among the companies. But for this paper, the study undertaken by Khairul Anuar Bin Kamarudin et al among the companies listed in the Kuala Lumpur Stock Exchange has been used as benchmark for comparison. The findings

of the study showed that the number of smoothing firms was smaller compared to non-smoothing firms where 81(71%) firms are classified as non-smoother and 33(29%) firms as smoother. These findings on the presence of income smoothing practices in Malaysia are consistent with Ashari et. al (1994) findings. The study concluded that smoothing is present among the companies but at a lower level. Since the percentage of smoother companies in the present study has been much higher as compared to the study undertaken by Khairul Anuar Bin Kamarudin et al among the companies listed in the Kuala Lumpur Stock Exchange, it can be concluded that smoothing is prevalent among the listed companies in India at a higher level. Therefore, the null hypothesis can be rejected.

H₀₂ : Income smoothing is independent of private and public sector

The hypothesis of the study deals with the question of whether income smoothing is associated with sector (public and private). In case of Chi-Square Test, it has been found that there is no significant association between the income smoothing and sector (public and private) with the (p=0.543>0.05). Therefore, the null hypothesis has been accepted

13. Limitation of the study

The output of any endeavour is subjected to certain limitations. Similarly the present research also has the following limitations:

- i) The companies selected for the sample are judgmental. Therefore, it may not be representative. This may have its effect on the final outcome. Once again, additional research in this direction can eliminate doubts.
- ii) Study in this area has not been extensively undertaken in case of companies listed in the Indian Stock Exchange. Due to this, difficulties were faced in the collection of literature relating to Indian companies.
- iii) The present study involves a broad area. Due to this, difficulties were faced in covering all the aspects relating to the topic.

14. Epilogue

The study was undertaken with a broad objective of determining the presence of income-smoothing practice among the sample companies. The result of the study gives an idea regarding the presence of income smoothing practice among sample companies. The purpose of the study has been fulfilled as income smoothing practice has been found in the sample. Income smoothing is a highly unethical practice which has been found to be

to focus increasingly on marketing techniques used by other organizations operating with the motive of profits. According to some higher education practitioners, the higher education institutes, in order to remain competitive will have to use a marketing framework consisting of the following: (1) establishing its image or market position; (2) identify competition and the competitors; (3) determining the needs of the various market segments; and (4) develop a marketing plan for promoting their educational services. One of the key issues for the successful development of a marketing strategy is to determine which factors students consider when they have to make a choice of institutes.

The review of literature shows that it has gone through basically the qualitative aspect and its continuous up-gradation. No such extensive literature is available, dealing with marketing aspect of higher education. Some of the study, reveal that there is need of marketing of higher education but how and what to market and its effectiveness are not clearly stated. Therefore, the present study is expected to fill up this gap.

1.4 Objectives of the study

The study has been conducted with the following objectives:

1. To examine the ongoing marketing plans and policies of some selected higher education institutes offering management programme.
2. To find out the marketing mix that the higher education institutes are focusing in the realm of globalization, immense competition and to achieve competitive advantage.
3. To identify measures for improving present marketing scenario of higher education institutes engaged in imparting management programme.

1.5 Scope of the study

The study has been conducted with the following scopes:

1. The study has been conducted on the higher educational institutes imparting management programme, covering both public (including university departments) and private domain, which are approved by the AICTE.
2. The Eastern Zone (Zone-I) and North- West zones (Zone-II) as classified by AICTE are selected for the study.

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MARKETING PLANS AND POLICIES OF SOME SELECTED MANAGEMENT INSTITUTES IN INDIA

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B. Gogoi**

Abstract

Marketing of products and services are equally important when these are functioning as a profit making institution. But there is lot of differences in creating marketing strategies. The management institutes are also facing stiff competition from their counterpart. The present study has made a survey in some select management institutes and gathered some information about their marketing policy and technique. For the purpose of the study, data and information have been collected from the students, teachers and office staff of the selected institutes. It has been observed that all most all the institutes are following same style for marketing their products. However, some of such institutes could build market image because of their unique services provide to the students. It is also observed that stiff competition has created some competitive advantages and some institutes are capitalizing on that. The study has also prescribed some practical suggestions to improve the present state of the management institutes.

Key words: Management Institutes, Management education

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1. Introduction

The marketing concept was borne out of the awareness that a business should start with the determination of consumer wants and ends with the satisfaction of those wants. The continuing liberalization of the Indian economy has totally altered the marketing environment. As such, manufacturing and service industries in India are facing major challenges. Today, the buzzwords in marketing is *creating customer value* and *managing customer relationships*. One of the main reasons for the above is growth in national and international competition, which has opened up the field of marketing for anyone who can satisfy customer needs. Therefore, Indian organizations have to strive forth in an environment that is highly competitive both within and outside the domestic arena.

1.2 Problem Statement

Marketing of services requires understanding of the characteristics of services, which are markedly different from product marketing, as it refers to selling the invisible as a core product offering. They affect the way clients behave during the buying process and the way organizations must understand and interact. Additionally, these characteristics influence the development of more tactical marketing mix—from the packaging and pricing of service bundles, to define distribution plans and promotional options, which help in development of the marketing strategies. Management education is thus, in the service sector as it bears the unique characteristics of services.

In the context of globalization, higher education being thought of as a commercial product, with dealings in it being governed essentially by market forces and the principles of market place. As such, to be at par or keep pace with the changing environment, create value for customers and build customer relationships, proper quality development and marketing of higher education institutes, with special reference to management education institutes, have been taken up as very important aspects. Though numerous studies are being undertaken in reference to quality development of higher education institutes in India, the marketing aspect is not touched in detail. This prompted the study on the theme, “Marketing of Selected Management Institutes in India

1.3 Significance of the study

Considering all the challenges that higher education institutes are facing, it is evident that they will have to become more market-oriented. This forces higher education institutes

stakeholders' pre-purchase and post-purchase evaluations, which play important parts in marketing of higher education institutes.

Table-1
Marketing Mix Elements with Related Factors

<i>ELEMENTS</i>	<i>FACTORS</i>
Product	Programme, Courses, Demand, Competitiveness, Collaborations
Place	Location, Industrial Development, Environment Stability
Promotion	Institute Information, Type, Attributes, Activities
Price	Total Course Fees, Fee Payment Options
People	Administrators, Teachers, Students
Physical Evidence	Buildings, Classrooms, Computer labs, Libraries, Student lounges, Seminar Halls, Hostels, Canteens, Transportations, Banking
Process	Admission Procedures, Teaching Methods, Technology, Level of Student Involvement in Class & other activities

Source: Compiled from Literature Survey

Analyzing the Marketing Mix concept gives us a clear understanding of the marketing activities of the selected institutes. The complete list of the selected items (with the selected respondents), along with the calculations of the different stated variables of the descriptive statistics of the first P/element of marketing mix i.e. Product, are shown herein.

(i) Product

Table 1a
Product Items & Concerned Stakeholders

	<i>STAKE HOLDER</i>	<i>ITEMS</i>
I	Students	Well structured course curriculum
II	Students	Relevance of the course content for placement purpose
III	Students	Competitiveness of the institute or department
IV	Students	Nature of management courses offered
V	Faculty	Frequency of course curriculum updates
VI	Faculty	First most important reason for growing demand for management education
VII	Faculty	Second most important reason for growing demand for management education

Source: Compiled from Field Study

- The study is limited to, and has been focused on the marketing aspects of the selected institutes of the two zones

1.6 Methodology of the study

A descriptive study has been conducted on the selected management institutes of two regional committee/zones of AICTE i.e. the Eastern Zone (Zone-I) and North Western Zone (Zone-II) of India. The management institutes of the states in these two Zones, which have the approval of AICTE as on 31.07.2007, are selected for the study. The total number of such institutes comes to around 150. A sample of 10% from the universe of the study is selected purposively, totaling to 6 and 9 institutes from the Eastern Zone (Zone-I) & North Western Zone (Zone-II) respectively.

To remove the biasness of selection, proper care has been taken to allocate equal importance of all the units of the universe of the study. The present study would not have been complete without coming into contact with the selected respondents of the sample institutes, through personal visits, interviews, exchanging mails and feedback from the student consulting agencies etc. 10 % of the Students, 10 % of the Faculties and 1 Office Staff/Librarian were selected from each of the selected institute from the two zones. The major parameters of the study includes ongoing marketing plans and policies of the selected management institutes, the marketing mix strategies adopted, effect of globalization on marketing strategies, identify new marketing measures etc.

Data was collected with the help of questionnaires. The Questionnaire brought focus to the relevance of the various elements of marketing mix, in designing the overall marketing plan and developing the marketing strategies.

To fulfill the objectives of the research work, data collected from the selected institutes from two zones are analyzed. Data collected during the study have been mostly of nominal type. Descriptive statistics like mean, median, mode, standard deviation, skewness value, standard error of skewness, minimum and maximum scores of all the selected variables or questions of the three stakeholders are calculated with the help of SPSS Statistics 17.0.

2.1 Major findings of the study

Findings of the study are mainly divided into findings from primary data and findings from secondary data, to fulfill the objectives of the study.

2.1.1 Findings on Objective I

Information has been collected from the secondary sources, which included literature reviews, institutes' brochures, websites of the institutes and discussions with some of the selected respondents i.e. past and present students, faculty members, office and library staff. In this context, vision/mission statements, collaborations and tie-ups, the features of the management programme, teaching-learning process, admission procedures, fee structure, faculty/resource persons, related student activities, academic infrastructure, student amenities, mentoring & guidance cells and value-added features of the selected institutes were observed.

- ◆ There has been considerable growth in the higher education sector all over the country. Higher education institutes, specially the institutes imparting management programme are increasing quite rapidly and as such there has been tough competition among those institutes. Various authorities have been constituted to regulate the professional education including management education in our country.
- ◆ The review of literature shows that it has gone through basically the qualitative aspect, along with the continuous upgradation of higher education institutes imparting management programme. No such extensive literature is available, dealing with marketing aspect of higher education. Some of the study, reveal that there is need of marketing of higher education but how and what to market and its effectiveness are not clearly stated.
- ◆ Some of the sample management institutes have academic collaborations with various national and international institutes to enhance the academic and educational programs for the benefit of both.
- ◆ The management programme offered at all the surveyed institutes is unique in their own way. The institutes have tried to stand apart in the competition, by designing their individual programme for the benefit of the aspirants of management education. Most of the surveyed institutes design their programme to provide a blend of Indian and International perspectives, which offer students real and lasting benefits.
- ◆ Majority of the surveyed institutes try to enhance the value/marketability of their management programme through various products/services, in the form of new courses/ related program or enhancement of the current management programme.

Tie-ups with national and international organizations of repute also helped in the overall value addition.

- ◆ The admission procedures followed by all the surveyed institutes are similar in nature.
- ◆ The faculty members of the surveyed institutes, in the two Zones, are equipped with the necessary qualifications and experiences, as deemed important. Some of the surveyed institutes give importance on extensive field based research, training and consulting activities, while some institutes give importance to quality publications and research projects. Corporate personnel also play major role in the teaching and learning process in some institutes.
- ◆ Some institutes have access to some well known forums/societies, while others have their own management clubs/societies.
- ◆ Good classrooms with up-to date facilities, both for seating and learning, together with modern thinking, ensures participative learning environment in different surveyed institutes.
- ◆ Libraries of most of the surveyed institutes are well stocked with textbooks, reference books, journals, magazines, periodicals and newspapers of national and international repute.
- ◆ All the surveyed institutes have their own seminar/conference halls for arranging major gathering, meetings, presentations, seminars, conferences and workshops. Most institutes have been successfully organizing many national and international seminars, conferences etc of repute.
- ◆ Some of the surveyed institutes in both the Zones have active mentoring and career guidance cells. But it has been observed that most of the sample institutes are not properly highlighting their roles in this regard for reasons better known to them.

2.1.1 Findings on Objective II & III

The study analyses the marketing mix elements, which have to be considered in formulating their marketing strategies. These elements play their roles in students' or/and

3.1.5 People

- Surveyed management institutes in both the Zones prefer and do have adequate faculty resources with a right combination of people having experience in industry, field work and teaching.
- The office staffs are approachable, helpful and are efficient in their daily work procedures, which make the other stakeholders, feel at ease, whenever they have to comply with official works and other formalities.
- Developing and sustaining a healthy relationship among the institutes and the corporate is very important and as such, the concerned stakeholders viz. the faculty of the management institutes devise various sorts of interactive platforms.
- The Library is a very useful unit at the institute, where the Librarian acts as a very important resource provider. Majority of the surveyed institutes in both the Zones, do point out the activeness of the Librarians at their institutes.

3.1.6 Physical Evidence

- Majority of the institutes generally offer good classroom facilities in both the Zones, and try to make the class learning as a venue for knowledge enriching.
- The presence of well-equipped computer centers with the latest gadgets/tools and important databases with up-to date facilities also play a major role in effective and efficient teaching-learning process.
- Presence of Seminar/Conference rooms/halls with all the modern facilities is also another important resource for effective interactions with the concerned stakeholders during the official gatherings.
- Before taking admission into a particular institute, students and other stakeholders also look into the presence and activeness of the mentoring and career guidance cells, for performing the various career related activities. This has been well realized by some of the surveyed management institutes.
- Presence of physical resources like quality and hygienic cafeteria/canteen within the institute premises, good transportation with pick and drop facilities, banks or ATMs for fulfilling the banking requirements, play their due importance in the proper functioning of the institutes.

Table 1b.1
Descriptive Statistics–PRODUCT(ZONE I)

Items	I	II	III	IV	V	VI	VII
Institutes	6	6	6	6	6	6	6
Mean	2	3.5	2.67	2	3	5.83	3.67
Median	2	3.5	3	2	3	6	3.5
Mode	2	3 ^a	3	2	2 ^a	6	3
Std. Deviation	0	0.548	0.516	0	1.095	0.408	0.816
Skewness	0	x	-0.968	0	x	-2.45	0.857
Std. Error of Skewness	0.845	0.845	0.845	0.845	0.845	0.845	0.845
Minimum	2	3	2	2	2	5	3
Maximum	2	4	3	2	4	6	5

a: multiple modes exist and the smallest value is shown

Table 1b.2
Descriptive Statistics–PRODUCT(ZONE II)

Items	I	II	III	IV	V	VI	VII
Institutions	9	9	9	9	9	9	9
Mean	2	3.22	2.33	2	2.22	4.89	4.89
Median	2	3	2	2	2	5	4
Mode	2	4	2	2	2	5	4
Std. Deviation	0	0.833	0.5	0	0.667	0.333	1.054
Skewness	0	-0.5	0.857	0	3	-3	0.271
Std. Error of Skewness	0.717	0.717	0.717	0.717	0.717	0.717	0.717
Minimum	2	2	2	2	2	4	4
Maximum	2	4	3	2	4	5	6

Source: Calculated from Field Study

3.1 The Descriptive Statistics for the remaining marketing mix elements i.e. Place, Promotion, Price, People, Physical Evidence and Process are worked out separately, in the similar format, the findings of which are stated below

3.1.1 Product

- a) The course curriculums of all the surveyed Institutes are well structured. 12 out of the 15 surveyed Institutes in Zone I and Zone II agreed that the entire course curriculum of the management programme are very relevant for placement purpose. The figure is large and significant enough to influence its acceptance.
- b) Majority of the surveyed Institutes in both the Zones, are very competitive, when it comes to offer the quality management program. Market/Industry oriented teaching is the approach followed by all the surveyed institutes.

3.1.2 Place

- a) Majority of the surveyed management institutes are generally located in the midst of town/cities and easily accessible by the three modes of transport i.e. road, rail and air.
- b) The various industries of the region also play a major role in enhancing the quality of the management institutes. Majority of the surveyed management institutes are generally located in industrially developed areas of both the Zones.

3.1.3 Promotion

- a) Friends, peers, relatives do become the trusted source of information, for selection of the management institute(s) and the management programme and comparatively less importance is given to information available with the regulatory bodies or surveys of different media agencies.
- b) With the exception of one or two institutes, in Zone II, all the other surveyed institutes, in both the Zones, do not give much importance to the declaration of quality recruitments/placements information about its students in the reputed corporate industries, at the time of admission, as important criteria.
- c) Preference wise, word-of-mouth and organizing regular management events are the two types of promotional media, which are given highest ratings, by the surveyed management institutes.

- d) Promotion of the Institute by the internal stakeholders scored the highest reliability scores in the pre-test. Scores pointed out that the internal stakeholders indeed promote the Institute-its various services and facilities.
- e) Again, competitions for promoting the management institutes and their offered services are increasing with the passage of time. The management institutes from both the Zones are facing medium to tough competition, for the same.
- f) Institutes generally have not expressed much concern over the growing competitions for promoting the institutes and their services. Many of the surveyed institutes in Zone-I, have not felt the competitive spirit, as demand outstrips supply, in the number of management institutes in the region. Most of the surveyed institutes have expressed their concern over high competition in Zone II, for admitting the qualified students.
- g) Some centers are getting high valued benefits that could provide distinct and market oriented courses/teachings. Such institutions could position themselves in the market and appropriate media. Most of the institutes under study are following this norm.
- h) Taking part in the various management fairs, in and around the regions, is seen as an important promotional activity followed by the management institutes with a few exceptions.

3.1.4 Price

- a) The observation of the relative quality of the value provided to the program i.e. fee charged, assumes a greater significance for the stakeholders in terms of satisfaction derived. The statistical findings realized that the fees charged by majority of the surveyed institutes, in both the Zones, as average in the industry.
- b) Loan facility is available at all the surveyed management institutes of the two Zones. The institutes have tie-ups with different public and private financial institutions, from where the eligible students can avail the educational loan facilities.
- c) Calculation of revenue generated to the expenditure incurred, from the management program, is an important aspect for the service providers. Statistical analysis of the scores of both the Zones, have resulted in the positive feedback.

taken up the CSR activities, on a continuous basis. Discussions with some company officials have also underlined the importance of CSR activities, for all organizations, where management institutes also come into the ambit or domain. Some other institutes, outside the purview of the study, have adopted the CSR activities on a regular scale, and have immensely gained from it in the form of project allotments, final placements of its students, better promotion of the institute and fund disbursements by various bodies or agencies.

6. After the Enron Imbroglia, teaching and practice of ethics in management education has acquired an important feature and this has been adopted by some of the surveyed institutes. Some other surveyed institutes have still not woken up or realized the importance of ethics in their management curriculum. Ethics in management education should not be an option, but a necessary course. Most of the professionals commented that ethics is required not only for building up the mind of the students and develop their careers, but also help to develop better work culture in the institute and thereby, create a good name and standing in the society and amongst all the stakeholders, which will be ultimately, profitable for the institute and its stakeholders in the long run.
7. The management institutes need to stimulate the entrepreneurial mind sets of their students and encourage starting innovative business for the growth and development of the management graduates and the regions. Entrepreneurship courses should be introduced and to give due importance to develop the entrepreneurial capacities. The institutes should try to make tie-ups with such organizations or agencies, which can foster a culture that is friendlier to entrepreneurship and to the growth of small and medium-sized enterprises (SMEs).
8. All the management institutes should make formats of the marketing strategy profile at the beginning of the term/year, and work on the various activities/strategies. This will help in proper coordination between the various resources and timely enactment of the plans. Review of the achievements of the strategies, at the various stages will help in realizing and learning from the consequences of the marketing efforts being undertaken. This will also help to analyze the cost-benefit ratio, in various steps.

- f) The surveyed institutes, in both the Zones, are providing all such facilities, which help in the proper interactions between the service providers and the receivers. Moreover, the Administrative Office of all the surveyed institutes are fitted with up-to date communication tools needed for sound interactions with the different stakeholders.
- g) Management institutes in both the Zones, give due importance to the availability of sufficient number of good quality text/reference books in their libraries at all times during the academic sessions. Moreover, the importance and availability of Business Journals/Magazines are gaining grounds at majority of the management institutes.
- h) Majority of the surveyed institutes, in spite of having their own hostel facilities, within the Institute campus, have not opted for the residential based programme due to certain other related problems.
- i) Hostel facilities are required to build up a good physical-psychological-social-intellectual mind of the stakeholders. Hostel facilities are of average standard in the surveyed institutes of Zone I. The hostel facilities in Zone II are good for an effective build-up.

3.1.7 Process

- a) The unskewed distribution of scores in the responses of the stakeholders, verifies the acceptance of the option that the type of management education programme followed at their institutes is practical oriented and skill based. There have been quite a good number of interactive sessions arranged with different stalwarts of the industries occupy the highest preference. To go one step further, most of the surveyed institutes organize industrial visits occasionally, where students can take part and can learn from the practical field and can interact with the industry people in industry environment.
- b) The different surveyed institutes ensure the toughness and rigidity of the management programme offered to the students. The students have to undergo continuous learning process, followed by continuous evaluations, both theoretically and practically. The result is directly realized in the final placement records.

- c) Field/market related works by the management students, in terms of knowing the practical applications of the theoretical understandings, is being practiced by some of the surveyed institutes. Students of the surveyed institutes in both the Zones, give the highest weightage for attending and participating in both class and institute level seminars cum conferences.
- d) The practice of doing assignments and project works is very beneficial for getting a practical understanding of the learning in the class. Two-thirds i.e. majority of the surveyed institutes follow this practice on a very rigid scale and on a regular basis.
- e) It has been observed that competitions are increasing to a great extent because of increase in the number of management education service providers in both the ones. All the competitors i.e. the institutes try to offer distinct value(s) in their education programme and plans. Such stiff competition among the service providers is actually helping some institutes to stand apart from the competition.
- f) Holding timely get-together with the present and past students on important occasions and appraising the present and future endeavours of the institute, actually help in proper promotion of the institute and its various activities. Together with this, the stakeholders gave due importance in holding regular value added academic, cultural and media programme with the present stakeholders, periodically or on stipulated dates.
- g) “...it takes all the running you can do, to keep in the same place.”¹. Gone are the days when anyone can rest on his/her past laurels. Almost all the surveyed institutes in both the Zones stated that, they work with a beginner’s mind and open to new thoughts and ideas and work to keep them ahead in the competitive race.

4.1 Recommendations

In the backdrop of the findings from the analysis and observations, the following actionable points are recommended.

¹ **The Red Queen**, Lewis Carroll’s “Through the Looking-Glass”

1. Management institutes have to understand the basic service package i.e. the management programme, consist of three elements: the core service, the facilitating service and the support service. The core service is the reason for being in the market i.e. to equip people with knowledge, skills and abilities, to manage organizations. Faculty expertise and the accumulated experience at the institute represent the core resource for supplying this benefit. To avail the core benefits, additional services in the form of facilitating services, are required. Lastly, the support services, which are also auxiliary to the core benefit, are to be used to enhance the value of the core product and to differentiate the service offered from other competitors offer.
2. An excellent basic education package, along with facilitating and the support service elements, may be made ineffective. Certain elements like accessibility of the service, interaction of the service organization with the customers, and consumer participation in the service offerings are must to properly handle the students.
3. Promotion of management institutes has tended to rely heavily on the component of publicity, rather than on mass media advertising, partly due to the inbuilt psychological barrier and partly due to the misunderstanding the role of advertising. But growing competition and the threat of losing market shares has awakened many institutes to adopt the mass media tools for advertising. They should also give emphasis on service benefits, make realistic attainable promises; build on word-of-mouth communication & referrals, provide tangible clues and develop continuity in advertising for their promotion.
4. The survey clarified the opinion that heterogeneity of services and differential pricing considerations, make pricing a less important determinant of consumer choice. So, management institutes can try to bring in the uniqueness of the total product offerings, which can increase the total value outlay and charge a price for it. Different management institutes from both the Zones must use differential pricing considerations for different types of value added courses offered under the management program.
5. CSR activities carried out by the different organizations, are gaining momentum and its importance is increasing. But, a few management institutes have actually

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9. Designing the marketing strategy is an important aspect, which the institutes cannot deny. Keeping in view the various features of management education viz. intangibility, parishability, inseparability, people based, high contact consumer service etc., designing any marketing strategy needs to be unique in itself, as it is an organization and situation specific.

4.2 Scope for future research

1. More in-depth studies can work out the marketing strategies that a particular management institute can design, based on the elements of both the internal and external environment analysis i.e. SWOT Analysis.
2. Separate studies are possible to analyze the cost-benefit of the various marketing-mix elements that an individual management institute needs to design and explore on to exercise its strengths.
3. A study can be conducted exhaustively employing case-study method to explore the detailed marketing strategies of the successful management institutes, round the world and the best practices adopted.
4. The study encompasses the survey of the management institutes, who are already established and have got the AICTE recognition. Further studies can be done for the newly established management institute who has just started their management programme.

4.3 Conclusion

The marketing of higher education has been a very hot topic for analysis and discussion. All management institutes are giving thrust on advertisement about their institutions, products, placement etc. It is seen that some institutions are promoting their institutions by making some false claims and thereby charging higher fee from the students. It has been happening for non-availability of some norms while a management institute goes for advertisement by using any media.

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fund flows. Through probit regressions analysis, the dynamics of daily flows with established results for monthly fund flows cited important differences between the variables.

Objective of the study

Out of the various reviews done till date, any substantial research work studying the relationship between Mutual Fund inflows and Mutual Fund outflows has not been found.

The objective of the paper is:

1. To determine the direction of causal relationship between Mutual Fund (MF) Net purchases and Mutual Fund (MF) Net Sales.

Hypotheses

With the intention to fulfill the objective of the study following hypotheses have been drafted in the paper.

Null Hypothesis (H_{01}): Net Purchases (Inflows) does not Granger Cause Net Sales (Outflows).

Alternative Hypothesis (H_1): Net Purchases does Granger Cause Net Sales.

Null Hypothesis (H_{02}): Net Sales does not Granger Cause Net Purchases.

Alternative Hypothesis (H_2): Net Sales does Granger Cause Net Purchases.

Methodology of the study

There are 43 Asset Management Companies (AMC) in India (www.amfiindia.com) and they manage different categories of Mutual funds which may be equity funds, debt funds, hybrid funds, balanced funds and so on.

Out of various types of funds managed by the AMCs, only equity mutual funds have been considered for the purpose of the study. The equity mutual funds allocate their assets in different proportions among equity and equity related mutual instruments, debt and debt related instruments, real estates and so on. The present study considers all equity mutual funds irrespective of the proportion of their asset allocation. To fulfill the objective of the study, time series data have been generated considering MF net purchase (inflow) and MF net sales / redemption (outflow). The period considered for the purpose of the study is from April, 2000 to March, 2014. Total 168 observations have been reported in the period of the study.

CAUSAL RELATIONSHIP BETWEEN MUTUAL FUND INFLOWS AND OUTFLOWS: A TIME SERIES ANALYSIS

Maitreyee Mayuree Sharma*

Abstract

The present study is undertaken to determine whether any causal relationship between Mutual Fund (MF) Net Purchases (Inflows) and Mutual Fund (MF) Net Sales (Outflows) exists. The result of the study shows that there is an existence of unidirectional relation between MF Net purchases and MF Net Sales. Results further highlights that the Mutual fund Net Purchases possess a tendency of influencing the performance of the Mutual fund Net sales. On the contrary, no evidences have been noticed about any influence of MF net sales on MF net purchases.

Key Words:

Mutual Fund Net Purchases, Mutual Fund Net Sales, Vector Auto Regression (VAR).

Introduction

Any investor always desires that their investment yields the maximum returns but at the same time they want to assume minimum risk to earn the high return. Secondary market is an avenue which may satisfy the investors' desire to earn maximum returns but for this, the risk which they would have to assume would also be very high. It is also wise not to invest all money in one security but to invest in a well diversified portfolio of securities. For this, one need to possess quite a large sum of money and at the same time should have adequate knowledge of the performance of the different securities in the market, for any

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unwise decision may result in disastrous consequences. So for those people who have neither the time, nor the money, nor perhaps is the expertise to undertake direct investments in the stock market, mutual funds are an effective avenue for investment (Desai, 2002). The success story of any country can be scripted on the basis of a sound financial system of the country. It is the financial market that finances the economic development by channelizing the savings of the people in investment avenues. Investment is the sacrifice of certain present value for the uncertain future reward, and so the investors have to make certain decisions like where to invest, when to invest, how to invest etc. Normally, when people invest their money, they are always interested in getting maximum returns from their investments at the cost of minimum risk. As per a report authored by PwC “The World in 2050”, the average real GDP growth in India was likely to be in the range of 5.8 percent between 2007-50, (the actual average GDP growth between 2007-10 has been 7.6 percent) with per capita income rising to USD 20,000 from the current USD 2,932. Mutual Fund is one of the financial instruments which is convenient for investment for small and retail investors as it pools the resources from a large number of savers and invest the pooled funds, in a well-diversified portfolio of securities, so as to ensure them a steady return by assuming minimum risk. The main objective of a mutual fund is to provide investors of small and moderate means to obtain ‘high return-low risk’ combination from their indirect holding of equities and other assets. Risk is sought to be reduced by investing in securities, which are spread across a wide cross-section of industries and sectors. Diversification reduces the risk because all stocks do not move in the same direction, in the same proportion, at the same time. The investors in mutual fund are given a share in its total funds, which is in proportion to their investments and their unit certificates evidence this. The profits and losses are shared by the investors in proportion to their investments. Mutual funds have proved to be an attractive investment for many investors, the world over, since they provide them a mixture of liquidity, return and safety in accordance with their performance. Further, the investor obtains these benefits without directly having a diversified portfolio, which is handled by specialists. The interests of various investors are generally protected through mutual funds. As individual investors, they may not hold much clout in companies whose shares they hold, but by being part of institutional investors like mutual funds; their bargaining power is enhanced (Desai and Joshi, 2013).

As per Securities and Exchange Board of India (Mutual Fund) Regulations, 1996, “Mutual Fund means a fund established in the form of a trust to raise monies through the sale of units to the public or a section of the public under one or more schemes for investing in securities, including money market instruments.”

The Indian mutual fund industry is one of the fastest growing and most competitive segments of the financial sector. As of August 2013, the total AUM stood at Rs. 7.66 trillion. However, growth rates of AMC's have come down from the peak levels seen in the early 2000s. One of the biggest reasons behind this is the lack of healthy participation from a large part of the country (Chakrabarti; Malik; Khairnar and Verma (.....)). Moreover, penetration levels of MF institutions in India are low as compared to other global economies. Assets under management as a percentage of GDP is less than 5 per cent in India as compared to 70 per cent in the US, 61 per cent in France and 37 per cent in Brazil (CII 6th Mutual Fund Summit 2010).

Most of the works on mutual funds have been done on the issue of fund flow and performance. Thenmozhi and Kumar, in their research paper titled ‘Dynamic Interaction among Mutual Fund Flows, Stock Market Return and Volatility’, examined the dynamic interaction between mutual fund flows and security returns and between mutual fund flows and volatility, with the objective to find out whether the information on mutual fund flows can be used to predict the changes in market returns and volatility. Considering daily data for the mutual fund flows and daily stock market index of S&P CNX Nifty of National Stock Exchange of India Limited for the period from 1st January 2001 to 20th April 2008, it was found that mutual fund outflows (sales) are significantly affected by returns in the equity market. Using VAR technique to study the direction of relationship between volatility and mutual fund flows, it was found that a strong positive relationship exists between stock market volatility and mutual fund flows measured as stock purchases and sales. Keswani (2011) suggests that there is no significant relationship between fund sizes on performance for micro, small, medium, and large Balanced Mutual Funds. Burucu and Contuk (2011) granger causality test findings showed that there is a relationship between investment funds flow and earnings of market stock based on Turkey stock market. There is no causal relationship between investments funds flow and earnings of market stock in their analysis result. Rakowski and Wang (2009) analyzed the dynamics of daily mutual

The results at levels shows that the null hypothesis framed cannot be rejected, highlighting the presence of unit root (not stationary) in the studied variables. To convert the variables into stationary variables, the log MF net purchases and log MF net sales have been transformed into their first differencing (integrated of order one) and subsequently test for Unit root has been performed again by using ADF test. Application of differencing replaced the time series Y_t by $\Delta Y_t = Y_t - Y_{t-1}$ at order one. The ADF test result of the variables at their first differencing shows that the test statistics are found to be statistically significant at 1 percent critical value. Thus it could be concluded that the variables log MF net purchases and log MF net sales are integrated at order one $I(1)$, resulting in being stationary.

For the purpose of performing cointegration, selection of lag length is one of the pre conditions. The selection of lag length is dependent upon HQIC and SBIC. Though, various authors have opined that a use of AIC is more relevant than other measures of lag selection. As HQIC is and SBIC are showing similar lag length, thus the resulting lag length of two (2) has been considered to perform the Johansen tests for cointegration (*Annexure –I*). Lutkepohl (2005) has shown that the Hannan and Quinn’s information criterion (HQIC) and Schwarz’s Bayesian Information Criterion (SBIC) statistics provide consistent estimates of P , the true lag length, while the FPE and AIC statistics overestimate P even in infinite samples. The AIC criterion asymptotically overestimates the order with positive probability, whereas the BIC and HQ criteria estimate the order consistently under fairly general conditions if the true order p is less than or equal to p -max (Stata Press; 400).

Granger causality, or precedence, is a circumstance in which one time- series variable consistently and predictably changes before another variable (Granger, 1969). Granger causality is important because it allows us to analyze which variable precedes or leads the other, and as such leading variables are extremely useful for forecasting purposes (Studenmund, 2013). After being confirmed, the Granger Causality test looks into the direction of causation between Mutual fund Net Purchases and Mutual fund Net Sales. This equation helps in identifying whether a change in MF Net purchases has caused a change in MF Net sales or whether a change in MF Net sales has caused a change in MF Net purchases.

The study adopts the Vector Autoregressive Model (VAR) to analyse the relationship between MF Net purchases and MF Net sales. To determine the direction of causation between the two variables, Granger Causality test is applied in the Vector Autoregressive Regression (VAR) framework. The study has been carried out in series of stages. First, the two variables have been tested for stationarity by using the Augmented Dickey Fuller (ADF) test. To test the presence of any association between the variables Johansen Jesulius test for cointegration has been performed, and finally the nature of causality have been determined with VAR. With this framework, an attempt has been made to determine the long run relationship between the variables under the period of the study. This paper has highlighted only the results of the VAR between the variables under study.

Analysis and Interpretations

Fig. 1.1 (a) Mutual Fund Net Purchases natural log data and (b) first differencing

Log data (Net Purchases; Apr 2000 to Mar 2014)

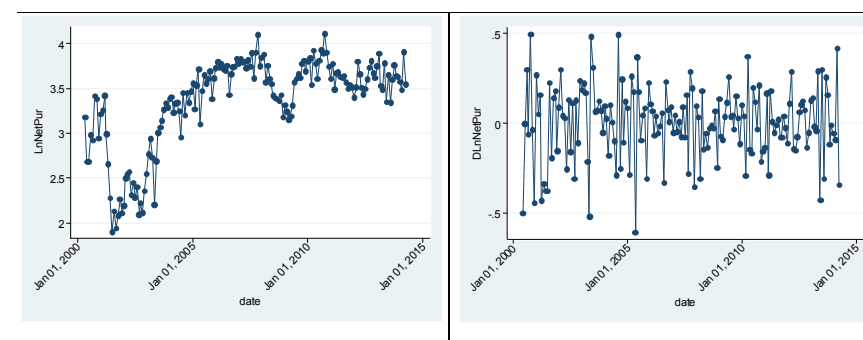
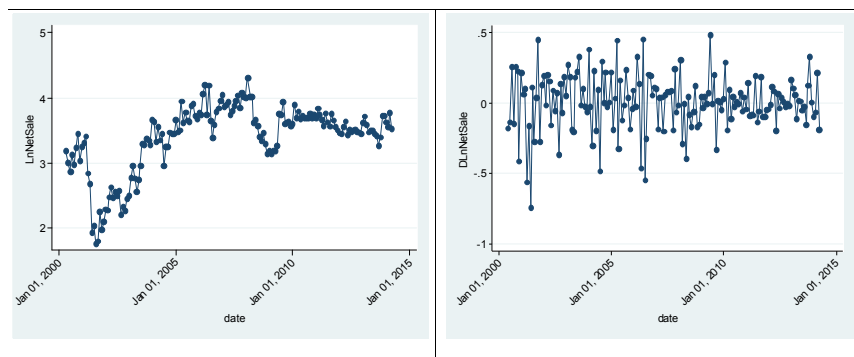


Fig. 1.2 (a) Mutual Fund Net Sales natural log data and (b) first differencing Log data (Net Sales; Apr 2000 to Mar 2014)



In regression analysis involving time series data, a critical assumption is that the time series under consideration is stationary (Gujarati, (2011)). The pre-requisite of a time series analysis is the stationarity of each individual time series over the sample period i.e., to find out if their mean and variance are time invariant. From the Figure 1.1(a) and 1.2(a) it has been noticed that over the study period the mean and variance of the variables i.e. MF Net purchases and MF Net Sales fluctuated respectively. If the means and variances of the variables change over time, all the computed summary statistics, in which these means and variances are used, would be time dependent and hence fail to converge to their true values as the sample size increases. This would lead to spurious regression. It is therefore necessary to look for stationarity of a time series and if the series is found to be non-stationary, steps are taken to induce stationarity in them, like differencing.

After making the first differencing of the variables it has been noticed that the mean and variance of the variables hovers around the stationarity (Figure 1.1(b) and 1.2(b)). Further to test it statistically ADF unit root test have been followed to check the stationarity of the variables, first as log of original variables and later log of first differencing of the original variables. The ADF test is based on the following regression equation.

$$X_t = \alpha + \beta t + \rho X_{t-1} + u_t \quad \text{————— (1)}$$

On the basis of equation 1 following null hypotheses have been formulated to test the unit root of the variables.

$H_0: \rho = 0$, i.e., there is a unit root – the Variables are non-stationary.

$H_1: \rho < 0$, i.e., there is no unit root – the Variables are stationary.

Table 1.1: ADF Unit Root Test Results (April, 2000 - March, 2014) (No intercept, no trend)

Series	Test statistic	Null Hypothesis Accept/Reject	Stationarity	Order of integration
Level				
LogNetPur	0.337(2)	Accept	Non-stationary	-
LogNetSale	0.113(2)	Accept	Non-stationary	-
First Difference				
Δ LogNetPur	-11.632(1)*	Reject	Stationary	I (1)
Δ LogNetSale	-9.937(1)*	Reject	Stationary	I (1)

Notes:

- a) Δ Representing Integrated of Order One.
- b) Ln: Natural Logarithm.
- c) 1 % ADF-Critical value = -2.591; 5% ADF-critical value = -1.950, 10% ADF-critical value = -1.614.
- d) *indicates significance at 1% level, representing rejection of null hypothesis of unit root at 1% of the critical values.
- e) The figures within parenthesis are lag lengths. The lag selections are in compliance with the Akaike Information Criteria (AIC) and Schwarz Bayesian Information Criteria (SBIC).

Source: Compiled by the researcher.

Table 1.1 reports the results of the ADF test. At level, the estimated values of the Log MF Net Purchases and Log MF Net Sales are found to be not statistically significant.

Annexure I:
Lag Selection Criterion: HQIC

. varsoc dlognetpur dlognetsale, maxlag(12)

selection-order criteria

sample: 14 - 168

number of obs = 155

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	89.663				.001106	-1.13114	-1.11518	-1.09187
1	112.53	45.734	4	0.000	.000867	-1.37458	-1.32673	-1.25677
2	125.825	26.589	4	0.000	.000769	-1.49451	-1.41476*	-1.29816*
3	126.762	1.8751	4	0.759	.0008	-1.455	-1.34334	-1.18011
4	132.332	11.139	4	0.025	.000784	-1.47525	-1.33169	-1.12182
5	136.837	9.0112	4	0.061	.000779	-1.48177	-1.30631	-1.0498
6	142.115	10.555	4	0.032	.000767*	-1.49826*	-1.2909	-.987747
7	142.322	.41393	4	0.981	.000806	-1.44931	-1.21006	-.860265
8	142.776	.90883	4	0.923	.000844	-1.40357	-1.13241	-.735975
9	148.64	11.727*	4	0.019	.000824	-1.42761	-1.12455	-.681483
10	149.862	2.4442	4	0.655	.000855	-1.39177	-1.05681	-.567099
11	151.045	2.3665	4	0.669	.000888	-1.35542	-.98856	-.452214
12	155.045	7.9997	4	0.092	.000889	-1.35542	-.956657	-.373672

Endogenous: dlognetpur dlognetsale

Exogenous: _cons

Table no. 2.1. Results of Granger Causality test
(Time period: 30th April, 2000 to 31st March, 2014)

Null Hypothesis:	Observations	Chi ² Statistic	P value	Result
Δ Netpur does not Granger cause ΔNetsale (Netsale→Netpur)	168	12.061(2)	0.002*	Ho 1 Rejected
Δ Netsale does not Granger cause Δ Netpur (Netpur→Netsale)		1.3103(2)	0.519	Ho 2 cannot be Rejected

Notes:

- a) * indicates significant at 1%.
- b) HQIC and AIC criteria is used to determine the appropriate lag lengths. Lag lengths are in the parentheses.

The results in table 2.1 indicate that the null hypothesis 'Net Purchases integrated of order one does not granger cause Net Sales integrated of order one' is rejected at 1 per cent level of significance resulting in acceptance of alternative hypothesis that Net purchases (logged) does Granger cause Net sales (logged). On the other hand, in case of second null hypothesis 'Net sales integrated of order one does not granger cause Net purchases integrated at order one' cannot be rejected. Hence, the result shows that there is an existence of unidirectional relation between the variables under study, highlighting that the Mutual fund Net Purchases possess a tendency of influencing the performance of the Mutual fund Net sales. Contrarily, no evidences have been noticed on the reverse direction i.e., MF net sales have an influence on MF net purchases.

The test result given in Table 2.1 suggests a lag order of 2 as an optimal lag based on Hannan and Quinn's information criterion (HQIC) and Schwarz's Bayesian Information Criterion (SBIC) for dependent variable MF Net Purchases (Net Sales → Net Purchases) and when the dependent variable is MF Net Sales (Net purchases → Net sales).

Results of Unit root test and Granger causality

- i. MF net purchases (in log form) and MF net sales (in log form) contain unit roots. They are non-stationary at levels.
- ii. MF net purchases and MF net sales are differenced.
- iii. Log MF net purchases and Log MF net sales are integrated of order one $I(1)$ as they turn stationary after first differencing.
- iv. Log MF Net purchases Granger causes Log MF Net sales since the co-efficient of Log MF Net purchases (lagged values) is significant at 1 per cent significance level.
- v. Log MF Net sales fails to Granger causes Log MF Net purchases since the co-efficient Log MF Net sales (lagged values) are not significant.

Conclusions

The overall development of an economy mainly depends upon the development of financial and economic situation prevailing in that country. The growth in the mutual fund industry is by and large governed by the macroeconomic factors affecting the country. The global economic slowdown and the high inflation rates since 2008 and the volatile market is more or less responsible for investors' investment and trading behavior which has its impact on the inflows and outflows of mutual fund values that fluctuated over the years of study. Nevertheless, the Indian Mutual Fund industry has been growing over the years with more and more new schemes being launched and the Assets under Management showing an increasing trend in every fiscal year and Indian Mutual funds have emerged as a strong financial stability to the financial system. This paper intended to check the casual relationship between the Mutual Fund Inflows and Mutual Fund Outflows data for a period of 14 years starting from April 2000 to March 2014. The result of the analysis shows that there is a unidirectional casual relationship from mutual fund inflows (net purchases) to mutual fund outflows (net sales).

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after Option listing. As this effect is not evident in the earlier sub periods, they attribute this volatility not as a listing effect but as foresightedness of the exchanges who list Options in anticipation of high volatility. An assessment of the effects of Option introduction by Danielson, Ness and Warr (2006) in the NYSE- AMEX and NASDAQ divulges quite a reverse finding. They indicate that improvement in market quality, measured by spreads, volatility and volume with option listing is not because of Option introduction. Rather market quality improves before Options are introduced. Earlier researches have mistakenly interpreted ex-ante improvements in market quality as ex-post Option listing effects.

Studies conducted in the European markets also differ in their findings. Kabir (2000) investigated the affect of Option introduction on stock price and stock volatility in the Dutch stock market. The three measures of volatility used by him – total risk, systematic risk and non-systematic risk do not give evidence of changes in the volatility with options introduction. Kraus and Zimmermann (2001) were able to identify stabilizing effect for option listings in the Swiss market. They also found that during the first few days after option listing there was significant volatility increase. Although they could not identify the exact cause of this phenomenon but indicate that it may be caused by emergence of additional traders and the noise created thereby. All share categories of a company are affected in a similar way whether options are traded on them or not which implies that listings predominantly affect the way in which information is processed in the market. Bologna (2000) examined the impact of MIB30 Index Futures on volatility of Italian Stock Exchange. They did not find any evidence that the introduction of futures trading destabilized the underlying market. On the contrary evidence of reduction of conditional volatility of the Italian Stock Exchange was documented. They also report that unconditional volatility in the post futures period was lower than that in the pre futures period. Goodfellow and Salm's (2008) study in the Polish stock market was unique in the sense that individuals account for more than three quarters of the turnover value in the Polish futures and options market who are usually perceived to be less informed than institutional investors. They found that derivatives trading stabilize spot returns thus implying that individual investors in the derivatives market, contrary to popular belief, lead to improved information flows into the cash market. Christina (2009) reported that the most efficient market with least volatility is the U.K. followed by the Italian, then German and the Hellenic being the least efficient among the four. It was also found that the introduction of futures has a

EFFECT OF LISTING OF EQUITY OPTIONS AND EQUITY FUTURES ON VOLATILITY OF THE UNDERLYING EQUITIES IN INDIAN STOCK EXCHANGE: AN EMPIRICAL SURVEY OF THE NATIONAL STOCK EXCHANGE OF INDIA LTD

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Abstract

Globally, National Stock Exchange of India ranked 2nd and 7th in terms of number of contracts traded in stock futures and stock options respectively in the year 2014. This is a crucial achievement for NSE considering that financial derivatives were introduced in India only in the year 2000. Ever since its introduction in various stock exchanges of the world financial derivatives have been an interesting area of study, a major concern being its impact on the volatility of the underlying securities. Considering the phenomenal growth of the derivatives market in India together with the fact that studies around the world lack in consensus regarding the impact of futures and options on market volatility, an in-depth study of the Indian market is necessary. This study aims to find out whether introduction of options and futures contracts have an effect on the volatility of the underlying equities. It was found that overall volatility of the underlying stocks has decreased with the listing of equity options and futures though the decrease is not significant.

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Introduction

The National Stock Exchange of India Limited (NSE) introduced derivative trading with S&P CNX Nifty Index Futures on June 12, 2000. Trading in Index Options was started on June 4, 2001 and Options on individual securities was introduced on July 2, 2001. Futures on individual securities were launched on November 9, 2001. Ever since its introduction in various stock exchanges of the world financial derivatives have been an interesting area of study, the main concern being its impact on the volatility of the underlying securities. Volatility is the relative rate at which the price of a security moves up and down. If the price of a stock moves up and down rapidly over short time periods, it has high volatility. There are conflicting views, both theoretical as well as empirical, on the impact of listing of Options on the underlying securities. Since it can be synthetically replicated through a combination of already available assets, an Option was assumed to be redundant by Black and Scholes (1973). Therefore introduction of an Option ought not to have any impact on the underlying stocks. However, according to Grossman (1988) the price of a traded Option conveys information which is otherwise not available from a synthetically replicated one. Thus, it would be wrong to assume that Option listing would have no impact on the underlying.

Some are apprehensive about how listing of Options might affect stock prices. Nathan Associates (1969) contended that attractiveness of the Options market can lure away significant trading volume from the spot market. This will lead to decreased liquidity and as a result increased volatility in the spot market prices. The destabilizing effect on the underlying market is also attributed to the large positions taken by institutional investors in both derivatives and underlying markets and the price pressures created thereby. Some suggest that the noise created by uninformed new traders may lead to increase in volatility.

There are again numerous theoretical arguments stating that listing of Options tend to lower the volatility of the underlying stock. According to Skinner (1989) the stock exchanges do not select the stocks randomly but firms with high level investor interest are chosen for option listing. Very often rising variance of a stock is taken as a criterion for selecting stocks for options listing. In such a case if the variance is mean reverting, soon after introduction of an option it would revert to its mean. Thus with option introduction, lowering of volatility may be documented. Fedenia and Grammatikos (1992) notes that bid ask spread declines are observed subsequent to options listing. Consequently, this would

definitely lead to increase in trading volume thereby resulting in decline of stock volatility. Options, by expanding the opportunity sets facing investors, may improve the efficiency of the market. As discussed by Black (1975) high leverage provided by stock options attracts informed traders thereby increasing liquidity in the spot market.

One of the prime reasons why futures are attributed to rise in volatility is because of the uninformed traders. The high degree of leverage combined with low transaction cost in the futures market vis-à-vis the spot market paves way for entry of additional traders who are not necessarily well informed. According to Cox (1976) the errant trading pattern of these uninformed traders in both the spot and derivative market lowers the information content of the prices, thus increasing the volatility of the underlying market. Another school of thought contends that opportunity sets made available by futures attract informed traders whose speculative activities tend to stabilize the market whereas the uninformed traders will be wiped out from the market within a short span of time.

Review of literature

Most of the studies with regard to effects of derivative listings are conducted in the US market. A study on the price effects of introduction at the American Option Exchange and Chicago Board of Options Exchange by Conrad (1989) reports a decline in variance of the individual underlying security with the introduction of Option but the systematic risk of the security does not seem to be affected by it. Bollen's (1998) study on the impact of Option introduction on the return variance in NYSE- AMEX and NASDAQ stocks did not find distinguishable difference of average changes in variance between a control group of stocks and Optioned stocks on option introduction. Sorescu (2000) found positive abnormal returns for Options listed during 1973 to 1980 and negative abnormal returns for Options listed in 1981 and later. So, there was a switch in 1981 from positive abnormal return to negative abnormal return. Although he could not cite the exact reasons for the same but possible causes include introduction of stock index options in 1982, implementation of stringent regulations in 1980-81 and the possibility that Options expedite the dissemination of negative information. In their paper Mayhew & Mihov (2000) examined Option listing effects taking into consideration the endogeneity of the Option listing decisions. According to them the high volatility has evolved as the most significant determinant of Option listing decisions besides long term trading volume. They find that in the recent sub periods optioned stocks experience increase in volatility as compared to control stocks

$$\sigma_n^2 = \frac{1}{m-1} \sum_{i=1}^m (u_{n-i} - \bar{u})^2$$

where \bar{u} is the mean of U_i

The number of observations, m , here is 250.

Options and futures contracts on certain securities have been reintroduced. If an existing future and option stock do not meet the continuing eligibility criteria prescribed by SEBI for three consecutive months, fresh contracts are not issued on those securities. The unexpired contracts are allowed to be traded but if it is banned on a new position for a significant part of the month consistently for three months, it is phased out from trading. Once a stock has been excluded from the list of futures and options, it is not considered for re-launching for a specific period of time. The study traces the impact of introduction of option and futures on the underlying securities. For this study only the first ever listings of options and futures are taken into consideration. If listing of futures and options are to have any impact on the underlying then that impact would be felt the first time they are introduced. Hence, the re-launched options and futures are not taken into account for analysis.

In certain cases futures and options contracts on some securities have been excluded from trading within a period of 250 days of their introduction. Such securities have been excluded from analysis as some literatures suggest that there might be some effect of futures and options delisting on the returns of the underlying securities.

In many cases, the date for share listing and derivative listing is the same, because of which the data for stock prices before listing of derivative is not available. In some cases, data relating to close price of a stock is not available for the whole of 250 days before derivative listing as the derivatives were listed before the expiry of 250 trading days of the shares being listed in NSE. Such stocks for which before listing data for 250 days are not available are not taken into consideration as calculating volatility for a few days would lead to discrepancies. Table 1 in Appendix 1 shows the securities that are finally considered in the study after excluding those for which stock return data was not available for 250 days either prior or after launching of options and futures contracts along with the NSE symbols and date of listing of the derivative contracts. Table 2 in Appendix

significant stabilizing effect on the spot market and there are other factors besides stock index futures that are likely to affect the volatilities of the corresponding spot markets.

As far as the Asian markets are concerned, Liu (2007) investigated the impact of Option listing on the market behavior of the underlying stocks in Tokyo Stock Exchange. She found that Options listing in Japan are related to the underlying stocks' prior trading volume and size but not volatility. Introduction of equity Options cause significant increase in the price and volatility of the underlying stocks. She reports that these contradictory findings might be due to the differences in the regulatory environment between Japan and US. A study on the Option trading at the National Stock Exchange of India by Arora and Shah (2004) revealed that options trading quicken the price adjustment process thereby leading to greater stock market efficiency and liquidity. Khan and Hizaji (2009) test whether single stock futures contract has an impact on the price volatility of the underlying stocks on the Karachi Stock Exchange. The study documents a significant decrease in return volatility for the single stock futures underlying stock following the introduction of single stock futures. Joshipura (2010) found no significant increase in volatility of the stocks on introduction of derivatives. Rather, there was some evidence, though very weak, of reduction in volatility on commencement of futures and options trading. Gahlot, Datta and Kapil (2010) analysed the impact of futures trading on stock market volatility taking the S&P CNX Nifty, 5 derivative stocks and 5 non derivative stocks as samples. They report a decline in volatility of S&P CNX Nifty, though very small, following the introduction of S&P CNX Nifty.

The empirical literature suggests that there is no clear consensus as to the effects of stock Options and Futures introduction on the underlying securities providing scope for more explorations. The size of the derivative market in India necessitates an analysis of its impact on the spot market. Most of the earlier studies in the Indian stock market were done taking into account short periods with limited data. The study intends to examine the impact of Equity Options and Equity Futures listed in NSE from 2001 to 2013 which is a fairly long period.

Objective

To examine whether listing of equity options and equity futures leads to increase in the volatility of the underlying securities.

Scope

This study is limited to the Equity Options and Equity Futures listed with the NSE, the largest stock exchange of India in terms of daily turnover and number of trades, for both equity and derivatives trading. All individual Stock Options and Stock Futures listed with NSE at different times from the very beginning are covered under the study. Of course, the list of final samples will depend upon whether the requisite data for the underlying stocks are available or not. The study intends to include the Stock Options and Stock Futures listed up to December 30, 2013. Since Options and Futures on individual securities were first introduced at NSE in July 2001 and November 2001 respectively, this study will therefore throw light on the volatility of the underlying securities due to Option and Futures listing that took place over a period of 13 years. It needs to be clarified that this study shall concentrate only on how volatility of the underlying securities are affected due to Stock Options and Stock Futures listing leaving aside other areas of market quality like volume, liquidity etc.

Methodology

For this study all the NSE circulars related to introduction of options and futures contracts on individual securities from the year 2001 to 2013 are retrieved. At NSE, the date for listing of an Option and Futures of a particular stock is the same. This is because the criteria prescribed by SEBI for selecting a stock for listing of Stock Options and Stock Futures are the same. So, whenever a share becomes eligible for Option listing, it becomes eligible even for Future listing.

The date on which a particular stock derivative is listed is taken. The close price of the underlying security for 250 trading days prior to the date of listing is considered in order to calculate volatility before listing. Volatility is calculated as the sample variance of the return provided by the stock when the return is expressed using continuous compounding. Volatility of the underlying share after listing is also calculated by taking into consideration the close price of the security for 250 trading days after the date of derivative listing. So, for every option and future listed stock volatility after and before listing is calculated. The data for the daily close prices is taken from the NSE website.

Wilcoxon signed rank test is used to determine if there is significant difference in the volatility of the underlying securities prior to introduction of options and futures contract on the securities and after the introduction of equity options and futures.

Findings

The NSE circulars relating to introduction of Futures and Options Contracts on individual securities are retrieved all through the years 2001 to 2013. It has already been mentioned that the criteria prescribed by SEBI for selecting stocks for having derivative contracts introduced on them is the same for stock options and stock futures. So, if a security is selected for derivative contracts to be listed on it then both equity options and equity futures would be introduced on it on the same date. However, for the year introductory year 2001, options contracts on 31 individual securities were launched for the first time in NSE on July 2, 2001 and futures contracts on the same 31 individual securities were launched for the first time in NSE on November 9, 2001.

The date on which a future and option contract on a particular security is introduced is taken. The close price of the underlying security for 250 days prior to the date of listing is considered in order to calculate volatility before listing. Volatility is calculated as the sample variance of the return provided by the stock when the return is expressed using continuous compounding. Volatility of the underlying share after listing is also calculated by taking into consideration the close price of the stock for 250 days after the date of derivative listing. So, for every option and future listed stock volatility after and before listing is calculated. The data for the daily close price is taken from the NSE website. The formula used for calculating variance is

Defining:

$m+1$: Number of observations

S_i : Stock price at the end of the i th interval, with $i= 0,1,2,\dots,m$

$$u_i = 1n \left(\frac{S_i}{S_{i-1}} \right)$$

for $i= 1,2,3,\dots,m$

The variance, σ_n^2 , of u_i is given by

Table B: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures for the stocks that had derivatives listed on them in 2001

		Ranks		
		N	Mean Rank	Sum of Ranks
BEFORE_2001 -	Negative Ranks	3 ^a	11.67	35.00
AFTER_2001	Positive Ranks	25 ^b	14.84	371.00
	Ties	0 ^c		
	Total	28		

a. BEFORE_2001 < AFTER_2001

b. BEFORE_2001 > AFTER_2001

c. BEFORE_2001 = AFTER_2001

Test Statistics ^b	
	BEFORE_2001 - AFTER_2001
Z	-3.826 ^a
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Since $p < .05$, the null hypothesis is rejected.

Twenty eight securities are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 28 derivative listed stocks, 3 stocks witnessed an increase in volatility after the listing of equity options

2 shows the securities grouped according to the year in which options and futures contracts on those securities are listed with the return volatility prior to and after listing of options and futures contracts. The column 'SYMBOL' shows the NSE symbols of the underlying stocks of the stock futures and options. The column marked 'AFTER' shows the volatility of the underlying stocks after the respective listing dates of the equity options and futures and the column marked 'BEFORE' shows the volatility of the underlying stocks before the respective dates of introduction of the equity options and futures. The Column 'VARIANCE RATIO' shows the after-to-before variance ratio. For those stocks whose volatility has increased after listing of stock options and futures, the ratio is greater than 1.0 and whose volatility has decreased after derivative listing, the ratio is less than 1.0. The Medians of the variances after listing and the variances before listing are calculated. Volatility data is not normally distributed for both prior to listing of equity options and futures and after listing of equity options and futures, as assessed by **Shapiro-Wilk test ($p < .05$)**.

Since the data is not normally distributed, paired samples t test cannot be used to compare the mean stock volatility prior and after listing of equity options and futures. Therefore, Wilcoxon signed rank test is used to determine whether there is a median difference in volatility prior and after listing of equity options and futures. The statistical test is conducted for all the stocks that have equity options and futures listed on them all throughout the sample period as well as for the different sub periods. Thus, the following 9 hypothesis are tested.

- H_0 : There is no significant median difference in volatility of the underlying securities prior to and after listing of equity options and futures.
- H_0 : There is no significant median difference in volatility of the securities that had options and futures contract listed on them in the year 2001 prior to and after listing of stock options and futures.
- H_0 : There is no significant median difference in volatility of the securities that had options and futures contract listed on them in the year 2003 prior to and after listing of stock options and futures.
- H_0 : There is no significant median difference in volatility of the securities that had options and futures contract listed on them in the year 2005 prior to and after listing of stock options and futures.
- H_0 : There is no significant median difference in volatility of the securities that had options and futures contract listed on them in the year 2006 prior to and after listing of stock options and futures.

- vi. H_0 : There is no significant median difference in volatility of the securities that had options and futures contract listed on them in the year 2007 prior to and after listing of stock options and futures.
- vii. H_0 : There is no significant median difference in volatility of the securities that had options and futures contract listed on them in the year 2008 prior to and after listing of stock options and futures.
- viii. H_0 : There is no significant median difference in volatility of the securities that had options and futures contract listed on them in the year 2010 prior to and after listing of stock options and futures.
- ix. H_0 : There is no significant median difference in volatility of the securities that had options and futures contract listed on them in the year 2011 prior to and after listing of stock options and futures.

As the data set for the years 2012 and 2013 are too small, statistical test is not conducted for these years.

i. The hypothesis test of interest is

$$H_0: \text{Median}_{\text{volatility after listing}} = \text{Median}_{\text{volatility before listing}}$$

$$H_1: \text{Median}_{\text{volatility after listing}} \neq \text{Median}_{\text{volatility before listing}}$$

The output derived is reported in Table A.

Table A: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures.

		Ranks		
		N	Mean Rank	Sum of Ranks
BEFORE - AFTER	Negative Ranks	103 ^a	131.06	13499.00
	Positive Ranks	146 ^b	120.73	17626.00
	Ties	0 ^c		
	Total	249		

- a. BEFORE < AFTER
- b. BEFORE > AFTER
- c. BEFORE = AFTER

Test Statistics ^b	
	BEFORE - AFTER
Z	-1.814 ^a
Asymp. Sig. (2-tailed)	.070

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Since $p > .05$, the null hypothesis cannot be rejected.

Two hundred and forty nine stocks are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 249 derivative listed stocks, 103 stocks witnessed an increase in volatility after the listing of equity options and futures and 146 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is no significant decrease in volatility ($Mdn = -0.000097444$) after listing of equity options and futures ($Mdn = 0.000928037$) compared to volatility before listing of equity options and futures ($Mdn = 0.00111609$), $z = -1.814$, $p = .070$.

ii. The hypothesis test of interest is

$$H_0: \text{Median}_{\text{volatility after listing 2001}} = \text{Median}_{\text{volatility before listing 2001}}$$

$$H_1: \text{Median}_{\text{volatility after listing 2001}} \neq \text{Median}_{\text{volatility before listing 2001}}$$

The output derived is reported in Table B.

		Ranks		
		N	Mean Rank	Sum of Ranks
BEFORE_2006 - AFTER_2006	Negative Ranks	11 ^a	13.09	144.00
	Positive Ranks	17 ^b	15.41	262.00
	Ties	0 ^c		
	Total	28		

- a. BEFORE_2006 < AFTER_2006
- b. BEFORE_2006 > AFTER_2006
- c. BEFORE_2006 = AFTER_2006

Test Statistics ^b	
	BEFORE_2006 - AFTER_2006
Z	-1.344 ^a
Asymp. Sig. (2-tailed)	.179

- a. Based on negative ranks.
- b. Wilcoxon Signed Ranks Test

Since $p > .05$, the null hypothesis cannot be rejected.

Twenty eight securities are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 28 derivative listed stocks, 11 stocks witnessed an increase in volatility after the listing of equity options and futures and 17 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is no significant decrease in volatility (Mdn=-0.000230906) after listing of equity options and futures (Mdn=0.00097148) compared to volatility before listing of equity options and futures (Mdn=0.001202838), $z=-1.344$, $p=.179$.

vi. The hypothesis test of interest is

and futures and 25 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is a significant decrease in volatility (Mdn=-0.000308368) after listing of equity options and futures (Mdn=0.000634657) compared to volatility before listing of equity options and futures (Mdn=0.000967899), $z=-3.826$, $p<.05$.

iii. The hypothesis test of interest is

$$H_0: \text{Median}_{\text{volatility after listing 2003}} = \text{Median}_{\text{volatility before listing 2003}}$$

$$H_1: \text{Median}_{\text{volatility after listing 2003}} \neq \text{Median}_{\text{volatility before listing 2003}}$$

The output derived is reported in Table C.

Table C: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures for the stocks that had derivatives listed on them in 2003

		Ranks		
		N	Mean Rank	Sum of Ranks
BEFORE_2003 - AFTER_2003	Negative Ranks	13 ^a	12.15	158.00
	Positive Ranks	9 ^b	10.56	95.00
	Ties	0 ^c		
	Total	22		

- a. BEFORE_2003 < AFTER_2003
- b. BEFORE_2003 > AFTER_2003
- c. BEFORE_2003 = AFTER_2003

Test Statistics ^b	
	BEFORE_2003 - AFTER_2003
Z	-1.023 ^a
Asymp. Sig. (2-tailed)	.306

- a. Based on positive ranks.
- b. Wilcoxon Signed Ranks Test

Since $p > .05$, the null hypothesis cannot be rejected.

Twenty two securities are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 22 derivative listed stocks, 13 stocks witnessed an increase in volatility after the listing of equity options and futures and 9 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is no significant increase in volatility (Mdn= 0.000110921) after listing of equity options and futures (Mdn= 0.001247025) compared to volatility before listing of equity options and futures (Mdn 0.001021454), $z = -1.023$, $p = .306$.

iv. The hypothesis test of interest is

$$H_0: \text{Median}_{\text{volatility after listing 2005}} = \text{Median}_{\text{volatility before listing 2005}}$$

$$H_1: \text{Median}_{\text{volatility after listing 2005}} \neq \text{Median}_{\text{volatility before listing 2005}}$$

The output derived is reported in Table D.

Table D: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures for the stocks that had derivatives listed on them in 2005

		Ranks		
		N	Mean Rank	Sum of Ranks
BEFORE_2005 - AFTER_2005	Negative Ranks	24 ^a	25.38	609.00
	Positive Ranks	36 ^b	33.92	1221.00
	Ties	0 ^c		
	Total	60		

a. BEFORE_2005 < AFTER_2005

b. BEFORE_2005 > AFTER_2005

c. BEFORE_2005 = AFTER_2005

Test Statistics ^b	
	BEFORE_2005 - AFTER_2005
Z	-2.253 ^a
Asymp. Sig. (2-tailed)	.024

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Since $p < .05$, the null hypothesis is rejected.

Sixty securities are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 60 derivative listed stocks, 24 stocks witnessed an increase in volatility after the listing of equity options and futures and 36 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is significant decrease in volatility (Mdn= -0.000124354) after listing of equity options and futures (Mdn= 0.000498757) compared to volatility before listing of equity options and futures (Mdn= 0.000806212), $z = -2.253$, $p = .024$.

v. The hypothesis test of interest is

$$H_0: \text{Median}_{\text{volatility after listing 2006}} = \text{Median}_{\text{volatility before listing 2006}}$$

$$H_1: \text{Median}_{\text{volatility after listing 2006}} \neq \text{Median}_{\text{volatility before listing 2006}}$$

The output derived is reported in Table E.

Table E: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures for the stocks that had derivatives listed on them in 2006

Test Statistics^b

	BEFORE_2010 - AFTER_2010
Z	-1.582 ^a
Asymp. Sig. (2-tailed)	.114

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Since $p > .05$, the null hypothesis cannot be rejected.

Twenty three stocks are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 23 derivative listed stocks, 5 stocks witnessed an increase in volatility after the listing of equity options and futures and 18 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is no significant decrease in volatility (Mdn= 0.000440001) after listing of equity options and futures (Mdn= 0.000553863) compared to volatility before listing of equity options and futures (Mdn= 0.00111609), $z = -1.582$, $p = .114$.

viii. The hypothesis test of interest is

$$H_0: \text{Median}_{\text{volatility after listing 2011}} = \text{Median}_{\text{volatility before listing 2011}}$$

$$H_1: \text{Median}_{\text{volatility after listing 2011}} \neq \text{Median}_{\text{volatility before listing 2011}}$$

The output derived is reported in Table I.

$$H_0: \text{Median}_{\text{volatility after listing 2007}} = \text{Median}_{\text{volatility before listing 2007}}$$

$$H_1: \text{Median}_{\text{volatility after listing 2007}} \neq \text{Median}_{\text{volatility before listing 2007}}$$

The output derived is reported in Table F.

Table F: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures for the stocks that had derivatives listed on them in 2007

Ranks

	N	Mean Rank	Sum of Ranks
BEFORE_2007 - Negative Ranks	29 ^a	27.14	787.00
AFTER_2007 Positive Ranks	20 ^b	21.90	438.00
Ties	0 ^c		
Total	49		

a. BEFORE_2007 < AFTER_2007

b. BEFORE_2007 > AFTER_2007

c. BEFORE_2007 = AFTER_2007

Test Statistics^b

	BEFORE_2007 - AFTER_2007
Z	-1.736 ^a
Asymp. Sig. (2-tailed)	.083

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Since $p < .05$, the null hypothesis is rejected.

Forty nine securities are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 49 derivative listed

stocks, 29 stocks witnessed an increase in volatility after the listing of equity options and futures and 20 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is significant increase in volatility (Mdn=0.000266462) after listing of equity options and futures (Mdn=0.001715341) compared to volatility before listing of equity options and futures (Mdn=0.001287889), $z=-1.736$, $p=.083$.

vii. The hypothesis test of interest is

$$H_0: \text{Median}_{\text{volatility after listing 2008}} = \text{Median}_{\text{volatility before listing 2008}}$$

$$H_1: \text{Median}_{\text{volatility after listing 2008}} \neq \text{Median}_{\text{volatility before listing 2008}}$$

The output derived is reported in Table G

Table G: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures for the stocks that had derivatives listed on them in 2008.

		Ranks		
		N	Mean Rank	Sum of Ranks
BEFORE_2008 -	Negative Ranks	13 ^a	12.77	166.00
AFTER_2008	Positive Ranks	11 ^b	12.18	134.00
	Ties	0 ^c		
	Total	24		

- a. BEFORE_2008 < AFTER_2008
- b. BEFORE_2008 > AFTER_2008
- c. BEFORE_2008 = AFTER_2008

Test Statistics ^b	
	BEFORE_2008 - AFTER_2008
Z	-.457 ^a
Asymp. Sig. (2-tailed)	.648

- a. Based on positive ranks.
- b. Wilcoxon Signed Ranks Test

Since $p > .05$, the null hypothesis cannot be rejected.

Twenty four securities are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 24 derivative listed stocks, 13 stocks witnessed an increase in volatility after the listing of equity options and futures and 11 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is no significant increase in volatility (Mdn 0.000180929) after listing of equity options and futures (Mdn=0.002907856) compared to volatility before listing of equity options and futures (Mdn=0.001903355), $z=-.457$, $p=.648$.

viii. The hypothesis test of interest is

$$H_0: \text{Median}_{\text{volatility after listing 2010}} = \text{Median}_{\text{volatility before listing 2010}}$$

$$H_1: \text{Median}_{\text{volatility after listing 2010}} \neq \text{Median}_{\text{volatility before listing 2010}}$$

The output derived is reported in Table H.

Table H: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures for the stocks that had derivatives listed on them in 2010

		Ranks		
		N	Mean Rank	Sum of Ranks
BEFORE_2010 -	Negative Ranks	5 ^a	17.20	86.00
AFTER_2010	Positive Ranks	18 ^b	10.56	190.00
	Ties	0 ^c		
	Total	23		

- a. BEFORE_2010 < AFTER_2010
- b. BEFORE_2010 > AFTER_2010
- c. BEFORE_2010 = AFTER_2010

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Table I: Table showing the output of Wilcoxon signed rank test determining whether there is a median difference in volatility prior and after listing of equity options and futures for the stocks that had derivatives listed on them in 2011

		Ranks		
		N	Mean Rank	Sum of Ranks
BEFORE_2011 -	Negative Ranks	4 ^a	5.75	23.00
AFTER_2011	Positive Ranks	6 ^b	5.33	32.00
	Ties	0 ^c		
	Total	10		

- a. BEFORE_2011 < AFTER_2011
- b. BEFORE_2011 > AFTER_2011
- c. BEFORE_2011 = AFTER_2011

Test Statistics ^b	
	BEFORE_2011 - AFTER_2011
Z	-.459 ^a
Asymp. Sig. (2-tailed)	.646

- a. Based on negative ranks.
- b. Wilcoxon Signed Ranks Test

Since $p > .05$, the null hypothesis cannot be rejected.

Ten securities are taken to know if the volatility of these stocks has changed with the listing of equity options and futures on these stocks. Of the 10 derivative listed stocks, 4 stocks witnessed an increase in volatility after the listing of equity options and futures and 6 stocks witnessed a decrease in volatility after the listing of equity options and futures. A Wilcoxon signed rank test determined that there is no significant decrease in volatility (Mdn=-0.000129787) after listing of equity options and futures (Mdn= 0.000989619) compared to volatility before listing of equity options and futures (Mdn= 0.001151872), $z = -.459$, $p = .646$.

Tests cannot be conducted on the data set for 2011 and 2013 as the size of the data is too small.

Conclusion

Financial derivatives have evolved as a major instrument of risk management in today's world. The skepticism surrounding the impact of derivatives on the underlying securities together with the pace at which the Indian derivatives market has grown over a short period of time provided the motivation for this study. The paper seeks to determine whether the listing of stock options and futures have an effect on the volatility of the underlying securities at the National Stock Exchange of India. Volatility for the underlying stocks has been calculated on either side of the listing dates of stock options and futures. The close price of the stocks for 250 days both before and after the listing dates are considered to calculate the variance before and after listing. Evidence from the study does not suggest that introduction of stock options and futures leads to increase in the volatility of the underlying securities. In fact for the years 2001 and 2005 it has been found that volatility of the securities have decreased significantly after the introduction of options and futures contracts on these securities. Only the year 2007 witnessed an increase in volatility post options and futures introduction. Overall there has been decrease in volatility of the underlying stock returns although it is not significant.

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109	SRF	SRF LTD	May 27,2005
110	STAR	STRIDES ARCOLAB LIMITED	May 27,2005
111	ABAN	ABAN OFFSHORE LTD.	Dec 29,2006
112	AMTEKAUTO	AMTEK AUTO LTD.	Dec 29,2006
113	BAJAJHIND	BAJAJ HINDUSTAN LTD	Dec 29,2006
114	BALRAMCHIN	BALRAMPUR CHINI MILLS LTD	Dec 29,2006
115	BATAINDIA	BATA INDIA LTD	Dec 29,2006
116	BEML	BHARAT EARTH MOVERS LTD	Dec 29,2006
117	BOMDYEING	BOMBAY DYEING & MFG. CO L	Dec 29,2006
118	CROMPGREAV	CROMPTON GREAVES LTD	Dec 29,2006
119	GDL	GATEWAY DISTRI PARKS LTD.	Dec 29,2006
120	GTL	GTL LTD	Dec 29,2006
121	GUJALKALI	GUJARAT ALKALIES & CHEM	Dec 29,2006
122	HCC	HINDUSTAN CONSTRUCTION CO	Dec 29,2006
123	JPASSOCIAT	JAIPRAKASH ASSOCIATES LTD	Dec 29,2006
124	JSWSTEEL	JSW STEEL LTD	Dec 29,2006
125	KOTAKBANK	KOTAK MAHINDRA BANK LTD	Dec 29,2006
126	LUPIN	LUPIN LTD	Dec 29,2006
127	MCDOWELL-N	UNITED SPIRITS LTD	Dec 29,2006
128	NAGARCONST	NAGARJUNA CONSTR. CO. LT	Dec 29,2006
129	PRAJIND	PRAJ INDUSTRIES LTD	Dec 29,2006
130	RENUKA	SHREE RENUKA SUGARS LTD	Dec 29,2006
131	SESAGOA	SESA GOA LTD	Dec 29,2006
132	TRIVENI	TRIVENI ENGG. & INDS. LTD	Dec 29,2006
133	TTML	TATA TELESERV(MAHARASTRA)	Dec 29,2006
134	ULTRACEMCO	ULTRATECH CEMENT LTD	Dec 29,2006
135	VOLTAS	VOLTAS LTD	Dec 29,2006
136	LT	LARSON & TOURBO LIMITED	Sep 15,2006
137	SAIL	STEEL AUTHORITY OF INDIA LIMITED	Sep 15,2006
138	ZEE TELE	ZEE TELEFILMS LIMITED	Sep 15,2006
139	ADLABSFILM	ADLABS FILMS LTD	May 14,2007
140	AIAENG	AIA ENGINEERING LIMITED	May 14,2007
141	APIL	ALSTOM PROJECTS INDIA LTD	May 14,2007
142	ANSALINFRA	ANSAL PROP & INFRA LTD	May 14,2007
143	BIRLAJUTE	BIRLA CORPORATION LTD	May 14,2007
144	BRFL	BOMBAY RAYON FASHIONS LTD	May 14,2007
145	DENABANK	DENA BANK	May 14,2007
146	EDUCOMP	EDUCOMP SOLUTIONS LTD	May 14,2007

Appendix - 1

Table 1
Table Showing the Securities Analysed with the NSE Symbols and Date of Introduction of the Options and Futures Contract

Sl. No.	SYMBOL	COMPANY NAME	LAUNCH DATE
1	ACC	ASSOCIATED CEMENT CO LTD	Jul 2,2001
2	BAJAJAUTO	BAJAJ AUTO LTD	Jul 2,2001
3	BPCL	BHARAT PETROLEUM CORP	Jul 2,2001
4	BHEL	BHEL	Jul 2,2001
5	BSES	BSES LTD	Jul 2,2001
6	CIPLA	CIPLA LTD	Jul 2,2001
7	DIGITALEQP	DIGITAL EQUIPMENT (I) LTD	Jul 2,2001
8	DRREDDY	DR. REDDY'S LABORATORIES	Jul 2,2001
9	GRASIM	GRASIM INDUSTRIES LTD	Jul 2,2001
10	GUJAMBCEM	GUJARAT AMBUJA CEMENT LTD	Jul 2,2001
11	HINDLEVER	HINDUSTAN LEVER LTD	Jul 2,2001
12	HINDPETRO	HINDUSTAN PERTOLEUM CORP	Jul 2,2001
13	HINDALCO	HINDALCO INDUSTRIES LTD	Jul 2,2001
14	HDFC	HDFC LTD	Jul 2,2001
15	INFOSYSTCH	INFOSYS TECHNOLOGIES LTD	Jul 2,2001
16	ITC	ITC LTD	Jul 2,2001
17	L&T	LARSEN & TOUBRO LTD	Jul 2,2001
18	M&M	MAHINDRA & MAHINDRA LTD	Jul 2,2001
19	MTNL	MAHANAGAR TELEPHONE NIGAM LTD	Jul 2,2001
20	RANBAXY	RANBAXY LABS LTD	Jul 2,2001
21	RELPETRO	RELIANCE PETROLEUM LTD	Jul 2,2001
22	RELIANCE	RELIANCE INDUSTRIES LTD	Jul 2,2001
23	SATYAMCOMP	SATYAM COMPUTER SERVICES	Jul 2,2001
24	SBIN	STATE BANK OF INDIA	Jul 2,2001
25	TELCO	TELCO LTD	Jul 2,2001
26	TATAPOWER	TATA POWER CO LTD	Jul 2,2006
27	TISCO	TATA IRON AND STEEL CO LTD.	Jul 2,2001
28	TATATEA	TATA TEA LTD	Jul 2,2001
29	ANDHRABANK	ANDHRA BANK	Aug 29,2003
30	BANKBARODA	BANK OF BARODA	Aug 29,2003
31	BANKINDIA	BANK OF INDIA	Aug 29,2003
32	HDFCBANK	HDFC BANK	Aug 29,2003
33	ORIENTBANK	ORIENTAL BANK OF COMMERCE	Aug 29,2003
34	PNB	PUNJAB NATIONAL BANK	Aug 29,2003
35	BEL	BHARAT ELECTRONICS LTD	Jan 31,2003

36	HCLTECH	HCL TECHNOLOGIES LTD	Jan 31,2003
37	HEROHONDA	HERO HONDA MOTORS LTD	Jan 31,2003
38	ICICIBANK	ICICI BANK LTD.	Jan 31,2003
39	IPCL	INDIAN PETROCHEMICALS CORP. LTD.	Jan 31,2003
40	MASTEK	MASTEK LTD	Jan 31,2003
41	NATIONALUM	NATIONAL ALUMINIUM CO LTD	Jan 31,2003
42	NIIT	NIIT LTD	Jan 31,2003
43	ONGC	OIL AND NATURAL GAS CORP.	Jan 31,2003
44	POLARIS	POLARIS SOFTWARE LAB LTD	Jan 31,2003
45	SCI	SHIPPING CORP OF INDIA LTD.	Jan 31,2003
46	WIPRO	WIPRO LTD	Jan 31,2003
47	ARVINDMILL	ARVIND MILLS LTD	Sep 26,2003
48	GAIL	GAS AUTHORITY OF INDIA LTD	Sep 26,2003
49	SYNDIBANK	SYNDICATE BANK	Sep 26,2003
50	IOC	INDIAN OIL CORPORATION	Sep 26,2003
51	ABB	ABB LTD.	Apr 20,2005
52	ALBK	ALLAHABAD BANK	Apr 20,2005
53	ASHOKLEY	ASHOK LEYLAND LTD	Apr 20,2005
54	BHARATFORG	BHARAT FORGE CO LTD	Apr 20,2005
55	BHARTI	BHARTI TELE-VENTURES LTD	Apr 20,2005
56	CADILAHC	CADILA HEALTHCARE LIMITED	Apr 20,2005
57	CENTURYTEX	CENTURY TEXTILES LTD	Apr 20,2005
58	CHENNPETRO	CHENNAI PETROLEUM CORP LT	Apr 20,2005
59	COCHINREFN	KOCHI REFINERIES LTD	Apr 20,2005
60	COLGATE	COLGATE PALMOLIVE (I) LTD	Apr 20,2005
61	DABUR	DABUR INDIA LTD	Apr 20,2005
62	GESHIPPING	GREAT EASTERN SHIPPING CO	Apr 20,2005
63	GLAXO	GLAXOSMITHKLINE PHARMA LT	Apr 20,2005
64	IDBI	INDUS DEV BANK OF IND LTD	Apr 20,2005
65	INDHOTEL	INDIAN HOTELS CO LTD	Apr 20,2005
66	INDRAYON	INDIAN RAYON AND IND LTD	Apr 20,2005
67	IOB	INDIAN OVERSEAS BANK	Apr 20,2005
68	JINDALSTEL	JINDAL STEEL & POWER LTD	Apr 20,2005
69	KIRLOSKCUM	CUMMINS INDIA LTD	Apr 20,2005
70	LICHSGFIN	LIC HOUSING FINANCE LTD	Apr 20,2005
71	MRPL	MRPL	Apr 20,2005
72	NEYVELILIG	NEYVELI LIGNITE CORPORATI	Apr 20,2005

73	NICOLASPIR	NICOLAS PIRAMAL INDIA LTD	Apr 20,2005
74	PATNI	PATNI COMPUTER SYST LTD	Apr 20,2005
75	RELCAPITAL	RELIANCE CAPITAL LTD	Apr 20,2005
76	SIEMENS	SIEMENS LTD	Apr 20,2005
77	SUNPHARMA	SUN PHARMACEUTICALS IND.	Apr 20,2005
78	TATACHEM	TATA CHEMICALS LTD	Apr 20,2005
79	UTIBANK	UTI BANK LTD	Apr 20,2005
80	VIJAYABANK	VIJAYA BANK	Apr 20,2005
81	WOCKPHARMA	WOCKHARDT LIMITED	Apr 20,2005
82	AUROPHARMA	AUROBINDO PHARMA LTD	May 12,2005
83	BILT	BALLARPUR INDUSTRIES LTD	May 12,2005
84	BONGAIREFN	BONGAIGAON REFINERY LTD	May 12,2005
85	CESC	CESC LTD	May 12,2005
86	CHAMBLFERT	CHAMBAL FERTILIZERS LTD	May 12,2005
87	CORPBANK	CORPORATION BANK	May 12,2005
88	DIVISLAB	DIVIT'S LABORATORIES LTD	May 12,2005
89	ESSAROIL	ESSAR OIL LTD	May 12,2005
90	FEDERALBNK	FEDERAL BANK LTD	May 12,2005
91	GNFC	GUJARAT NARMADA FERT. CO	May 12,2005
92	INDUSINDBK	INDUSIND BANK LIMITED	May 12,2005
93	J&KBANK	J & K BANK LTD.	May 12,2005
94	JSTAINLESS	JINDAL STAINLESS LTD	May 12,2005
95	MAHSEAMLES	MAHARASHTRA SEAMLESS LTD	May 12,2005
96	MPHASISBFL	MPHASIS BFL LIMITED	May 12,2005
97	NDTV	NDTV LTD	May 12,2005
98	ORCHIDCHEM	ORCHID CHEMICALS LTD	May 12,2005
99	PFIZER	PFIZER LTD	May 12,2005
100	TITAN	TITAN INDUSTRIES LTD	May 12,2005
101	TVSMOTOR	TVS MOTOR COMPANY LTD	May 12,2005
102	ALOKTEXT	ALOK INDUSTRIES LTD	May 27,2005
103	ESCORTS	ESCORTS INDIA LTD	May 27,2005
104	IFCI	IFCI LTD	May 27,2005
105	INDIACEM	INDIA CEMENTS LTD	May 27,2005
106	IVRCLINFRA	IVRCL INFRAST & PROJ LTD.	May 27,2005
107	KTKBANK	KARNATAKA BANK LIMITED	May 27,2005
108	NAGARFERT	NAGARJUNA FERTILIZERS LTD	May 27,2005

Appendix - 2

Table 2

Table showing the securities grouped according to the year in which options and futures contracts on these securities are listed with the return volatility prior to and after listing of options and futures contracts

2001				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	ACC	0.00068507	0.001338584	0.511787082
2	AMBUJACEM	0.000432972	0.000877669	0.493320375
3	BAJAJAUTO	0.000407922	0.000705616	0.578107639
4	BHEL	0.000902933	0.00140647	0.641985254
5	BPCL	0.000904914	0.00340613	0.265672185
6	BSES	0.000319583	0.000638624	0.50042435
7	CIPLA	0.000359097	0.000725988	0.494632143
8	DIGITALEQP	0.001497078	0.00284039	0.527067762
9	DRREDDY	0.002448337	0.000701016	3.492555091
10	GRASIM	0.000422168	0.001096992	0.384841457
11	HDFC	0.000369784	0.000553141	0.668516707
12	HINDLACO	0.000384193	0.000481637	0.797681657
13	HINDPETRO	0.000890697	0.000967086	0.921011161
14	HINDUNILVR	0.000393282	0.021123048	0.01861862
15	INFY	0.001160201	0.001735665	0.66844754
16	ITC	0.00046563	0.000500847	0.929685113
17	L&T	0.000611095	0.000970086	0.629938995
18	M&M	0.001051069	0.001089809	0.964452487
19	MTNL	0.000777121	0.000968711	0.802221715
20	RANBAXY	0.000536613	0.000766478	0.700102286
21	RELIANCE	0.000561488	0.000512537	1.095507251
22	RELPETRO	0.000684376	0.000601946	1.136939194
23	SATYAMCOMP	0.00177065	0.012293537	0.144030965
24	SBIN	0.000573428	0.000579152	0.990116584
25	TATAGLOBAL	0.000658218	0.001025683	0.641736287
26	TATAMOTORS	0.00101854	0.001231166	0.82729705
27	TATAPOWER	0.000593022	0.001459269	0.406382922
28	TATASTEEL	0.000663285	0.000918798	0.721905141
	MEDIAN	0.000634657	0.000967899	

147	EKC	EVEREST KANTO CYLINDER LTD	May 14,2007
148	FINANTECH	FINANCIAL TECHNO (I) LTD	May 14,2007
149	HOTELEELA	HOTEL LEELA VENTURES LTD	May 14,2007
150	INDIAINFO	INDIA INFOLINE LIMITED	May 14,2007
151	KESORAMIND	KESORAM INDUSTRIES LTD	May 14,2007
152	GESCOCORP	MAHINDRA GESCO DEVELOPERS	May 14,2007
153	MOSERBAER	MOSER-BAER (I) LTD	May 14,2007
154	BINDALAGRO	OSWAL CHEM. & FERT. LTD.	May 14,2007
155	PANTALOONR	PANTALOON RETAIL (I) LTD	May 14,2007
156	PATELENG	PATEL ENGINEERING LTD.	May 14,2007
157	PENINLAND	PENINSULA LAND LIMITED	May 14,2007
158	PETRONET	PETRONET LNG LIMITED	May 14,2007
159	RAJESHXPO	RAJESH EXPORTS LTD	May 14,2007
160	RNRL	REL. NAT. RESOURCES LTD.	May 14,2007
161	ROLTA	ROLTA INDIA LTD	May 14,2007
162	SKUMARS YNF	S KUMARS NATIONWIDE LTD	May 14,2007
163	SHREECEM	SHREE CEMENTS LTD	May 14,2007
164	STERLINBIO	STERLING BIOTECH LTD	May 14,2007
165	UNITECH	UNITECH LTD	May 14,2007
166	UNIPHOS	UNITED PHOSPHOROUS LTD	May 14,2007
167	3IINFOTECH	3I INFOTECH LTD.	Sep 6,2007
168	APTECHT	APTECH LIMITED	Sep 6,2007
169	BHUSANSTL	BHUSHAN STEEL & STRIPS LT	Sep 6,2007
170	BIOCON	BIOCON LIMITED.	Sep 6,2007
171	CMC	CMC LTD.	Sep 6,2007
172	HAVELLS	HAVELLS INDIA LIMITED	Sep 6,2007
173	LAXMIMACH	LAKSHMI MACHINES LTD	Sep 6,2007
174	NIITTECH	NIIT TECHNOLOGIES LTD.	Sep 6,2007
175	NUCLEUS	NUCLEUS SOFTWARE EXPORTS	Sep 6,2007
176	TECHM	TECH MAHINDRA LIMITED	Sep 6,2007
177	TULIP	TULIP IT SERVICES LTD	Sep 6,2007
178	WELGUJ	WELSPUN GUJ ST. RO. LTD.	Sep 6,2007
179	YESBANK	YES BANK LIMITED	Sep 6,2007
180	JINDALSAW	JINDAL SAW LIMITED	Nov 31,2007
181	DCB	DEVELOP CREDIT BANK LTD	Nov 31,2007
182	HINDZINC	HINDUSTAN ZINC LIMITED	Nov 31,2007
183	MICO	MOTOR INDUSTRIES CO LTD	Nov 31,2007
184	NIITLTD	NIIT LIMITED	Nov 31,2007

185	ISPATIND	ISPAT INDUSTRIES LIMITED	Nov 31,2007
186	HINDOILEXP	HINDUSTAN OIL EXPLORATION	Nov 31,2007
187	GITANJALI	GITANJALI GEMS LIMITED	Nov 31,2007
188	AKRUTI	AKRUTI CITY LIMITED	Aug 21,2008
189	ASIANPAINT	ASIAN PAINTS LIMITED	Aug 21,2008
190	CONCOR	CONTAINER CORPORATION OF INDIA LIMITED	Aug 21,2008
191	DCHL	DECCAN CHRONICLE HOLDINGS LTD.	Aug 21,2008
192	DISHTV	DISH TV INDIA LIMITED	Aug 21,2008
193	EVERONN	EVERONN SYSTEMS INDIA LIMITED	Aug 21,2008
194	FSL	FIRSTSOURCE SOLUTIONS LIMITED	Aug 21,2008
195	GSPL	GUJARAT STATE PETRONET LIMITED	Aug 21,2008
196	GTLINFRA	GTL INFRASTRUCTURE LIMITED	Aug 21,2008
197	GVPIL	GVK POWER & INFRASTRUCTURE LIMITED	Aug 21,2008
198	IBREALEST	INDIABULLS REAL ESTATE LIMITED	Aug 21,2008
199	ICSA	ICSA (INDIA) LIMITED	Aug 21,2008
200	KLGSYSEL	KLG SYSEL LTD.	Aug 21,2008
201	KSOILS	K S OILS LIMITED	Aug 21,2008
202	MIC	MIC ELECTRONICS LIMITED	Aug 21,2008
203	MLL	MERCATOR LINES LIMITED	Aug 21,2008
204	NOIDATOLL	NOIDA TOLL BRIDGE COMPANY LTD	Aug 21,2008
205	OPTOCIRCUI	OPTO CIRCUITS (INDIA) LIMITED	Aug 21,2008
206	PTC	PTC INDIA LIMITED	Aug 21,2008
207	RIIL	RELIANCE INDUSTRIAL INFRASTRUCTURE LIMITED	Aug 21,2008
208	SINTEX	SINTEX INDUSTRIES LTD.	Aug 21,2008
209	SREINTFIN	SREI INFRASTRUCTURE FINANCE LIMITED	Aug 21,2008
210	TV-18	TELEVISION EIGHTEEN INDIA LTD.	Aug 21,2008
211	UCOBANK	UCO BANK	Aug 21,2008
212	ADANIENT	ADANI ENTERPRISES LIMITED	Feb 19,2010
213	ADANIPTS	MUNDRA PORT AND SEZ LIMITED	Feb 19,2010
214	ALSTOMT&D	AREVA T&D INDIA LIMITED	Feb 19,2010
215	APOLLOTYRE	APOLLO TYRES LIMITED	Feb 19,2010
216	BAJAJHLDNG	BAJAJ HOLDINGS & INVESTMENT LIMITED	Oct 29,2010
217	BGREENERGY	BGR ENERGY SYSTEMS LIMITED	Feb 19,2010
218	EXIDEIND	EXIDE INDUSTRIES LIMITED	May 28,2010
219	FORTIS	FORTIS HEALTHCARE LIMITED	Feb 19,2010
220	GMDCLTD	GUJARAT MINERAL DEVELOPMENT CORPORATION LIMITED	May 28,2010
221	GODREJIND	GODREJ INDUSTRIES LIMITED	Feb 19,2010
222	HEXAWARE	HEXAWARE TECHNOLOGIES LIMITED	May 28,2010

223	IGL	INDRAPRASTHA GAS LTD	Oct 29,2010
224	JISLJALEQS	JINDAL SOUTH WEST HOLDINGS LIMITED	Feb 19,2010
225	JSWHL	JAIN IRRIGATION SYSTEMS LIMITED	May 28,2010
226	MAX	MAX INDIA LTD	Oct 29,2010
227	MCLEODRUSS	MCLEOD RUSSEL INDIA LIMITED	Feb 19,2010
228	NMDC	NMDC LIMITED	Oct 1,2010
229	OIL	OIL INDIA LIMITED	Oct 29,2010
230	ONMOBILE	ONMOBILE GLOBAL LIMITED	Feb 19,2010
231	RUCHISOYA	RUCHI SOYA INDUSTRIES LIMITED	May 28,2010
232	SRTRANSFIN	SHRIRAM TRANSPORT FINANCE CO LIMITED	Jul 30,2010
233	TATAMTRDVR	TATA MOTORS DVR 'A' ORDINARY	Oct 29,2010
234	VIDEOIND	VIDEOIND INDUSTRIES LIMITED	Feb 19,2010
235	BFUTILITIE	BF UTILITIES LIMITED	Jul 18,2011
236	DELTA CORP	DELTA CORP LIMITED	Aug 5,2011
237	DHANBANK	DHANLAXMI BANK LIMITED	Aug 5,2011
238	GUJFLUORO	GUJRAT FLUROCHEMICALS LIMITED	Aug 5,2011
239	JUBLFOOD	JUBILANT FOODWORKS LTD	Jul 18,2011
240	JSWENERGY	JSW ENERGY LIMITED	Jul 18,2011
241	RAYMOND	RAYMOND LIMITED	Apr 27,2011
242	SOUTHBANK	THE SOUTH INDIAN BANK LIMITED	Jul 18,2011
243	TTKPRESTIG	TTK PRESTIGE LIMITED	Jul 18,2011
244	VIPIND	VIP INDUSTRIES LTD	Jul 18,2011
245	TATACOFFEE	TATA COFFEE LIMITED	Jan 27,2012
246	APOLLOHOSP	APOLLO HOSPITALS ENTRPRISE LIMITED	Dec 27,2013
247	GLENMARK	GLENMARK PHARMACEUTICALS LIMITED	Oct 3,2013
248	M& MFIN	MAHINDRA & MAHINDRA FINANCIAL SERVICES LTD	Dec 27,2013
249	UBL	UNITED BREWERIES LIMITED	Oct 3,2013

2006				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	ABAN	0.00069363	0.001365332	0.508030281
2	AMTEKAUTO	0.000435479	0.000671947	0.64808534
3	BAJAJHIND	0.001434965	0.000671947	2.135533011
4	BALRAMCHIN	0.001451329	0.001159017	1.252206827
5	BATAINDIA	0.000965944	0.00161523	0.598022573
6	BEML	0.000652698	0.000961141	0.679086627
7	BOMDYEING	0.000381696	0.001989088	0.191894979
8	CROMPGREAV	0.000779228	0.010923192	0.071337023
9	GDL	0.000853162	0.001422792	0.599639301
10	GTL	0.000565305	0.001151283	0.491021756
11	GUJALKALI	0.000845696	0.001551541	0.545068419
12	HCC	0.001305025	0.00114773	1.137048783
13	JPASSOCIAT	0.012466834	0.001332762	9.354133746
14	JSWSTEEL	0.000977016	0.001013093	0.964389252
15	KOTAKBANK	0.000860552	0.001085896	0.792481048
16	LT	0.002489006	0.000683333	3.642449582
17	LUPIN	0.000407416	0.002498108	0.163089826
18	MCDOWELL-N	0.001137302	0.000942161	1.207120651
19	NCC	0.001241378	0.003115589	0.398440873
20	PRAJIND	0.002925127	0.001093	2.676236962
21	RENUKA	0.001382734	0.001246659	1.109151741
22	SAIL	0.000755434	0.001327316	0.569144047
23	SESAGOA	0.000741839	0.001255471	0.590885014
24	TRIVENI	0.001998201	0.001680477	1.189067747
25	TTML	0.001201983	0.000694918	1.729676019
26	ULTRACEMCO	0.000610623	0.000764685	0.798528806
27	VOLTAS	0.001007724	0.021765638	0.04629885
28	ZEEL	0.001335815	0.00089591	1.491014722
	MEDIAN	0.00097148	0.001202838	

2003				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	ANDHRABANK	0.001344978	0.000992818	1.354707509
2	ARVIND	0.001243397	0.000901177	1.379747819
3	BANKBARODA	0.001783934	0.001118329	1.595178163
4	BANKINDIA	0.001382916	0.000758851	1.822381469
5	BEL	0.000637079	0.001403401	0.453953645
6	GAIL	0.00164256	0.000369803	4.441716265
7	HCLTECH	0.001230684	0.001047466	1.174915463
8	HDFCBANK	0.000725606	0.00030114	2.409530451
9	HEROMOTOCO	0.00070764	0.000627598	1.127537054
10	ICICIBANK	0.00055307	0.000706065	0.783313151
11	IOC	0.001034084	0.001278998	0.808511038
12	IPCL	0.00074104	0.001207094	0.613904137
13	MASTEK	0.003522735	0.00153644	2.292790477
14	NATIONALUM	0.000792238	0.001488899	0.532096536
15	NIIT	0.001250652	0.001504379	0.831341038
16	ONGC	0.000609704	0.000964207	0.632337247
17	ORIENTBANK	0.001839498	0.000995442	1.847920823
18	PNB	0.001550961	0.001533684	1.011265032
19	POLARIS	0.001382503	0.001700896	0.812808661
20	SCI	0.00137641	0.001469175	0.936859122
21	SYNDIBANK	0.001325142	0.000781062	1.696590027
22	WIPRO	0.0008942	0.0007524	1.188463583
	MEDIAN	0.001247025	0.001021454	1.151226258

2005				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	ABB	0.000311122	0.000413289	0.752795259
2	ABIRLANUVO	0.000305843	0.00069778	0.438308177
3	ALBK	0.000345858	0.001413733	0.244641669
4	ALOKTEXT	0.00065495	0.00057992	1.129379914
5	ASHOKLEY	0.000483781	0.022065143	0.021925124
6	AUROPARMA	0.000611533	0.000603515	1.013285502
7	AXISBANK	0.000600981	0.0011454	0.524690938
8	BHARATFORG	0.010061608	0.000468709	21.46664135
9	BHARTIARTL	0.000353411	0.000792929	0.445703209
10	BILT	0.00046946	0.000508768	0.922738852
11	BONGAIREFN	0.000369743	0.000647466	0.571061646
12	CADILAHC	0.000273824	0.000532878	0.513858707
13	CENTURYTEX	0.000675738	0.001053406	0.641479164
14	CESC	0.000498904	0.000915855	0.544741253
15	CHAMBLFERT	0.000472436	0.000563618	0.838220213
16	CENNPETRO	0.000456018	0.001531313	0.297795421
17	COCHINREFN	0.000300075	0.000832576	0.360417547
18	COLGATE	0.000468256	0.000312243	1.499652514
19	CORPBANK	0.000528703	0.000748249	0.706586978
20	DABUR	0.002559726	0.000694486	3.685784883
21	DIVISLAB	0.000465323	0.000544598	0.854433913
22	ESCORTS	0.00134029	0.000513116	2.612060431
23	ESSAROIL	0.001321346	0.001467886	0.900169359
24	FEDERAKBNK	0.000498609	0.005319445	0.093733275
25	GESHIPPING	0.000472296	0.000759325	0.621994535
26	GLAXO	0.000314039	0.000264627	1.186723199
27	GNFC	0.00069927	0.000492961	1.418509781
28	IDBI	0.000628889	0.002107005	0.298475324
29	IFCI	0.001513628	0.001250606	1.210315639
30	INDHOTEL	0.000292978	0.000316635	0.925286213
31	INDIACEM	0.001377912	0.000897392	1.535462763
32	INDUSINDBK	0.00077917	0.00085016	0.916498071
33	IOB	0.000541523	0.001469593	0.368485138

34	IVRCLINFRA	0.011333933	0.00073021	15.52147054
35	J&Kbank	0.000445489	0.00081396	0.547310679
36	JINDALSTEL	0.000435282	0.000798464	0.545149186
37	JSL	0.001062348	0.000885286	1.200005422
38	KIRLOSKCUM	0.000602264	0.000445745	1.351140226
39	KTKBANK	0.000907902	0.003245679	0.279726369
40	LICHSGFIN	0.000404336	0.000666287	0.606849601
41	MAHSEAMLES	0.002352659	0.000523724	4.492173358
42	MRPL	0.000481034	0.001111047	0.432955582
43	MPHASIS	0.002339843	0.002219023	1.054447385
44	NAGARFERT	0.00081352	0.001034419	0.786451138
45	NDTV	0.000927595	0.000850505	1.090640267
46	NEYVELILIG	0.000340287	0.001062817	0.320174593
47	NICOLASPIR	0.000457623	0.010322381	0.044333086
48	ORCHIDCHEM	0.001136787	0.000905697	1.255151557
49	PATNI	0.000398399	0.000565142	0.704953799
50	PFIZER	0.000354643	0.000308829	1.148347467
51	RELCAPITAL	0.004100099	0.000973458	4.211891011
52	SIEMENS	0.000457802	0.000455372	1.005336296
53	SRF	0.001553309	0.001014748	1.530734027
54	STAR	0.000948973	0.000793689	1.195648421
55	SUNPHARMA	0.000343641	0.002216623	0.155029069
56	TATACHEM	0.000349756	0.000526978	0.663701331
57	TITAN	0.001062478	0.001053278	1.008734982
58	TVSMOTOR	0.000684002	0.000630727	1.084466021
59	VIJAYABANK	0.000382189	0.001394524	0.274064125
60	WOCKPHARMA	0.00046394	0.004666282	0.09942391
	MEDIAN	0.000498757	0.000806212	

2011				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	BFUTILITIE	0.001289111	0.001163654	1.107812975
2	DELTACORP	0.001243287	0.001932	0.643523292
3	DHANBANK	0.001100226	0.000545135	2.018263366
4	GUJFLUORO	0.000664823	0.00097	0.685384536
5	JUBLFOOD	0.000988668	0.001035153	0.955094272
6	JSWENERGY	0.000990571	0.000369695	2.679428295
7	RAYMOND	0.000565606	0.001170335	0.483285555
8	SOUTHBANK	0.0004	0.021665	0.018462959
9	TTKPRESTIG	0.000927	0.00114009	0.813093703
10	VIPIND	0.011475209	0.001235	9.291667206
	MEDIAN	0.000989619	0.001151872	
2012				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	TATACOFFEE	0.000383172	0.000866264	0.442327525
2013				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	APOLLOHOSP	0.00032876	0.000491011	0.669557301
2	GLENMARK	0.000353031	0.000420734	0.839083602
3	M&MFIN	0.000553468	0.011291331	0.049017073
4	UBL	0.00030944	0.001259	0.245782367

2007				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	3IINFOTECH	0.000971711	0.002740316	0.354598156
2	AIAENG	0.000767802	0.001168205	0.65724937
3	AIL	0.001300358	0.0013848	0.939022241
4	ANSALAPI	0.002466935	0.003106107	0.794220869
5	APTECHT	0.00248073	0.001287889	1.926198609
6	BUSANSTL	0.001694297	0.000562268	3.013326385
7	BIOCON	0.000745079	0.000449279	1.658388218
8	BINDALAGRO	0.003702	0.002832	1.30720339
9	BIRLACORPN	0.001612811	0.001129228	1.428242126
10	BOSCHLTD	0.000738073	0.000471611	1.565003785
11	BRFL	0.001689855	0.002340414	0.722032512
12	DCB	0.002671628	0.001416059	1.886664327
13	DENABANK	0.001873068	0.001078415	1.736871242
14	EDUCOMP	0.002269392	0.001279913	1.773083014
15	EKC	0.011703714	0.001344415	8.705432474
16	FINANTECH	0.000928037	0.000982919	0.94416427
17	FRL	0.001085929	0.065619883	0.01654878
18	GITANJALI	0.001944967	0.002250543	0.864221212
19	HAVELLS	0.00092622	0.000702181	1.319061609
20	HINDOILEXP	0.002890099	0.001584041	1.824510224
21	HINDZINC	0.001539925	0.000746414	2.063097691
22	HOTELEELA	0.0015	0.008970359	0.167217388
23	IIFL	0.002250674	0.002624905	0.85743065
24	JINDALSAW	0.001634724	0.000844487	1.935759816
25	JSWISPAT	0.003047478	0.001532442	1.988641658
26	KESORAMIND	0.001090164	0.001239125	0.879785332
27	LAXMIMACH	0.001154033	0.020925331	0.055150048
28	LML	0.001762992	0.002145447	0.82173646
29	MAHLIFE	0.001715341	0.002661266	0.644558267
30	MOSERBAER	0.00202	0.000967753	2.087309468
31	NIITLTD	0.001843885	0.016749685	0.110084757
32	NIITTECH	0.002096317	0.002159626	0.970685202
33	NUCLEUS	0.239020898	0.002801675	85.31357063

34	RELMEDIA	0.00293	0.001525153	1.921118734
35	PATELENG	0.001202348	0.001075	1.118463256
36	PENINLAND	0.012537384	0.00131	9.570522137
37	PETRONET	0.001534404	0.000665939	2.304120948
38	RAJESHEXPO	0.013925641	0.001400644	9.942312965
39	RNRL	0.003293631	0.000846628	3.890293021
40	ROLTA	0.003428012	0.001542442	2.222457635
41	SHREECEM	0.000767224	0.000780714	0.982720945
42	SKUMARSYNF	0.001902618	0.001126645	1.688746677
43	STERLINBIO	0.000583531	0.001136039	0.513654021
44	TECHM	0.001114124	0.001039973	1.07130089
45	TULIP	0.00081297	0.001126047	0.721968088
46	UNIPHOS	0.000772312	0.000603025	1.280729655
47	UNITECH	0.00396366	0.069817046	0.056772095
48	WELGUJ	0.001563951	0.000742802	2.105474945
49	YESBANK	0.001728818	0.000778849	2.219708827
	MEDIAN	0.001715341	0.001287889	
2008				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	ASIANPAINT	0.0005282	0.000558211	0.946236638
2	CONCOR	0.000640788	0.002193891	0.292078321
3	DCHL	0.00283568	0.001398679	2.02739871
4	DISHTV	0.002462352	0.002149632	1.145476063
5	EVERONN	0.004444988	0.01067859	0.416252333
6	FSL	0.00356847	0.001191569	2.994765725
7	GSPL	0.001838585	0.001847311	0.995276377
8	GTLINFRA	0.003597397	0.001407075	2.556649077
9	GVKPIL	0.003091852	0.022416806	0.137925626
10	HUBTOWN	0.005011853	0.00177595	2.822068752
11	IBREALEST	0.004743647	0.002290584	2.070933439
12	ICSA	0.003484668	0.01142766	0.304932768
13	KLGSYSEL	0.002980032	0.001755296	1.69773759
14	KSOILS	0.001224526	0.002593538	0.472145

15	MERCATOR	0.003514655	0.002460529	1.428414378
16	MIC	0.003118141	0.012969222	0.240426218
17	NOIDATOLL	0.002146491	0.002097354	1.023428091
18	OPTOCIRCU	0.00266722	0.001081133	2.467060019
19	PTC	0.001057525	0.001812613	0.583425695
20	RIIL	0.004031109	0.001938022	2.080011992
21	SINTEX	0.002736679	0.001219337	2.24439921
22	SREINFRA	0.003588751	0.001868687	1.920466616
23	TV-18	0.00266693	0.003187143	0.836777641
24	UCOBANK	0.000993249	0.001830981	0.542468218
	MEDIAN	0.002907856	0.001903355	
2010				
SL. NO.	SYMBOL	AFTER	BEFORE	VARIANCE RATIO
1	ADANIEN	0.000528745	0.00282681	0.187046511
2	ADANIPTS	0.010977193	0.00083443	13.1553192
3	ALSTOMT&D	0.00038	0.00111609	0.340474335
4	APOLLOTYRE	0.000835671	0.001277967	0.653906556
5	BAJAJHLDNG	0.000207994	0.000374432	0.555492052
6	BGREENERGY	0.000769755	0.001428475	0.538864873
7	EXIDEIND	0.000457189	0.000747973	0.611237304
8	FORTIS	0.00034654	0.000939101	0.369012492
9	GMDCLTD	0.000530472	0.001209192	0.438699561
10	GODREJIND	0.000610238	0.001596861	0.382148478
11	HEXAWARE	0.003234044	0.001546605	2.091060096
12	IGL	0.000236417	0.000485178	0.487278896
13	JISLJLEQS	0.011070859	0.000869397	12.73395123
14	JSWHL	0.000972873	0.002127924	0.45719349
15	MAX	0.000443994	0.000498574	0.890527785
16	MCLLEODRUSS	0.000568605	0.00149701	0.379827122
17	NMDC	0.000352434	0.000792435	0.44474815
18	OIL	0.000181179	0.000225936	0.801904079
19	ONMOBILE	0.000820232	0.001324638	0.619212192
20	RUCHISOYA	0.001043082	0.00125834	0.828934946
21	SRTRANSFIN	0.000553863	0.000538182	1.029136983
22	TATAMTRDVR	0.011704547	0.000626169	18.6923131
23	VIDEOIND	0.000452	0.001373	0.329206118
	MEDIAN	0.000553863	0.00111609	

political areas and residents of surroundings communities by linking long term bio-diversity conservation with local, social and economic development.

As a concept Eco-Tourism has gained momentum recently in India but as a way of life Indians have practiced Eco-Tourism since times immemorial by their traditional approach to nature and rich culture heritage. Eco-Tourism society in 1991 provided one of the earliest definitions. "Eco-Tourism is responsible travel to natural areas as to sustain the well being of local people."

The World Tourism Organization (WTO) has defined Eco-Tourism as "Tourism that involve traveling to relatively undisturbed natural areas with the specified object of studying, admiring and enjoying nature and its wild plants and animals, as well as existing cultural aspects (both of the past and the present) found in these areas."

Tourism in Assam is essentially nature based; therefore, national parks, wild life sanctuaries, rivers, lakes, hot water springs and thick wooded forest and wildlife are the major components of tourist attractions in Assam. It is counted as one of the prime Eco-Tourism destinations in India. Eco-Tourism in Assam attracts a large number of nature lovers and animal lovers in the form of national & international tourist who love to see colourful wildlife in their natural habitat. *There are five National Parks and eleven wildlife and bird sanctuaries for protection and preservation of wildlife in the state.* Kaziranga, for instance, has been receiving a steady flow of nature tourists for years. Other areas like Manas are increasingly touted as excellent destinations for bird watchers and nature treks. However what is required is expanding the Eco- Tourism market that includes destinations other than the popular wildlife sanctuaries, and innovative strategies to capitalize on this new trend.

Review of Existing Literatures

For the purpose of the study a brief view of available literature on the topic is given below:

Sangpikul *et. al.* (2007) in their research article, Eco-Tourism- A Perspective from Thai Youths, highlighted about Eco-Tourism experiences of the Thai youths. Their research paper also discusses the knowledge and attitude of Thai youths towards Eco-Tourism as well as travel experiences relating to Eco-Tourism. The article concludes that the Thai youths had a moderate level of Eco-Tourism knowledge and it was realized that

STATUS OF ECO-TOURISM DEVELOPMENT IN THE TINSUKIA DISTRICT OF ASSAM: AN EMPIRICAL STUDY

Anjan Kumar Bordoloi*

Abstract

Tourism has long played an important role in the Indian economy as being the third most important industry sector of national economy. Eco-Tourism has therefore come to signify an attractive investment proposition. Eco-Tourism in simple words means "Management of Tourism" and "Conservation of Nature" in a way so as to maintain a fine balance between the requirements of tourism and ecology on one hand and the needs of local communities for jobs, new skills, income generating, employment and a better status for women on the other. The global importance of Eco-Tourism, its benefits as well as its impact was recognized with the launching of the year 2002 as the International year of Eco-Tourism (IYE) by the United Nations General Assembly. Tourism in Assam is essentially nature based; therefore, national parks, wild life sanctuaries, rivers, lakes, hot water springs and thick wooded forest and wildlife are the major components of tourist attractions in Assam. It is counted as one of the prime Eco-Tourism destinations in India. Eco-Tourism in Assam attracts a large number of nature lovers and animal lovers who love to see colourful wildlife in their natural habitat. The paper intends to highlight the status of Eco-Tourism development in the Tinsukia district of Assam with that of the potentiality for further development.

Keywords: Status, Eco-Tourism, Tinsukia, Assam.

Introduction

Tourism is an economic activity of immense global importance. Perhaps there is hardly any field of activity where so many people are involved directly or indirectly. Needless to say, tourism has found a niche for itself as a very effective instrument for generating

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employment and earning foreign exchange thereby facilitating overall development. Tourism has been the fastest growing largest industry in the world in the past 50 years. Liberalization has brought Indian economy much closer to the International economic scene-creating the right backdrop for the growth of tourism. In a country of diversities like India, each state has its own attractions in abundance to develop tourism. But it is necessary for each state to move forward with clear aims and programmes to help India realize its tourism potential to the fullest. As per the working strategy for the 12th Five Year Plan, the Ministry of Tourism has adopted a 'pro-poor tourism' approach which could contribute significantly to poverty reduction. Pro-poor tourism signifies all plan and policies directed towards generating jobs, dispersing economic benefits to rural areas, creating business opportunities for small and medium entrepreneurs & protecting socio-cultural and natural environment. More than half of Tourism Ministry's Plan budget is channelized for funding the development of destinations, circuits, mega projects as also for rural tourism infrastructure projects.

Foreign Tourist Arrivals and Foreign Exchange Earnings During the years 2000-2012						
Year	Foreign Tourist Arrivals (in nos.)	Percentage Change Over Previous Year	Foreign Exchange Earnings in Crore	Percentage Change Over Previous Year	Foreign Exchange Earnings (Million US\$)	Percentage Change Over Previous Year
2000	26,49,378	6.7	15,626,	20.6	3,460	15.0
2001	25,37,282	-4.2	15,083	-3.5	3,198	(-)7.6
2002	23,84,364	-6.0	15,064	-0.1	3,103	3.0
2003	27,26,214	14.3	20,729,	37.6	4,463	43.8
2004	34,57,477	26.8	27,944	34.8	6,170	38.2
2005	39,18,610	13.3	33,123,	18.5	7,493	21.4
2006	44,47,167	13.5	39,025	17.8	8,634	15.2
2007	50,81,504	14.3	44,360	13.7	10,729	24.3
2008	52,82,603	4.0	51,294	15.6	11,832	10.3
2009	51,67,699	-2.2	53,700*	4.7	11,136*	(-)5.9
2010	57,75,692	11.8	64,889#	20.8	14,193#	27.5
2011	63,09,222	9.2	77,591#	19.6	16,564#	16.7
2012	66,48,318	5.4	94,487#	21.8	17,737#	7.1

Advance Estimates *Revised Estimates

Source: Ministry of Tourism, Annual Report 2012-13

The Ministry also ensured that 2.5% of its total Annual Plan (2012-13) outlay went to the tourism projects in the North-Eastern region and the tribal areas respectively. The North-East has a wide array of products in the form of its pristine natural beauty, forests and wildlife, rivers and mountains, and a unique multi-ethnic cultural heritage to offer to the tourist. The region is endowed with diverse tourist attractions and each state has its own distinct features. For the development and promotion of North East Region 10% of the plan allocation of the Ministry has been earmarked. An amount of Rs.100.00 crore has been earmarked in Budget Estimate 2012-13 for the region. In order to develop and promote tourism in the region, Ministry of Tourism has also organized the International Tourism Mart with the objective of showcasing the largely untapped tourism potential of the North East region in the domestic and international markets.

Tourism has long played an important role in the Indian economy as being one of the most important industry sectors of national economy. Within the tourism industry worldwide, Eco-Tourism is one of the fastest growing sectors. Thus, Eco-Tourism has therefore come to signify an attractive investment proposition.

Eco-Tourism in simple words means "*Management of Tourism*" and "*Conservation of Nature*" in a way so as to maintain a fine balance between the requirements of tourism and ecology on one hand and the needs of local communities for jobs, new skills, income generating, employment and a better status for women on the other. ***The global importance of Eco-Tourism, its benefits as well as its impact was recognized with the launching of the year 2002 as the International year of Eco-Tourism (IYE) by the United Nations General Assembly.*** The IYE offers an opportunity to review Eco-Tourism experiences worldwide in order to consolidate tools and International framework that ensure its sustainable development in the future. This meant maximizing the economies, environmental (conservation of nature/ sustains biodiversity) and social (employment/ enrich culture & traditions) benefits from Eco-Tourism, while avoiding its short comings and negative impacts.

Eco-Tourism is also known as ecological tourism is responsible travel to fragile, pristine and usually protected areas that strives to be low impact, and (often) in small scale. It helps educate the traveler, provides funds for conservation. Eco-Tourism may offer one way of striking this critical balance. Well planned Eco-Tourism can benefit both

a taxi. Tinsukia also acts as a link to all other cities in the North-East of India. Presently it houses the biggest railway station of Assam. The people of Tinsukia are engaged in agricultural activities. Some of the important crop that is cultivated is paddy. Tea plantation and growing of citrus fruits are also carried on by the local people of the district. Working in the coal mines is another way of living for the people Tinsukia. The important oil refinery is located in Digboi. It is one of the oldest oil refineries. The National Park of Dibru Saikhowa is one of the tourist attractions in Tinsukia. One will get to see animals of rare species in this park. The tourists can avail guest houses arranged by the authority of the national park.

Scope of the study

The Tourism potentiality of the Tinsukia district of Assam is immense with a combination of human, natural, cultural, ethnic beauty, religious attractions, heritage sites and deep forests. Most foreign travelers look for ethnic and culture mosaic, adventure and Eco-Tourism while a domestic tourist is enthused by religious attractions, wildlife and flora and fauna. In all these areas the Dehing Patkai Region of the Tinsukia District of Assam has tremendous scope for attraction. To mention a few, one can enjoy the socio-cultural life style (their food-habit, dress, ornaments, religious practices, games and sports etc.) of the large numbers of the tribes like Singphos, Noctes, Tai Phakes, Wangchos, Tangsas, Sonowals, Kacharis, Duaniyas, Khamtis, Deoris, Sema Nagas and many more in addition to those of non-tribals like Ahoms, Morans, Mattacks, Tea communities, Nepali etc. The ethnic festival viz. Dehing Patkai festival organized every year at Lekhapani under the Margherita Sub-Division in the Tinsukia district of Assam since the year 2002 is a unique opportunity for the tourists to enjoy (as if under the same roof) the diverse cultural and heritage mosaic of various ethnic tribes and integrated cultural pattern in a spirit of unity in diversity. Dehing Patkai festival has been organized with an aim to highlight the Tourism potentialities of the catchment areas of the river Dehing and the Patkai foothills. The lush green valleys and scenic splendour of this area covering the geographical areas of Tinsukia and Dibrugarh districts and South-Eastern part of Arunachal Pradesh, cast spell on visitors. The lush green rain forest patch of Joypur, Dirok and Upper Dehing located within a radius of 100 k.m. from Tinsukia town are ideal for a wide variety of flora and fauna as also for trekking. 'Roing' the Headquarter of lower Dibang valley District of Arunachal

more awareness would be required to encourage Thai youths to realize the importance of Eco-Tourism in helping natural tourism resources and the local economy of the country.

Athma *et. al.* (2006) in their research article, Eco-Tourism in Andhra Pradesh, highlighted that how tourism plays a major role in the growth of an economy and can generate large scale employment. They emphasize that Andhra Pradesh can be transformed into an Eco-Tourism destination and highlighted that APTDC (Andhra Pradesh Tourist Development Corporation) is providing impetus for tourism development in Andhra Pradesh. They concluded that, endowed with rich natural heritage of vast forest tracts, the longest coastline in the country, the hilly terrain of Eastern Ghats, the mighty rivers Godavari and Krishna traversing the state, innumerable lakes and caves dotting the landscape of the state, the potential is vast and not fully explored through efforts are being made to develop Eco-Tourism in Andhra Pradesh.

Honey (1999) suggests that real Eco-Tourism has seven characteristics. *It involves travel to natural destinations, minimizes impact, builds environmental awareness, provides direct financial benefits for conservation, provides direct financial benefits and empowerment for local people, respects local culture, and supports human rights and democratic movements.*

Batra (1999) analyses the dynamics of tourism business and its emerging issues. He discussed the growth, nature and extent of tourism industry in India apart from the global scene and gave importance on the need of tourism marketing.

Batra (1998) stressed on the dynamics of tourism marketing and its emerging trends. He provided figures related to major region-wise tourist arrivals in India, tourist-generating countries, tourist arrival according to purpose of visit and foreign exchange earnings from tourism in India.

Lawrence (1997) has stated that a dominant part of Eco-Tourism is for Tourists to learn about and appreciate the natural environment in order to advance the cause of conservation.

Minelli (2006) stress on the need of responsible tourism that imparts a positive a positive impact on local people and their environment.

Goodwin (1997) compares the impact of wild life, national park tourism in India, Indonesia and Zimbabwe and looks at ways of increasing revenue to local communities.

Bhattacharya (2004) makes a pioneering attempt to depict the background, growth, status, problems and potential of tourism in Assam, which is still in its evolving stage. He also attempts to identify the tourist spots and centres of the state Assam. Baruah and Borah (2003) discussed the phenomenon of tourism marketing and Economic Development of North-East Region.

Bora (2004) attempts to unfold the yet undiscovered secrets of the land of pristine beauty and a veritable tourist's paradise in North East India comprising the States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim.

Bezbaruah (2001) highlights the trends of tourism growth in North East India.

Gogoi (2003) in the article 'Eco- Tourism- An answer to sustainable development of Tourism', highlighted that community based Eco- Tourism is the best option Eco-Tourism in such areas which is owned and managed by a community and takes care of their natural resources in order to gain income through operating a Tourism enterprise and using that income to better their lives. It involves conservation, business enterprise and community development and there will be direct and indirect participants and direct and indirect beneficiaries.

Yadav (2003) in the article 'Eco- Tourism problems and prospects', highlighted that Eco- Tourism as one of the fastest growing segments of Tourism today and more and more destinations are becoming interested in Green Tourism, Cultural Tourism and Eco-Tours, and are considering Eco-Tourism as part of their Tourism strategy. He mentioned that the New-Zealand Ministry of the Environment which reported that nature / culture visits to New Zealand have been growing at a rate of 30% or eight times faster than the growth rate of traditional Tourism at 4 %.

Handique (2006) in the article 'Forest policy and development of Eco- Tourism in the Dehing- Patkai region', highlighted that the Dehing Patkai region as one of the richest regions on this earth as far as natural and cultural diversities are concerned. He also mentioned that this area forms part of the Indo-Malayam realm, the world's richest biogeographic area. The Patkai range of mountains forms part of the lower Himalayan ecology

and the accompanying foothills and valleys together with the moist tropical climate have contributed in setting up of a habitat mosaic.

Gap Analysis

It is observed that a very little work has been done in terms of research in the tourism sector in Assam especially on the Eco-Tourism Sector, inspite of its vast potentiality. Although a few scholars like Lawrence, Harrison, Goodwin (Internationally), Bhattacharya, Bezbaruah and Bora (Nationally) (*literatures reviewed in this study*) have significantly focused on the trends of developments in this sector but no endeavours has been noticed in broad perspective on the tourism sector of the Tinsukia District of Assam. So the study aims to present the status of Eco-Tourism development in the Tinsukia district, the growth potentiality of Eco-Tourism in this district, performance of the eco-entrepreneurs, the level of institutional supports for the Eco-Tourism development in the district and the problems associated with Eco-Tourism development in the district.

A Brief Profile of the Tinsukia district

Tinsukia is one of the twenty seven administrative districts in the state of Assam, India. The district headquarter is located at Tinsukia. The district occupies an area of 3790 km² and has a population of 1,316,948 (as of 2011 Census) of which males constitute 51% of the population and females 49%. Tinsukia has an average literacy rate of 71% of which male literacy rate is 78% and female literacy rate is 64%. In Tinsukia, 10% of the population is under 06 years of age. The district of Tinsukia is located in the upper part of the state of Assam. The Tinsukia district is divided into three Sub-Divisions which are Sadiya, Tinsukia and Margherita (Sadar). In the south west of Tinsukia lies Arunachal Pradesh and to its south west, the Dibrugarh district is located. The Dhemaji district is located to the north of Tinsukia. The geographical location of the district is 95 degree 22' to 95 degree 38' East longitude. The latitudinal extent is 27 degree 23' to 27 degree 48' north. Tinsukia is 84 kilometers away from the border with Myanmar. Hailed as the business capital of Assam, the place has a heady mix of Assamese, Bengali and Hindi-speaking people. The name of the place comes from the Tinkunia Pukhuri (the lake with three sides) located at the heart of the town. Tinsukia is also a major railhead of Assam. It is one of the fastest developing cities of India and one can travel there either by train or by a flight to Dibrugarh and then

Table 1.1 showing level of satisfaction of the respondents regarding the study area						
Factors of satisfaction	Very Satisfied	Satisfied	Average	Dissatisfied	Very Dissatisfied	No Idea
Accommodation	-	42%	24%	26%	08%	-
Transport/ Accessibility	24%	56%	17%	03%	-	-
Food & Beverage	08%	37%	41%	08%	06%	-
Sanitation & Hygiene	-	14%	27%	59%	-	-
Guide Service & Interpretation	06%	44%	23%	27%	-	-
Hospitality	24%	37%	39%	-	-	-
Security	02%	23%	37%	34%	04%	-
Travel Cost	09%	27%	53%	11%	-	-
Package tour arrangement	09%	34%	57%	-	-	-
Information about the site	04%	32%	60%	04%	-	-
Promotion & Marketing	06%	36%	34%	22%	02%	-
Information & interpretation about local culture, history and resources	07%	23%	31%	37%	02%	-

(Source: Field Survey)

Results of the data analysis regarding level of satisfaction of the respondents regarding the study area the results indicates as for accommodation highest 42% of the respondents responded satisfied, for Transport/ Accessibility highest 56% of the respondents responded satisfied, for Food & Beverage highest 41% of the respondents responded average. For sanitation highest 59% of the respondents responded dissatisfied, for guide service and interpretation highest 44% respondents responded satisfied. For hospitality highest 39% of the respondents responded satisfied, for travel cost highest 53% of the respondents remarked as average, for package tour arrangement highest 57% of the respondent's responded average, for information of the site highest 60% of the respondent's

Pradesh is still another place of tourist's attraction with versatile opportunities of living an eco-friendly life. Thus the whole region of the Tinsukia District of Assam has tremendous potentiality for furthering Eco-Tourism development. Hence the area also has tremendous scope for entrepreneurship development to promote the tourism sector.

Significance of the study

Like other potential places in India, Assam too has high prospects as to develop it as a Tourism destination. Within the entire Assam region and beyond, much of the potentials for Tourism development falls within the scope of Eco-Tourism and provides possible activities which includes nature treks, village stays, tribal festivals and visits to smaller wildlife parks. Throughout the area, there are numerous natural resources that are unique and relatively unspoiled and by far its main attraction. Ecotourism as a concept is sustainable tourism that focuses on minimal impact on the environment and local culture. The objective of Eco-Tourism is to generate income that can be used for the benefit of the local community and to conserve the local biodiversity. However, many of the natural and cultural resources are currently undeveloped to cater to Eco-Tourism, little if any information on the natural and cultural history of the region is known throughout much of the rest of the world. Unfortunately, the areas ecological richness and culture diversity is also belied by social fragility and threatened by unsustainable industrial development that could quickly degrade it beyond any tourist trade. The significance of the study is to find out the present status of Eco-Tourism development at Tinsukia district with special reference to Dibru-Saikhowa and adjacent locations.

Objectives of the study

The study has been conducted with the following objectives:

1. To study the present status of Eco-Tourism development at Tinsukia district of Assam with special reference to Dibru-Saikhowa and adjacent locations.
2. To study the further growth potentiality of Eco-Tourism in the study area.
3. To draw up the necessary conclusion and suggestions on the basis of the results so obtain.

Research Questions

The following research questions were being formulated for the study:

1. Whether the Eco-Tourism is highly developed in the study area.
2. Whether there is a growth potentiality of Eco-Tourism in the study area.

Research Methodology

The sample for the present study is the tourists visiting Tinsukia district particularly visiting Dibru-Saikhowa and adjacent locations at Tinsukia district of Assam. Convenience sampling has been adopted to collect the data. Total of hundred (100) tourists (Both National & International) has been selected for the purpose. For collection of primary data, a structured schedule has been designed keeping in view the objectives of the study. Tourists have been sourced from NGO's operating Eco-Tourism enterprises at Dibru-Saikhowa and adjacent locations namely WAVE-Eco camp, & Explore North-East & Banashree Eco-Camp. Secondary data for the study has been collected from Books, Journals, Magazines and from Internet.

Analysis & Results

The samples for the study were the tourist (National & International) visited Dibru Saikhowa and adjacent locations and the distribution of Tourist was 16% International & 84% National Tourist. Data analysis indicates that 90% of the respondents (Tourist) responded that they have visited the site through tour package, 88% remarked that Travel Agencies/ Tour Operators were the sources through which they came here and enjoying the pristine beauty of Dibru-Saikhowa.

Of the total sample tourist 78% have not visited the site before and 20% has visited the site once. On analyzing the purpose of visiting the area the broad interpretation were which being articulated from the multiple viewpoints, maximum tourist 80% remarked to enjoy the nature & migratory birds, 57% remarked it for to enjoy wildlife, river dolphin & scenic beauty, 03% remarked for boating & trekking. The other viewpoints were to see feral (wild) horse, gibbons, to enjoy photography, river Brahmaputra, tea gardens of upper Assam etc.

On responding to the attractions of this site, the multiple viewpoints were maximum 80% of the respondents remarked it for migratory birds & natural beauty, 61% remarked it for river dolphin, 57% for feral horse, 22% for boating 07% for sunset view etc. On the rating of the image of the site before they visit were 75% (Above Average), 22% (Average) & least 03% (Below Average) but in response to the rating of the image of the site after visit shows 05% (Excellent), 77% (Above Average), 08 (Average) & least 10% (Below Average). On the rating the experience of tourists on the site was 81% (Excellent), 12%

(Above Average) & 07% (Average). Maximum 61% of the tourists remarked that the area conserves natural resources and the same time promotes tourism. 32% of the tourists remarked that the place provides support to the Assam's Economy and 43% of the tourists remarked that the place provides support to the local entrepreneurs.

In response to the elements do they think that indicate the success of an Eco-Tourism site were being rated as per preference and in the context to studied area. The results so obtained were Guide (32% remarked it as Excellent at Dibru-Saikhowa), Hospitality (26% remarked as Excellent), Fooding (13% remarked as Excellent), Accommodation (51% remarked as Excellent) & Cost (72% remarked as Excellent). On the rating of the Eco-Tourism Hospitality in the area the results were 24% remarked it as Excellent, 37% remarked it as Above Average, 39% remarked it as Average. In response to the evidence being tracked by the tourists regarding the local people involvement in the area in the promotion of the Eco-Tourism projects the results obtained were 91% responded as Yes and rest 09% as No. On the response to the entrepreneurial participation at the study area the results so obtained from the respondents were, 57% remarked it as Above Average, 20% as Average, 13% remarked it as Below Average and 10% as Poor. In response to the local people benefits from Eco-Tourism the results so obtained were as it promotes local entrepreneurship, locals are employed, employment opportunities created promotion of culture and traditions etc. In response to the problems the local people have encountered at the time of developing their Eco-Tourism enterprises were (77%) found to be lack of sufficient capital and poor access to the promotional agencies. Of the total respondents surveyed a low percentage of 27% respondents have visited other Eco-tourism sites. Those respondents responded rated Dibru-Saikhowa as one of the best Eco-Tourism sites they have seen.

being launched by the government time to time. The tourists responded positively regarding how Eco-Tourism can contribute to elevate local economic activities (37%), how Eco-Tourism aware the local people about the significances and values of the conservation of natural resources (43%), how Eco-Tourism encourage people's active participation in the economic development process (75%). Thus furthering the growth of Eco-Tourism in the study area the Eco-entrepreneurs and potential entrepreneurs needs to aware of various privileges announced and initiatives taken by the Government from time to time for the promotion of tourism and try to avail the following benefits and sanctions:

- (a) For the development and promotion of North East Region, 10% of the plan allocation of the Ministry has been earmarked. An amount of Rs. 110.00 crore has been earmarked in 2011-12 for the region.
- (b) The financial assistance being given to North East States includes assistance for development of tourist Infrastructure, promotion of fairs/festivals and tourism related events in the region, publicity campaigns, market development assistance, human resource development, promotion and marketing of tourism products etc.
- (c) In 2011-12, an amount of Rs. 93.77 crore has been released for development of infrastructure under the Product/ Infrastructure Development of Destinations/ Circuits Scheme of the Ministry of Tourism (*Identified circuit in Assam was NATIONAL PARK MEGA CIRCUIT covering Manas, Orang, Nameri, Kaziranga with Jorhat, Sivasagar & Majuli on 30.11.2011*).
- (d) Tourism Projects sanctioned for state Assam during the eleventh Five Year Plan (2007- upto 2010) was 66.07(Rs. in crores) for 18 projects.
- (e) Familiarization Tours are being arranged by the Ministry of Tourism for Travel and Media Representatives from Overseas to the States in the North Eastern Regions on a regular basis under the Hospitality Scheme of the Ministry so as to promote tourism in the Region.
- (f) In order to give wide publicity to the tourist attractions of the North East Region, the Ministry has produced a series of collaterals including brochures and posters. A compendium on North East as a whole and also a set of six display scrolls on each of the individual state of North East have been produced. A logo and brand line for the North East titled "India's North East-Paradise Unexplored" has been

responded average, for promotion & marketing highest 36% of the respondents responded satisfied and for Information & interpretation about local culture, history and resources highest 37% respondents responded as dissatisfied.

To answer the first research question '*whether Eco-Tourism is highly developed in the study area*' it can be stated that, the Eco-Tourism facilities in the study area are not highly developed rather it has been partially developed or we can say the facilities/ tourism services are not standard. The tourists responded negatively regarding Sanitation & Hygiene (59% of the respondents responded dissatisfied), for Information & interpretation about local culture, history and resources (37% respondents responded as dissatisfied), for accommodation (34% of the respondents responded under category dissatisfied & very dissatisfied), for Food & Beverage highest 41% of the respondents responded average, for package tour arrangement highest 57% of the respondent's responded average and for information of the site location highest 60% of the respondent's responded average which indicates the respondents mixed views.

Thus furthering the development of Eco-Tourism in the study area following points needs to be take care of:

- (a) To overcome the problems of accommodation the state Governments can adopt the policy of certification, monitoring and registering of lodges, inns and paying guest accommodations with standard facilities considering the increase inflow of tourists.
- (b) With the increase in tourist inflow we need trained and qualified manpower in hospitality, tour operation, ground operation, tour guide and adventure sports sectors. Other areas like in communication (e.g., drivers, IT professional etc) will also need human resources.
- (c) The Eco-entrepreneurs of the study area needs to build and manage the required tourist facilities in all places of tourist interest.
- (d) They should assume collective responsibility for laying down industry standards, ethics and fair practices in tourism.
- (e) They should ensure preservation and protection of tourist attractions and give lead in green practices.
- (f) They should look into maintenance of monuments, museums and parks and provision of public conveniences and facilities.

- (g) They should undertake industry training and man-power development to achieve excellence in quality of services.
- (h) Participate in the preparation of investment guidelines and marketing strategies and assist in database creation and research.
- (i) Facilitate safety and security of tourists.
- (j) Endeavour to promote tourism on a sustained and long term perspective.
- (k) Collaborate with Govt. in the promotion and marketing of destinations.

Table 1.2 showing respondent's response regarding how Eco-Tourism can positively contribute to the Community development and for Tourists

Positively contribute	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Increase local economic activities	37%	59%	04%	-	-
Improve local people's awareness about the significances and values of natural resources and their culture	21%	43%	36%	-	-
Prevent people's out migration by creating jobs for the people	34%	51%	10%	05%	-
Encourage people's active participation in development	27%	43%	16%	14%	-
Encourage and light up local small and medium scale enterprises or business on Tourism	23%	75%	02%	-	-
Increase market for local product and services	21%	65%	14%	-	-
Improve tourist awareness and knowledge about natural resources and culture	23%	54%	20%	03%	-
Increase or diversify tourism products and services for long satisfactory stay of the tourist in the host country	13%	45%	30%	12%	-

(Source: Field Survey)

Results of the data analysis regarding how Eco-Tourism can positively contribute to the Community development and for Tourists indicates that highest 59% agreed for that it increases local economic activities, highest 43% agreed that it improve local people's awareness about the significances and values of natural resources and their culture, highest 51% agreed that it prevent people's out migration by creating jobs for the people, highest 43% agreed that it encourage people's active participation in development, highest 75% agreed that it encourage and light up local small and medium scale enterprises or business on Tourism, highest 65% agreed that increase market for local product and services, highest 54% agreed that it improve tourist awareness and knowledge about natural resources and culture and highest 45% agreed that it increase or diversify tourism products and services for long satisfactory stay of the tourist in the host country. Regarding challenges for Eco-Tourism development in this area the results which being obtained as lack of capital, proper facilities for promotion & marketing, deficiencies in communication & transportation, less access to Govt. support and incentives, involvement of the local community to promote entrepreneurial opportunities for tourism products, professional attire of the local entrepreneurs in promoting tourism enterprises.

Results of the data analysis regarding tourist perception on institutional supports of related agencies and institution working for the promotion of Eco-Tourism Development in the area indicates, there is a poor awareness of the institutional support for Eco-Tourism Development in the area as being perceived by the respondents. Beside results of the SWOT analysis of the Eco-Tourism development in the area is being highlighted as:

- (a) **Strengths:** Rich Culture, Wildlife and Natural Beauty.
- (b) **Weaknesses:** Lack of awareness of Government supports, Promotional Programmes.
- (c) **Opportunities:** Special incentives by the Govt. for promotion of tourism under 12th five year plan and special emphasis to North-East region.
- (d) **Threats:** Killing of animals, Destroying Forest and Natural Resources & Natural calamities.

To answer the second research question '*whether there is a growth potentiality of Eco-Tourism in the study area*' it can be stated that, there is an enormous growth potentiality of Eco-Tourism in the study area considering the incentives and schemes

for people's participation should be evolved. More community based Eco-tourism projects needs to be initiated.

- ◆ Effective marketing is essential if the tourism policy for the North-East is to be successful. Ideally, a brand image should be developed for the region, which should be integrated into the highly successful "Incredible India" campaign. The most well-intentioned policies fail due to weaknesses in implementation. The N.E. states, Assam & Tinsukia district of Assam in particular should develop tourism organizations which are accountable, professionally managed and capable of taking quick decisions.

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devised for the North East Region. CD of the brochure and a high resolution image CD on the Region has been produced.

- (g) Films and commercials on North East and a film on Eastern Himalayas have also been produced.
- (h) In 2009-10, Ministry of Tourism has also produced a 60 seconds TV commercial which was aired on various TV channels to promote North East of India in the Domestic Market.
- (i) Ministry of Tourism provides financial assistance for setting up of the Institute of Hotel Managements (IHM) and Food Craft Institutes (FCI) in the North-Eastern states. As per the recent decision of Council of Ministers the scheme's scope has been broad based to cover the funding of infrastructure creation in vocational schools, polytechnics/ ITI's Universities etc for starting courses in Tourism and Hospitality sector.
- (j) A special initiative name 'Hunar se Rozgar' was launched in 2009-10 for the creation of employable skills among youth belonging to economically weaker sections of the society in the age group of 18-25 years with the basic objective to reduce the skill gap affecting the hospitality and tourism sector and to ensure the spread of economic benefit of tourism to the poor.
- (k) Considering the importance of Visa facilities in enhancing tourist inflow, the facility of Long Term Tourist Visas for five years duration with multiple entries, carrying a stipulation of 90 days for each visit, has been introduced on a pilot basis for the nationals of the 18 selected countries.
- (l) As part of its domestic and global publicity and marketing strategy to promote tourism and create social awareness through the print and electronic media, the Ministry of Tourism launched campaigns on Clean India, Atithi Devo Bhava and Hunar Se Rozgaar through radio channels. A campaign highlighting the tourism potential of North-East was also carried out through Doordarshan.
- (m) The Ministry had participated in major international Travel Fairs and Exhibitions in important tourist generating markets the world over, as well as in emerging and potential markets, to showcase and promote the tourism products of the country. These included Arabian Travel Market (ATM) in Dubai, International Trade Business (ITB-Asia) in Singapore, World Travel Market (WTM) in London,

International Meetings Exhibitions (IMEX) in Frankfurt, International Tourism Trade Fair (FITUR) in Madrid, etc.

- (n) An International Tourism Mart was held at Guwahati in January, 2013 to showcase the largely untapped tourism potential of the north-Eastern region in the domestic and international markets.⁷⁹ International Buyers and media delegates from 23 countries and hundreds of tour operators from different parts of India participated in the Mart and engaged in one-to-one meetings with sellers from the North East Region and West Bengal.
- (o) The Ministry of Tourism has also taken the initiative of identifying, diversifying, developing and promoting the nascent/ upcoming niche products of the tourism industry. This is done in order to overcome the aspect of “seasonality” to promote India as a 365 days destination, attract tourists with specific interests and to ensure repeat visits for the products in which India has comparative advantage. *Accordingly, the following Niche Products have been identified by the Ministry of Tourism for development and Promotion: Cruise, Adventure, Medical, Wellness, Golf, Polo, Meetings Incentives Conferences and Exhibitions (MICE) and Eco- Tourism.*

The above given points indicates that there lies immense scope for Eco-Tourism development in the study area but the awareness and consciousness can bring fruitful results.

Conclusion and Suggestions

From the analysis of the present study it can be concluded that, Assam tourism especially at the study area has not been so successful because of the following basic difficulties. The following points highlight how to improve tourism facilities in the North-East as a whole and Tinsukia district in particular:

- ◆ Poor internal communication & transportation specifically Road travel is difficult and time consuming. While air transport links have greatly improved in recent years, though they are still not fine-tuned to the requirements of tourism. Co-ordinated planning for tourism in the Assam and at the study area will be effective only when air travel becomes cheap, convenient, efficient and great extent reliable. Moreover aviation infrastructural & Service facilities should be developed in the Tinsukia district.

- ◆ Lack of a suitable organizational set-up for projecting Assam tourism as a whole. Prospective tourists who want to visit the region, or sympathetic entrepreneurs who want to market the NER, find it frustrating to draw up an integrated schedule for the whole region due to lack of proper knowledge and incentives. There is too much dependence on the government and very least incentives for the private sector to enable them to play an effective role. If tourism in the Assam has to grow, a common platform needs to be evolved for co-ordinated planning and integrated policy-making by the concerned states, including government agencies and non-governmental organizations. More importantly broad knowledge about the various privileges announced and initiatives taken by the Government time to time for the promotion of tourism will add to resolve these problems.
- ◆ Because of the lack of awareness, tourism has been a peripheral activity in most states of the North-East. Public funding for tourism development has been low. It is not necessary that government funds should be heavily committed for tourism. Naturally, the allotted funds must be used effectively used. Tourism is a multi-dimensional activity, which requires co-ordination between many departments. It should not only be put at the core of the planning process, but the linkages to other sectors must be institutionalized as well.
- ◆ Modern tourists are mostly looking for new experiences. In this regard, the Assam has an advantage over other parts of the country particularly Tinsukia district of the state as it is considered as mini India with various ethnic tribes & non-tribes. To enable tourists to experience the unique natural and cultural wealth of this region, the following infrastructure will have to be adequately developed/ upgraded in the study area:
 - Accommodation (various kinds).
 - Road Transport and other communication.
 - Wayside facilities (signage/ signboards & motels).
 - Product development and destination management (positioning/ image building).
 - Information guides.
- ◆ For further development of the tourism it has to play an important role in poverty alleviation and employment creation in the study area, meaningful arrangements

Statement of the Problem

An advertisement should always be enclosed with an effective, valuable and interesting message that leads the consumer to a desired end state. The rationale of an advertisement should be such that the consumers start believing the product features and benefits, once they view the same. The advertisements should be designed in such a way that the message theme meets the customers' personal values. The product attributes, consumer benefits, leverage points, personal values and the execution framework together with proper communication strategies are adopted by every organization to remain at the top of the competitive hierarchy.

An effective leverage point can also be associated with an attitudinal change, especially when the sequence is cognitive – affective – conative. As the attitude is formed, the individual first understands, then is moved emotionally, and then takes action. A leverage point can help the viewer of an ad move through these three stages, thereby tying cognitive knowledge of the product to more emotional and personal values.⁴ However at times, the sequence may be as cognitive – affective – cognitive – conative, depending upon the type of consumers and their habits.

The creative heads of the advertising agencies devote much of their time and energy in designing ads with prominent, influential and dominant leverage points. Effectively communicating the tools like; executional frameworks and various types of advertising appeals are the next best practices adopted by them to help consumers in making the transition from being aware of product's benefits to incorporating them with personal value systems. The choice of picking the right advertising appeal rests on the criteria of the product, advertisers' preference, target market, customer's choice and the geographical region. Thus, advertisements, message themes and an effective communication medium are the backbone of success of every business organization.

Scope of the Study

For the study, the researchers have limited the scope of Creative Advertising Agencies to ten (10), all of which have a nationwide existence. Online responses from

⁴ Clow, E.K & Baack, D. (2013), Integrated Advertising, Promotion and Marketing Communications, Pearson Education, Inc, Fourth Edition, pp 176

ANALYZING THE PARAMETERS ADOPTED BY ADVERTISERS IN DESIGNING MEDIA ADVERTISEMENTS

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Abstract

The communication medium through television is recognized as the most powerful method of advertising and covers a wide range of customers from different geographical vicinity. Television advertisements can strongly display product attributes, features and characteristics and persuasively enlighten the benefits that the consumers expect from its usage. There exists a significant role of the advertising agencies while creating successful Television advertising campaigns. Appropriately designed and planned TV ads when accompanied by accurate execution strategies, acts as a powerful marketing tool. Based on a suitable impact index, this study aims to observe the varying parameters which the advertisers focus while designing an advertisement, the advertisers' belief and preferences regarding the selection of the message theme and the advertising appeals in relation to the product that is being advertised and their choice on various market segmentation variables in creating media advertisements. For the study, the researchers have restricted the scope of Creative Advertising Agencies to ten (10), all of which have a nationwide existence. A structured online questionnaire was served to the Ad agencies and their response formed the basis of collecting the primary data. Judgement Sampling has been adopted for the study. Through the findings of this study, an attempt has been

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made to bring scholarly attention in the field of advertising, from the advertiser's point of view. From this paper, the advertisers will come to know the impact of their advertisements in relation to the message theme, to customers as well as consumers of this region.

Key Words: Television, Advertisements, Advertising agencies.

1. Introduction

“When executing advertising, it’s best to think of yourself as an uninvited guest in the living room of a prospect who has the magical power to make you disappear instantly”¹

(By: John O’ Toole)

Advertising is a mass communication tool whose final intention is to provide information, build up attitudes and provoke actions, which are useful on the part of the advertisers. It plays a distinguished role in marketing of the goods, services and ideas for every organization. The advertising agencies aim to create effective and efficient advertisements each time in order to maintain its goodwill in this competitive scenario for a longer period.

For an advertisement to be effective, an ad first must be noticed. Next it must be remembered. Then the message of the advertisement should incite some kind of action, such as purchase, a shift in brand loyalty, or, at the very least, find a place in the buyer’s long-term memory.²

Advertisements are aimed to build a strong brand image, which creates brand equity. These two goals can be achieved by developing brand awareness among the customers. Advertising goals like message strategy, providing relevant information, persuasion and execution framework influences the understanding level of advertising messages by the target audience, which finally influences the buying behavior of the customers.

¹ <http://www.directcreative.com/wise-and-witty-quotes-about-advertising.html>

² Clow, E.K & Baack.D. (2013), Integrated Advertising, Promotion and Marketing Communications, Pearson Education, Inc, Fourth Edition, pp 144

Conceptual Framework

Advertising is the most dominant communication medium for every industry. It is an essential marketing tool for selling goods, services and ideas through channel of information and persuasion. In the words of Canor and Wichart, “Advertising includes those visual or oral messages in magazines, newspapers, movies and letter, over radio and television and on transportation vehicles and outdoor signs which are paid by their sponsors and directed to consumers for purpose of influencing their purchases and attitudes”³.

Every time, advertisements are designed with certain innovative and creative ideas. Creativity and Advertising may be considered as the two sides of the same coin. The advertisers design the advertisements keeping into consideration the main objective of the said brand. An objective guides the choice of an execution framework. The positioning of the advertisements is mostly influenced by the selection of the right target customers within selected geographical vicinity.

Advertising message theme, which acts as the next basic idea of any advertisement, is a sketch of the design that the advertising program aims to communicate. The message theme is the benefit or the assurance that the advertiser uses to reach the target audience. The promise, assurance, or the unique selling point backed by effective marketing communication strategies, should portray the key benefit of the good, service or idea that it offers to the customers. Also, the advertisements are supported by facts that substantiate the message theme.

In this busy world, an ad can be poles apart from its competitors and highly successful because of how it grabs an individual’s attention and imprints its image in the consumers mind. If the media advertisements portray the exact message theme, the fruit of success can be tasted by the organizations. Thus, every organization visualize to incorporate advertising, into the Integrated Marketing Communication (IMC) program in an efficient and effective way, so that the idea of retention and execution from the customers may be achieved.

³ Pandey B., Basic Principles of Advertising and Public Relation, pp 6, available at <http://www.ddegjust.ac.in/studymaterial/pgdapr/pgdapr-101.pdf>, accessed on 05-01-2014

(Source:http://www.indiantelevision.org.in/industryresources/adagencies/top50_adagencies.htm)

SI No.	Names of Advertising Agencies
1	Adbur Pvt Ltd
2	Akshara Advertising
3	Ambience D'arcy
4	Chaitra Leo Burnett Pvt Ltd
5	Contract Advertising (India) Ltd
6	Crayons Advertising and Marketing Pvt Ltd
7	Creative Advertising
8	Enterprise Nexus Communications Pvt. Ltd
9	Euro RSCG Advertising Pvt Ltd
10	Everest Integrated Communications Limited
11	Equus Advertising Co Ltd
12	FCB-Ulka Advertising Ltd
13	Fountainhead Communications Pvt Ltd
14	Fortune Communications Ltd
15	Graphisads Pvt Ltd
16	Hindustan Thompson Associates
17	Hakuhodo Percept
18	IB&W
19	Interface Communications Limited
20	Interact Vision Advertising & Marketing Pvt Ltd
21	Imageads
22	Jelitta Publicity
23	Kamerad-news
24	Mudra Communications Ltd
25	McCann-Erickson India Ltd
26	MAA Bozell Communications Ltd
27	Madison Advertising Pvt Ltd
28	Marketing Consultants & Agencies Ltd
29	MCS Communications Pvt Ltd
30	Market Missionaries (India) Pvt Ltd
31	Mouli's Euro RSCG (I) Pvt Ltd
32	National Advertising Agency
33	Ogilvy & Mather Ltd

these agencies have formed the basis of the research. The analysis has been based only on the advertisements which are aired on Television, i.e. Media advertisements through Television. As FMCG market is huge and the most fast growing market, so advertisements of only FMCG products has been taken into consideration.

From the study, the advertisers will come to know the parameters which to a large extent, influences the acceptance of their advertisements by the audience. They can very often, adopt new, creative and innovative advertising strategies to maintain a prominent status in the market.

Review of Literature

Alam. A (2012) in his study on “Consumer Interactions vis-à-vis Consumer Shopping Through Reality Show in Today’s Business Environment: A Study” focused on the talent based game shows and how adversely does it affect to the TV viewers. This theoretical based study gives the concept of various talent shows, which is very much existed in the Indian TV market. According to the author, the findings of this study may boost to the consumer shopping habit. The study reveals that the reality show industry is a market with a huge potential to create wealth and capture the imagination and emotions of the audience. In this scenario, the author suggested that it is of utmost importance to regulate this sector so as to mitigate the exploitative potentials and pitfalls that go with an industry having such characteristics. Also, the selection and elimination procedures should be transparent and before finalizing any event, sentiments of virtue and social behavior should always be given priority to restore.

Budhiraja A. (2012) in his study on “Consumer perception in context with Indian Sports Celebrities as Brand Endorsers” tried to find out the phenomenon of celebrity endorsement in mass media; especially involving sports celebrities and the impact of consumer buying behavior by making a comparative study about the level of awareness and popularity between Indian cricket celebrities and other Indian sports celebrities. Based on a sample of 100 respondents by using Convenience Sampling, the study revealed that Indian cricket celebrities are highly impactful on the decision making process of the consumers. According to the author, celebrity endorsement really works because the

qualities associated with the endorser are associated with the brand and the brand therefore remains at the top of the consumer mind. However, the impact of an endorser is likely to be a huge success in case of “image brands” like the categories of soaps, soft drinks etc. where it is difficult to distinguish between the products. The association between the Celebrities and the Customers of a brand can be categorized as; persuasiveness, demographic and psychographic connection between the stars and fans, universal appeal and public relation opportunities. Hence, before selecting any sports celebrity for endorsing, the author recommended the companies to have a thorough understanding of the image and values of the endorser along with the image and brand values of the product and its meaning and also the companies should choose a celebrity who is not already strongly associated with another product.

Jain V., Roy S., Daswani A. and Sudha M. (2010) in their study on “How Celebrities are used in Indian Television Commercials” analyzed the nature of celebrity endorsements in Indian Television Commercials, ascertained relationship (if any) between the category of product endorsed and the type of celebrity used and identified the relationship between celebrity gender and occupation and product category endorsed. Based on a total sample of 558 unique television commercials featuring 56 celebrities by using Descriptive study including content analysis and Cross-Tabulated Frequency Tables, the study findings contributed to the academia as well as practitioners. For the academia, the study identified the most dominant mode of celebrity advertising in India and found that there was no correspondence between the mode in which a celebrity was portrayed and the product category endorsed. For the practitioners, the study identified the lesser used modes of celebrity endorsements which could be used as opportunities. As per the authors, most of the advertisements in Indian scenario were found to be in the implicit mode, where the celebrity indirectly suggested the consumer to use a particular product or brand. The authors suggested that a cross country analysis on the impact of the celebrity endorsements on sale of the products, involving countries with different cultural context would be an interesting addition to this study.

Dash S K. and Sabat D R. (2013) in their study on “The impact of Celebrity endorsed TV commercials on demographic dynamics of attitude: An Indian context” viewed the

demographic aspects like age, gender and occupation, behind a company’s choice of celebrity endorsement as part of its promotional strategy while positioning its brand to a particular segment of whole consumer set. Based on a sample of 200 respondents, the study observes that the use of celebrity endorsements in TV commercials could be effective in influencing attitude and purchase intentions. However, the success of the use of celebrity endorsers depends on the fact for which demographic segment the advertisement was meant like age, gender, occupation, for the financially dependents or for business personnel. The authors suggested that the marketers should go thoroughly about the psyche of the different demographic segment before finalizing the strategies with a long term perspective.

2. Objective of the Study

This study aims to fulfill the following objectives: -

1. To observe the varying parameters which the advertisers focus while designing an advertisement.
2. The advertisers’ belief and preferences regarding the selection of the message theme and the advertising appeals in relation to the product that is being advertised.
3. The advertisers’ choice on various market segmentation variables in creating media advertisements.

3. Research Methodology

◆ Respondents

This research has been based on an online survey conducted through the use of questionnaire which formed the basis of collecting the primary data. Out of top fifty three advertising agencies, the population for the study consisted of ten (10) advertising agencies having nationwide presence. The basic reason for selecting these ad agencies is that, these agencies are at present largely dealt with advertisement of FMCG Products.

7	Humor may sometimes harm recalling and comprehension in general	2	6	2	0	0	80
8	The simpler the message, the less frequency of ads required	2	0	4	4	0	60
9	Audiences that are younger, better educated, and upscale and professionals are best suited to humor	0	0	4	4	2	44
10	New campaigns require higher levels of frequency in Televisions, to register the message in the minds of the consumers	2	2	6	0	0	72
11	A simpler ad resides in the minds of the consumers for longer duration	2	4	4	0	0	76
12	Older, less educated and downscale groups of consumers are least suited to humor appeal	0	0	2	6	2	40
13	A good understanding of the target audience is a mandate for effective communication	10	0	0	0	0	100

34	Pressamn Advertising and Marketing Ltd
35	Percept Advertising Ltd
36	Publicis Zen Communications Pvt Ltd
37	Purnima Advertising Agency
38	Quadrant Communications Ltd
39	Rediffusion-DY&R
40	RK Swamy/BBDO Advertising Ltd
41	Ram Advertising Service
42	Rashtriya Advertising Agency
43	Saatchi & Saatchi Pvt Ltd
44	SSC & B Lintas Ltd
45	Sasi Advertising Pvt Ltd
46	Trikaya Grey Advertising (India) Ltd
47	Ushak Kaal Advertising Pvt Ltd
48	Urja Communications Pvt Ltd
49	Lintas India Ltd

Another 4 (four) advertising agencies having nationwide presence are being added to the list based on their name and goodwill in the advertising market.

1	Creativeland Asia
2	JWT
3	Lowelintas
4	Scarecrow Communications

The Sampling procedure that is used is Judgmental sampling, as selection of the Advertising agencies is based only on the advertisements dealing with FMCG products. A list of top forty nine advertising agencies has been annexed herewith.

• Collection of Data

An online questionnaire based on 5 point Likert scale has been served to each of the 10 ad agencies to fill their responses regarding media advertisements, effective communication through media advertisements, etc. The questionnaire consisted of 22 Statements. The responses from these agencies formed the basis of the research. The parameters that formed the base of the questionnaire were; advertising message, advertising appeal, frequency of advertisements, plan of action of the advertising agencies and various demographic and socio-economic segments playing a major role in media advertisements.

• Analysis Technique :

I. Formulation Of Impact Index:

For the study, the responses of each Statement were converted into Impact score.

The formula for Impact Index is as below:

a. $Impact\ Index = (Weighted\ Score / Maximum\ Score) * 100$

b. $Weighted\ Score = w_1 * n_1 + w_2 * n_2 + \dots + w_5 * n_5$

where,

➤ w_1 to w_5 = weightage given to each responses per statement ranging from 1 to 5. The highest being 5 and 1 being the lowest.

➤ n_1 to n_5 = no. of respondents responding to a statement with respective weightage

c. $Maximum\ Score = Highest\ rate * N$

where,

➤ N = Total no. of respondents

The results from the questionnaire have been presented in percentage.

The scale of Impact Index that is taken into consideration is as follows:

RANGE	IMPACT WITH RESPECT TO THE STATEMENT
0-25	No Impact
25-50	Some Impact
50-75	Moderate Impact
75-100	High Impact

This study aims to throw light on the understanding level of the customers regarding the message theme and the appeals used by the agencies in their advertisements and the impact of the relationship between the message themes and the advertisements as is developed by these ad agencies. Through the findings of this study, these ad agencies can also frame or reframe their advertising strategies as per the need of the situation, as and when required.

Data Analysis

Following are the responses collected from the respondents:

No.	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Impact Index
1	Media advertisements are successful campaigns to reach large no. of target audience	8	0	2	0	0	92
2	The primary function of most media is to provide information or entertainment to the subscribers / viewers or readers	4	4	0	2	0	80
3	The purpose of media advertisement is to provide an environment for the firm's marketing communication message	2	4	4	0	0	76
4	Emotional ads are designed to evoke feelings among the customers	2	6	0	2	0	76
5	Humorous messages in advertisements put consumers in a good mood and evoke positive feelings that may become associated with the brand being advertised	4	6	0	0	0	88
6	Music in advertisements adds emotions that make consumers more receptive to the messages	4	6	0	0	0	88

medium the customers become aware of the features / usage and benefits of an existing product or a new product in the market. Also the advertisers merely support the fact that arguments of a brand in an advertisement relate positively to message acceptance. An advertising message is accepted by the flow and the content of the message and not by any kind of arguments. Regarding the production of original approaches every time in the advertisements by the agencies, the score is 64. Thus, it is inferred that the advertisers don't always produce original approaches every time in their advertisements. Different types of ads can be created keeping a single approach into consideration, but the approach should be proper in the first go itself.

No.	Statements	Fully satisfied	Satisfied	Neutral	Dissatisfied	Fully dissatisfied	Impact Index
19	Ad agencies always accurately interpret facts, strategies and objectives into usable advertisements and plans	2	2	6	0	0	72
20	Celebrity endorsement is a major promotion strategy in positioning a brand to a particular consumer segment	2	2	6	0	0	72

Regarding the facts that ad agencies always accurately interpret facts, strategies and objectives and celebrity endorsement is a major promotion strategy in positioning a brand, the impact scores have come out to be 72. As the Index score is within the range of 50-75, these Statements have a moderate impact for the study. The ad agencies accept the fact that they don't always accurately interpret facts, strategies and objectives into usable advertisements and plans. While considering many advertising situations, it is apparent that sometimes wrong interpretation of information occurs which finally leads to loss of the organization. These agencies humbly accept the fact that Celebrity endorsement is a major promotion strategy in positioning a brand to a particular consumer segment. It is evident that advertisements are recalled by the customers through the image of the Celebrities attached with a particular brand.

14	A media plan is the one and only tool for effectively communicating the message to the target audience	2	0	6	0	2	60
15	Ad agencies produce fresh ideas every time in their advertisements	0	0	8	2	0	56
16	Ad agencies present ideas and execution not requested but felt to be good opportunities by the customers	0	2	8	0	0	64
17	Support arguments of a brand in an ad relate positively to message acceptance	2	4	2	2	0	72
18	Ad agencies produce original approaches every time in their advertisements	0	2	8	0	0	64

With reference to the Impact Index analysis technique, as the Index score of the first Statement is 92 which falls within the range of 75-100, it is inferred that the successful campaigns that these ad agencies adopts to reach a huge no. of target population is by using media advertisements. Thus, from the advertising agencies point of view, this Statement posses a huge impact for the study.

Regarding the primary function of media to provide information and entertainment, the index score has been found to be 80 which is falling in the range of High Impact (75-100). Thus it can be inferred that, the principal role of most media is to present information, entertainment or amusement to the subscribers / viewers or readers. While developing advertisements, along with focusing on the product features, usage and its benefits, the agencies should always give priority to the entertainment quotient.

With regards to the purpose of media advertisement in providing an environment for the firm's marketing communication message and the emotional quotient attached to

the ad to evoke feelings among the customers, the Impact Index score is 76. This refers that the advertising agencies always endeavor to create an environment or a podium for communicating the firm's marketing message to the target audience. Emotions are always attached with the designing of advertisements. Emotional contents supplement the advertisements with the intention to evoke feelings among the customers.

Considering the statements that, humor and music in advertisements put consumers in a good mood and evoke positive feelings and also adds emotions that make consumers more receptive to the messages, the Impact score has been found to be 88, i.e., within the range of 75-100. Thus it can be inferred that, music and at times humor, is blended with the media advertisements for better response from the viewers. Humorous messages are added to put the consumers in a good mood and evoke positive feelings that may become associated with the brand being advertised. Along with the same, music in advertisements adds emotions that make consumers more receptive to the messages. So the agencies adds various types of melodious / funky / funny/ attractive, etc. music to the ads in relation to the product that is being advertised. Music helps the target audience in understanding the advertising message as well as to recall the ads many a times. Regarding the statement that humor may sometimes harm recalling and comprehension, the Impact score is 80. Thus, the advertisers believe; if the humor element in an advertisement surpasses the advertising message then it may not have a positive impact, in recalling and comprehension of the ad message for the audience. Thus, this Statement is essential for the study.

The simpler the message, the less frequency of ads required. The score of this statement has been found to be 60. This encourages in believing that the advertisers to a moderate extent consider the phrase; the uncomplicated the message, the less regularity of ads required. The impact score of the suitability of the humor content to younger, educated and upscale audiences' is 44. Thus it is inferred that the ad agencies does not firmly believe that humorous advertisements are best suited to the audiences who are younger, better educated, upscale and professionals. They mostly consider that the humorous advertisements are for every kind of audience.

Regarding newer campaigns requiring higher level of frequency in Televisions and recalling the simpler ads for a longer duration, the Impact Index score has been found to be 72 and 76. This means that the advertisers to an extent admit that higher level of

frequency is required in Televisions for new campaigns. This is required so that the new advertisements, its message, its taglines, etc. gets registered in the consumers mind for a longer duration. The advertisers also consider simpler ads to have more long-lasting effects in the consumers mind. The statement mentioning the less suitability of humor appeal to the older, less educated and downscale groups, the Impact score is as low as 40. It signifies that the ad agencies do not firmly consider humorous appeal to be least suited to the audiences who are older, less educated and downscale groups. They mostly consider that the humorous advertisements can be targeted to every type of audience.

The mandate of a good understanding of the target audience for effective communication, the Impact score has come out to be 100. As the Index score is within the range of 75-100, this Statement is the most important statement for the study. It also has the utmost impact for the research. It is inferred that the advertisers do believe that a good understanding of the target audience is a mandate for effective communication. Only then, successful media advertisements can be framed, targeted and finally aired in Televisions.

For the two statements, i.e., first, a media plan is the one and only tool for effectively communicating the message to the target audience and second, ad agencies produce fresh ideas every time in their advertisements, the impact score has been found to be 60 and 56. Thus, the advertisers give emphasis to a media plan to a moderate extent. They believe that a media plan is not the one and only tool for effectively communicating the message to the target audience. Along with the same, every time and for each advertisement, the ad agencies don't create fresh ideas. Sometimes for a single product / brand, same ideas can be continued for a number of ad frequencies. Thus, these Statements have a reasonable impact for the study.

Ad agencies present ideas and execution not requested but felt to be good opportunities by the customers. The score for this statement is 64. Likewise, the score for the statement "Support arguments of a brand in an ad relate positively to message acceptance" is 72. This means that, advertising agencies moderately believe the fact that ad agencies present advertising ideas and execution not requested but felt to be good opportunities by the customers. Advertisements are created based on consumers requirements / preference / demand and need of the hour and through the advertising

designing their advertisements can be sorted as; Selection of the accurate advertising appeals, the ultimate message which the organizations wants to communicate to the viewers, frequency of ads in relation to the life cycle of the brand in the market and the major demographic and the socio economic factor which impacts in the creation and innovation of media advertisements.

The agencies make use of a number of advertising appeals such as; Emotions, Music, Humor and Celebrity endorsement, in order to make the consumers more receptive and approachable to the ad message. These appeals motivates the consumers to retain information regarding the brands for a longer duration and thus in their final buying behavior. In certain situations; if the humor element in an advertisement surpasses the advertising message then it may hamper in recalling and comprehension of the ad message for the audience. Thus there should be a proper balance between the inclusion of these appeals and the message theme as well as the duration of the advertisement.

The simpler the message, more long-lasting effects in the consumers mind and thus less frequency of ads required. A fine knowledge and understanding of the target audience is a mandate for effective communication. A media plan is also not the only tool for effective communication of the ad message. Sometimes for a single product / brand, same ideas can be continued for a number of ad frequencies. Advertisements are created based on consumers requirements / preference / demand and need of the hour and through the advertising medium the customers become aware of the features / usage and benefits of an existing product or a new product in the market.

Also, “Age” is the prime demographic factor, and “Occupation” is the leading socio economic factor which plays a major role in framing the media advertisements by these agencies. If the advertising theme in an advertisement does not flow in accordance with the age and occupation of the target market, the entire effort may go at stake. Therefore, the market segmentation variables should be planned sequentially by the agencies to avoid risks at any ground.

Thus, it can be concluded that the right advertising message, in the right time and in the right way is the mantra to reach every customers’ desk and finally gain success for every ad agency and organization.

Statement 21: Demographic segments playing a major role in media advertisements

Factors	Highly Preferred	Preferred	Neutral	Not Preferred	Highly Not Preferred	Weighted Score	Maximum Score	Impact Index
Age	8	0	0	2	0	44	50	88
Gender	2	6	2	0	0	40	50	80
Life Stage	4	0	4	0	2	34	50	68
Marital Status	0	6	0	4	0	32	50	64
Household size	4	0	2	0	4	30	50	60

From the table, it has been observed that the demographic factor which plays a major role in media advertisements is “Age”. The ad agencies create an advertisement, keeping the factor of “Age” of the consumers into priority. The next prioritized factor for media ads is “Gender”. Advertisements are developed based on the consumers’ gender, i.e., either male or female. The remaining demographic factors like; Life stage (Child/ Youth/Collegiate/Adult/Senior), Marital status and Household size plays a moderate role in framing the advertisements and its message.

Statement 22: Socio Economic segments playing a major role in media advertisements

Factors	Highly Preferred	Preferred	Neutral	Not Preferred	Highly Not Preferred	Weighted Score	Maximum Score	Impact Index
Occupation	4	4	2	0	0	42	50	84
Education	6	2	0	0	2	40	50	80
Income	2	2	4	2	0	34	50	68
Financially dependants	2	4	0	0	4	30	50	60
Business personnel	4	0	2	4	0	34	50	68

From the table, it has been observed that the socio economic factor which influences the most, to the ad agencies in preparation of media advertisements is the “Occupation” of the target population. The ad agencies create an advertisement, keeping the factor of “Occupation” of the consumers into consideration. The next prioritized factor for media ads is “Education”. Advertisements and its strategies are framed keeping in view the literacy level of the consumers. It is because an ad which is targeted to an educated target audience differs remarkably from an ad, targeted to an uneducated mass of people. The remaining socio economic factors like; Income, Financially dependent consumers and Business personnel’s plays a moderate role in framing the advertisements, its theme and its message.

Findings

From the study, it has been observed that a huge no. of target population residing in varying geographical area is covered, with the use of successful media advertisements. The main purpose of most media is to deliver information or entertainment to the subscribers / viewers or readers. Amusement and entertainment are the two elements which should be given priority in proposing and advertisement. If an ad focusing on the product features,

its benefits and its usage, misses out the entertainment quotient, the whole subject matter of the advertisement will become vague. In the framework of designing the media advertisements, creation of an environment or a platform for communicating the firm’s marketing message to the target audience is a mandate on the part of the ad agencies. Emotional contents, Humor and Music is added to the advertisements to put the consumers in a good mood and evoke positive feelings and emotions that may become associated with the brand being advertised. Advertisements backed by musical note, flows with the understanding and capacity of recalling the advertising message by the audience. Even though humorous advertisements are for every kind of audience, at times, if the humor element in an advertisement surpasses the advertising message then it may hamper in recalling and comprehension of the ad message for the audience. The simpler the message, the less frequency of ads required and it also posses’ long-lasting effects in the consumers mind. The ad agencies believe that; fresh campaigns require higher level of frequencies in Televisions, a good understanding of the target audience is a mandate for effective communication, and a media plan is not the one and only tool for effectively communicating the message to the target audience.

Advertising agencies moderately believe the fact that ad agencies present advertising ideas and execution not requested but felt to be good opportunities by the customers. The advertisers merely support the fact that arguments of a brand in an advertisement relate positively to message acceptance. It is also seen that advertisers don’t always produce original approaches every time in their advertisements and they always don’t accurately interpret facts, strategies and objectives into usable advertisements and plans.

Celebrity endorsement is a major promotion strategy in positioning a brand to a particular consumer segment. It is also found that the demographic factor, “Age” and the socio economic factor, “Occupation” plays a major role in media advertisements.

Discussion

Advertising agencies plays a distinguished role in communicating the ad message / information and entertainment to the target audience through the use of media. A huge and varied mass of population from different geographical areas can be targeted through the use of Television media. The parameters which the ad agencies consider the most in

approach without being convinced of the seriousness of the SHG business. In the mad rush to promote SHGs quality aspects are often ignored.

This paper focuses specifically upon SGSY and non-SGSY programmes around SHG-based microfinance sector of Assam. The main objective of the study is to make a comparative study the effectiveness of the microfinance initiatives under SGSY and non-SGSY programmes in the state in terms of uplifting the socio-economic status of the beneficiaries under the programmes. On the basis of the findings, attempts have been made to provide effective suggestions and recommendations to policy makers, executors, trainers, and motivators the will assist in the implementation of the microfinance programme in the state of Assam on a sustained basis.

Key words : Poverty alleviation, Microfinance, SGSY, Non-SGSY programmes

Poverty alleviation and improvement in socio-economic life of the poor and vulnerable section of the society warrants the interaction of markets, state institutions and civil societies. It facilitates the process of harnessing the forces of economic integration and technological changes to serve the interest of the poor people and thereby assists them in becoming partners in society's growth process. It is widely believed that micro finance is a powerful tool to alleviate poverty and empowerment of vulnerable section and thus it is effective in bringing social and economic changes in the rural areas. It has been accepted that micro finance plays a vital role in reducing poverty since it paves the way for employment and empowerment which leads to economic development. The experiences of the last two decades vividly shows that micro finance plays a vital role in reducing poverty since it paves the way for employment and empowerment leading to economic development (Puhazhendi and Badatya, 2002; Khandekar S., 2001).

Poverty alleviation presupposes the creation of more and more opportunities for employment seekers and workers and job providers and it is possible through micro finance coupled with micro enterprises. Microfinance assists the hitherto financially excluded masses (read the poor) to access to credit from formal financial institutions and thus assist them to finance their productive activities, which in turn allows income growth and socio-economic empowerment of the masses, provided there are no other binding constraints.

Limitations of the study

Due to time constraint, selection of only a few Advertising agencies was taken into consideration. Also the total sample size has been limited to 10. The respondents were contacted online and the responses were collected through mail. As online responses were collected from these ad agencies, it was not certain whether the correct Creative Heads had given the response.

Future Scope for study

The Advertising agencies should be very particular in creating and communicating the advertisements. The ad message should be clear, concise and concrete while communicating the FMCG advertisements on air. Taking the findings of this study into consideration, the advertisers' belief and preferences regarding the selection of the message theme and appeals will be clear and transparent. The market segmentation variables which play a magnificent role in framing media advertisements can also be focused in detail and with top priority. The Ad agencies can take the opportunity to maintain and improve the existing strategies in developing the creative advertisements and can also accept new strategies as is required by the changing market from time to time.

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IMPACT OF MICROFINANCE THE SOCIO-ECONOMIC LIFE OF BORROWING MEMBERS : A COMPARATIVE STUDY BETWEEN SGSY GROUPS AND NON-SGSY GROUPS IN DARRANG DISTRICT OF ASSAM

Debabrat Sarma*

Abstract

Poverty alleviation presupposes the creation of more opportunities for employment seekers and workers and job and it is possible through micro finance coupled with micro enterprise. Microfinance assists the hitherto financially excluded masses to access to credit formal financial institutions and thus assist them to finance their productive activities, which in turn allows income growth, provided there are no other binding constraints. SGSY implemented through DRDA is the single largest microfinance initiative in Assam. Under this programme highest number of SHGs has been formed and credit linked in the state. At the end of March 2011, there were 1,11,589 credit linked SHGs in the out state out of which 77,889 SHGs have been formed and credit linked under SGSY programme against only 33,700 SHGs under non-SGSY programmes.

However, along with quantitative aspects, it is imperative to have a closer look at the qualitative aspects of the microfinance programmes in the state. The leaps and bounds in terms of growth of SHGs bring in attendant risks of ensuring quality in SHGs. There are also many not-so-serious players who for the heck of getting the kick of SHG based approach, have come to adapt SHG based

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quality aspects are often ignored. The perception of leading SHG promoters is that very few promoters have any clarity about the objective and the long-term trajectory of the SHGs.⁷

2. OBJECTIVES OF THE STUDY :

This paper focuses specifically upon SGSY and non-SGSY programmes around SHG based microfinance sector of Darrang district of Assam. The main objective of the study is to make a comparative study the effectiveness of the microfinance initiative under SGSY and non-SGSY programmes in the state in terms of uplifting the socio-economic status of the beneficiaries under the programmes. Area wise distribution of population in Darrang district shows that a vast majority of people (i.e.95.1 per cent of the total population) live in rural areas. hence the basic thrust in this study is to examine the impact of the microfinance programmes on the borrowing members in rural areas. Keeping this objective in view, field survey has been kept limited in the rural areas only. On the basis of the findings, attempts have been made to provide effective suggestions and recommendations to policy makers, executors, trainer, and motivators that will assist in the implementation of the microfinance programme in the state of Assam on a sustained basis.

3. METHODOLOGY:

The present study is mainly descriptive in nature. It makes an attempt to investigate into the socio-economic impact of SGSY and non-SGSY programmes on the borrowing members of the SHGs formed and credit linked under these programmes. Case study method has been used for data collection. Both primary and secondary data have been used for the purpose of this study. Primary source of respondents are the ultimate beneficiaries i.e. borrowing members under these programmes.

For the purpose of primary collection, a multi-staged random sampling technique has been adopted.

Stage –I : Selection of study area. Undivided Darrang district of Assam (present Darrang and Udalguri districts) has been selected for the purpose of data collection. Selection of study area has been done purposively so that it can represent the socio-economic and geographical characteristics of the state.

Apart from micro credit, microfinance is linked to various other development programs and hence it confers many benefits – both economic and social. This is a route out of poverty for the poor. Poor, who are vulnerable to fluctuation in income, micro finance provides the possibility of credit at times of need and also the opportunity of regular savings.

Puhazhendi and Badatya¹ carried on a study to assess the economic impact of microfinance programme for NABARD, covering 115 members from 60 SHGs in three backward eastern states, viz., Chattisgarh, Orissa and Jharkhand. The findings of the study revealed that there was significant increase in assets (up by 30%) and income level (up by 23%) of the members. A survey carried on by Khandker² in 1991-92 followed by another survey in 1998-99 in Bangladesh shows that “Microfinance participants do better than non-participants in both 91/92 and 98/99 in terms of per capita income, per capita expenditure, and household net worth. The incidence of poverty among participating households is lower in 1998-99 than in 1991-92 and lower than among non-participating households in both periods.”

Another study carried on by MYRADA on social empowerment of the women members of SHGs reconfirmed the general belief that women empowerment was the major outcome of the microfinance programme.³

1. MICRO FINANCE INITIATIVES ASSAM:

As in other parts of the country, SHG- based microfinance programme started in Assam in 1992. As part of NABARD’s pilot project on SHG- Bank linkage programme, two SHGs were formed and credit linked in Assam. However, the progress of the microfinance sector in the state has been very slow as compared to many other states of the country. At the end of November 2006, there were 1,23,021 savings linked SHGs in the state which increased to 2,45,120 at the end of March 2011 when total number of credit linked SHG was 1,11,589 which is less than 50 percent of the savings linked SHGs in the state. Cumulative bank loan provided to 1,11,589 SHGs credit linked in the state up to March 2011 was Rs. 51,47027 lakh which is only 1.6 percent of national total.⁴ Microfinance programme in the state has covered all the 28 districts of the state.

All the mainstream MFIs operating in the country viz. NABARD, SIDBI, NEDFi and major commercial banks are operating in the microfinance sector of Assam. With the increasing scale of operations of microfinance activities, larger number of institutions has started participating in the microfinance sector of the state – most of them on a for-profit

basis. At present, variety of Microfinance Institutions (MFIs) are operating in the state's microfinance sector under different legal forms. These agencies include 13 commercial banks, 2 RRBs of the state, 2 co-operative banks and other agencies like NGOs DRDAs, Farmers club and other voluntary organizations. At the end of March 2008, there were 276 NGOs engaged in SHG promotion, nurturing and credit linkage function.⁵ Under MFI Model, RGVN, SIDBI, SIRD and a few NBFCs are operating in some pockets of the state.

The Mahila Samata Society under the Mahila Samakhya Yojna of the Government of India has been actively involved in promoting SHGs. Rashtriya Grameen Vikas Nidhi [Now RGVN (NE) Finance Limited] is the largest voluntary sector intervention in the microfinance programme of the state. Initially, RGVN's operation was concentrated in the districts of lower Assam viz. undivided Goalpara and Kamrup districts. Of late it has extended its Credit and Savings programme to other districts of the state. The other two significant interventions are Bosco Reach out and Gyan Vigyan Samiti's 'Prochesta' initiative. However, their credit infusion is insignificant till date. Other bodies promoting SHGs in Assam include Vikash Volunteer Vahini, Farmers Club, DPEP and so on. At the end so on. At the end of March 2008, there were 271 Farmers Club operating in 20 districts of the state.

The Swarnjayanti Gram Swarozger Yojana (SGSY) launched with effect from 1st April 1999 is the largest microfinance initiative in the state. The programme is being implemented through the DRDAs, with the active involvement of Panchayati Raj Institutions (PRIs), the Banks, the Line Departments and the Non-Government Organizations (NGOs). The assisted families under the programme may be individuals or groups (Self-Help Groups). The SGSY, however, favours the group approach. The group approach involves organization of the poor into Self-Help Groups (SHGs) and their capacity building. A special SGSY programme has been designed for the development of Eri and Muga industry of Assam in eight handpicked districts namely, Goalpara, Dhuburi, Kamrup, Lakhimpur, Kokrajhar, Karbi-Anglong and Golaghat.

Agency-wise savings and credit linkage position of the SHGs in Assam at the end of March 2012 is as follows –

Table -1 Agency-wise SHGs savings and credit linked in Assam upto March 2012⁶

SHGs in Assam	SHGs formed and savings	SHGs formed and savings	Total
	Linked through DRDA under SGSY	Linked through other	
Total number of SHGs savings linked upto 31 st March 2011	1,15,056	1,30,064	2,45,120
Total number of SHGs credit linked upto 31 st march 6,2012	77,889	33,700	1,11,589
Credit linked SHGs as percentage of savings linked SHGs	67.7%	25.9%	45.5%

(Source : Status of Microfinance in India, NABARD, 2010-2011)

From the above table, it becomes clear that SGSY implemented through DRDA is the single largest microfinance initiative in Assam. Out of the 2,45,120 savings linked SHGs in Assam, 1,15,056 SHGs i.e. nearly 47 per cent SHGs have been formed under SGSY. Against this the share of credit linked SHGs under SGSY is 67.7 per cent. Out of the 1,11,589 credit linked SHGs in the state, 77,889 SHGs formed under SGSY have been credit linked. Out of the 1,30,064 SHGs formed and credit linked through other SHPIs in the state, 33,700 SHGs that is only 25.9 per cent of the SHGs have been credit linked.

However, along with quantitative aspects, it is imperative to have a closer look at the qualitative aspects of the microfinance programmes in the state. The leaps and bounds in terms of growth of SHGs bring in attendant risks of ensuring quality in SHGs. There are also many not-so-serious players who for the heck of getting the kick of SHG based approach, have come to adapt SHG based approach without being convinced of the seriousness of the SHG business. In the mad rush to promote SHGs (to reach numbers)

backward and forward linkages can be effectively established. The SGSY also focuses on organization of the poor at grassroots level through a process of social mobilization for poverty eradication. Social mobilization enables the poor build their own organizations {Self-Help-Groups (SHGs)} in which, they participate fully and directly and take decisions on all issues that will help them in coming above the Poverty Line. An SHG may consist of 10-20 persons belonging to families below the Poverty Line and a person should not be a member of more than one group. In the case of minor irrigation schemes and in the case of disabled persons, this number may be a minimum of five.

Financial Assistance :

Assistance under the SGSY to individual Swarozgaris or Self-Help –Groups is given in the form of subsidy by the Government and credit by the Banks. Subsidy under the SGSY to individuals is uniform at 30% of the Project Cost subject to a maximum of Rs.7500. in respect of SCs/STs, the subsidy is 50% of the Project Cost, subject to a maximum of Rs. 10,000. For groups of Swarozgaris, the subsidy is 50% of the cost of the Scheme, subject to a ceiling of Rs.1.25 lakh. There is no monetary limit on subsidy for Irrigation Projects.

Funding Pattern:

The SGSY is financed on 75:25 cost sharing basis between the Centre and the State.

Implementing Agencies :

The SGSY is being implemented by the District Rural Development Agencies (DRDs), with the active involvement of Panchayati Raj Institutions (PRIs), the banks, the Line Departments and the Non-Government Organization (NGOs).

7.2: Microfinance initiatives under Non-SGSY programmes

i) Microfinance initiatives of banking institutions:

at present, almost all the major banks in the state are actively involved in the Bank-SHG linkage programme, which include all the regional rural banks viz. Assam Gramin Vikash Bank and the Langpi Dehangi Rural Bank, ten nationalized banks, viz. Bank of Baroda, UCO Bank, SBI, Canara Bank, Union Bank of India, United Bank and the Assam Cooperative Apex Bank Ltd. A few banks themselves act self-help group promoting institution

Stage II: SHGs formed and credit linked in the district have been divided into two strata viz. SHOs formed and credit linked under SGSY programme and SHOs formed and credit linked under non-SGSY programmes. Altogether 120 credit linked SHGs have been selected on simple random sampling basis from two strata. Selection of SHGs has been done as follows –

SHGs formed and credit linked under programmes	Number of sample SHGs Selected on simple random sampling basis
SGSY	60
Non-SGSY	60
Total	120

Stage – III : Selection of borrowing members of SHGs. 120 borrowing members from the 120 credit linked SHGs have been selected for the purpose of data collection. Of the total borrowing members in each SHG selected in Stage-II, one borrowing member has been selected on simple random sampling basis. Selection of borrowing members has been done as follows –

SHGs formed and credit linked under programs	Number of sample borrowing members
SGSY	60
Non-SGSY	60
Total	120

Primary source of respondents also include officials and executives of NABARD, DRDA, RGVN, SIRD and some other organizations associated with microfinance programme. By and large, all organizations and institutions directly and indirectly involved in microfinance sector are taken up for study. Secondary source of respondents are the various reports published by the Central Government, Government of Assam, Reserve

Bank of India, NABARD and so on. Secondary data have also been collected from some other agencies like Small Industries Development Bank of India (SIDBI), Guwahati, NEDFi, Commercial Banks, RPBs, Co-Operative banks, RMK, SIRD, DRDA and so on. These are supplemented by various books, journals and periodicals and various websites on different aspects SBLP-both national and international.

4. SIGNIFICANCE OF THE STUDY :

India is a vast country with diverse socio-economic and geographical characteristics. Caste, creed, habit, and culture of the people in the country change from state to state, region to region. Against this backdrop, a particular approach to address the socio-economic problems before the nation may not yield desired results in all situations. Success of SGSY in credit linking highest number of SHGs in the state is a positive outcome. However, along with quantitative aspect, it is imperative to have a closer look at the qualitative aspects of the SHGs in the state. The study will help in examining the role of the SHGs formed under different programmes in improving socio-economic condition of the beneficiaries and to identify the impediments, if any, in these microfinance promotion initiatives. It will also help the government, RBI, NABARD and other policy making bodies to effect necessary changes in their policy measures so that the programme can be adopted as an effective measure of poverty alleviation and empowerment of the vulnerable sections of the society on a sustained basis.

5. REFERENCE PERIOD :

The study covers the different facets of SHG – based microfinance programme in Darrang district of Assam under SGSY and Non-SGSY programmes for a period of five years from the year 2006 to 2010. Respondents for the purpose of data collection have been selected from the SHGs formed and credit linked during the period from 1st January 2006 to 31st December, 2010.

6. LIMITATIONS OF THE STUDY :

All efforts have been made to include the different aspects of SGSY and non SGSY programmes directed to form and credit link SHG – based microfinance programme. Yet the study suffers from some limitations, which are as follows –

1. Time constraint was the major limitation in carrying out this study.
2. Unavailability of accurate and upto date information relating to the SHGs is a major limitation of the study.
3. Various reports on microfinance do not provide facts and figures in detail.

7. MICROFINANCE INITIATIVES: SGSY AND NON SGSY-PROGRAMMES

Microfinance initiatives in Assam can be discussed under two broad categories- viz. SHG promotion and credit linkage programme under SGSY and SHG promotion and credit linkage programme under non-SGSY programmes. As stated earlier, SGSY is the most important microfinance initiative in Assam under which highest number of SHGs has been credit linked. Of late, the non-SHG programmes have also gained importance. Under both the programmes, different types of institutions under different legal status are involved in SHG formation and credit linkage process.

7.1: Microfinance initiatives of DRDA under SGSY

The Swarnjayanti Gram Swarozgar Yojana (SGSY) was launched with effect from 1.4.1999 as a new Self-employment Programme. With the coming into effect of the SGSY, the earlier Programmes of Integrated Rural Development Programme (IRDP), Training of Rural Youth for Self-Employment (TRYSEM), Development of Women and Children in Rural Areas (DWCRA), the Ganga Kalyan Yojana (GKY) as well as the Million Wells Scheme (MWS) have been merged under programme.

The assisted families under the programme may be individuals or groups (Self-Help Groups). However, main emphasis under SGSY is on the group approach. The objective of the SGSY is to bring the assisted poor families (known as Swarozgaris) above the Poverty Line by providing them income-generating assets through a mix of bank credit and governmental subsidy. Towards this end, SGSY is conceived as a holistic programme of micro enterprises covering all aspects of self-employment viz. organization of the rural into Self-Help Groups and their capacity building, planning of activity clusters, infrastructure build up, technology, credit and marketing.

Strategy:

There are two key aspects of the SGSY, namely, Activity Clusters and the Group Approach. These Key Activities should preferably be taken up in clusters so that the

Poverty impact has been estimated by calculating the change in poverty gap of the borrowing members in BPL category deflated by the change in poverty gap of the control group.

The model is illustrated with the help of the following algebraic equation –

$$y = a + \delta x$$

where

a = existing conditions of the participants before joining SHGs.

δ = dummy variable, will have a nil value if the respondents has not participated in microfinance interventions and '1' if the person is a programme beneficiary.

x = the change in social circumstances

y = the social impact

This equation will now be tested under two possible scenarios :

Scenario 1 : Case of control group –

$$\delta = 0$$

$$y = a + 0 x$$

$$y = a$$

Other things remaining the same, the conditions of the inhabitants remain the same with no change, due to no borrowing taking place.

Scenario 2 : Case of target group:

$$\delta = 1$$

$$y = a + 1 x$$

$$y = a + x$$

The change (x) occurs in the social circumstances due to borrowing, over and above their existing conditions (a).

The difference between the two scenarios ($y = x$) demonstrates that the target group benefits, by an amount equal to 'x' from the borrowing, which shows the change in their social circumstances, while the control group remains the same in terms of social condition, with no impact due to no borrowing taking place. This has been represented graphically below:

(SHPI). After the SHGs are formed, the banks take the initiatives for their credit linkage. In some cases banks provide financial support to SHGs, which had grown almost spontaneously without any intervention of any SHPI. The cases of such linkages are of course not very common in the state. A few branches of the Assam Gramin Vikash Bank have been providing credit linkages to SHGs under this model.

ii) Joint microfinance initiatives of banking institutions and SHPIs (other than the DRDA):

In case of these SHGs, the Self-Help Promoting Institutions (SHPIs) like NGOs, Farmers clubs, and some government agencies provide the initial training, guidance to rural poor in organizing themselves into thrift and credit groups. In many cases, the SHPI also provides some initial support to these SHGs to segment their resources. The SHPI also keeps a watch and ensures satisfactory functioning of the SHGs even after the linkage. While linkage of the banks is direct with the SHGs, the SHPI has an important role in pre- as well as post-linkage stages. But these SHPIs do not involve themselves in the financial interaction process.

A part from DRDA, Assam Gandhi Smarak Nidhi, Neheru Yuva Kendra, Bosco Reach out, some regional level NGOs, Mahila Samata Society, Vikash Volunteer Vahini and Farmers Clubs are actively involved in the SHG promotion and credit linking process. Other important interventions are Namghar Samiti, DPEP, Namghar Samiti and Gyan Vigyan Samiti's 'Prochesta' initiative. However, the scale of operation of these SHPIs except the DRDA has been insignificant till date.

iii) Joint microfinance initiatives of banking institutions and SHPIs (other than the DRDA) where SHPIs act as financial intermediary:

under this programme the SHPI play the role of financial intermediary between the banks and a number of SHGs. Again, the SHPIs take up such responsibilities only in respect of the groups promoted/nurtured by them and not for other groups. The SHPI accepts the contractual responsibility for repayment of the loan to the bank. Only a handful of small regional level NGO-MFIs are involved in this model. SATRA and SDCC in the Sipajhar area of Darrang district, Birkhang Harimu Afat in Udalguri district, the North East Centre for all Round Development (CARD), Mangaldoi, Darrang, Tinsukia Gaon Tribal

Mahila Samittee etc. are some of the examples of SHPIs involved in financial intermediation process.

iv) Initiatives of Microfinance Institutions:

In recent times, the MFIs have assumed a greater role in the SHG formation and credit linkage programme. Wholesale microfinance service providers like NEDFi, SFMC, have been carrying on their microfinance operations in the state for long. They implement their microfinance programmes through some other agencies like NGO-MFIs. Besides institutions like NGO-MFIs and some NBFCs like RGVN (NE) Microfinance Ltd, North east Finservices Ltd, Asomi Fin PVT Ltd, CHAU, Dibrugarh have been providing specified financial services targeted to the poor in the state. They provide thrift, credit and other financial services and products of very small amounts mainly to the poor in rural, semi-urban and urban areas for enabling them to raise their income level and improve living standards. The MFI model in Assam is characterized by a diversity of institutional and legal forms such as Societies registered under the Societies Registration Act, 1860; Co-operatives registered under Co-operative Societies Act of the State and the Non Banking Finance Companies-MFIs which are registered under the Companies Act 1956 or NBFCs registered under the Reserve Bank of India.

8. MECHANISM ADOPTED FOR IMPACT ASSESSMENT

In this study, socio-economic impact of SHGs on borrowing members has been measured by analyzing both quantitative and qualitative impacts. Quantitative impact has been examined on the basis of two main criteria viz. impact on income level and asset level of the borrowing members. An analysis of the income impact on borrowers will indicate short term SHG impact under the SGSY and non-SGSY programmes. Besides, impact on asset level of the borrowers has also been studied to examine long-term impact of microfinance on the borrowing members.

This apart, there are some other quantitative factors, which have important bearings on the income and asset level of the borrowing members. For example easy accessibility to credit, cost of credit, repayment period, availability of support services etc. have important bearings on the entrepreneurial activities of the borrowing members and thereby influence

their income and asset level. Hence for the purpose of this study, the following impact indicators have been used –

- i) Coverage of members from BPL category,
- ii) Impact on extent and intensity of poverty,
- iii) Impact on income level of members,
- iv) Impact on income level of members in BPL category,
- v) Impact on asset holdings of members,
- vi) Impact on asset holdings of members in BPL category,
- vii) Cost of credit,
- viii) Accessibility to credit,
- ix) Vulnerability of borrowing members and
- x) Availability of support services.

There are different methods used for the study of impact of any microfinance operation. These methods include Scientific method (target group vs. control group), 'Before and After intervention', 'Participatory Learning and Action' and 'Household Economic Portfolio Model'⁸ for the purpose of this study, following two comparison methods have been used.

8.1: Target group vs. control group⁹:

This model employs two sets of groups, both from the same rural dwelling and living in identical economic and social conditions. The only difference is that one set of individuals (the Target group) are subjected to microfinance intervention, while participants of the other group (control group) are not subjected to any microfinance interventions. After a particular period, the program borrowers (*ceteris paribus*) start to show signs of improvement in terms of income, asset holding, literacy, health, gender-related issues and community relations, subjects of the control group, on the contrary, continue to lead lives as before. The difference in the quality of lives, between the two measured against a set of social impact variables and indicators, exhibits the impact that has taken place due to microfinance. In this study the income impact has been estimated by calculating the change in income of borrowing members as percentage of income change of control samples.

9.3: Impact on extent of poverty:

According to the definition of poverty stated above, 39 borrowing members out of 120 sample members were below the poverty line before the formation of SHG which declined to 16 after the SHG formation. This shows that the extent of poverty has reduced among the members of the SHGs. Under both the programmes, the extent of poverty has reduced.. The reduction in the share of members in the BPL category is the highest under non-SGSY programmes. Under this programmes 1.8 out of 60 sample borrowers (i.e. 30.0 per cent) were in BPL category before joining SHG which reduced to 5 that is 8.3 per cent during the post SHG period. In other words 21.7 per cent of the sample members have crossed over to income group of above ~8300.40 during the post SHG period while the share of borrowing members crossing over the BPL category under SGSY is 16.7 per cent.

Table 3: Income level of SHG members both before and after SHG

Range of income	Period	All programmes		Programmes			
		F	%	SGSY		Non-SGSY	
				F	%	F	%
Upto Rs. 5,000	Before SHG	12	10.0	09	15.0	03	5.0
	2010	04	3.3	04	6.7	--	--
Rs. 5,001 – 8300.40	Before SHG	27	22.5	12	20.0	15	25.0
	2010	12	10.0	07	11.7	05	8.3
Above Rs. 8300.40	Before SHG	81	67.5	39	65.0	42	70.0
	2010	104	86.7	49	81.6	55	91.7

9.4: Impact on intensity of poverty:

Besides the reduction in the extent of poverty, there is also reduction in the intensity of poverty during the post SHG period. This can be seen from the decline in the number of members in the income group of upto { 5000. While the number of members in this group at the time of joining the SHG was 12, it declined drastically to 04 at the end of 2010. The

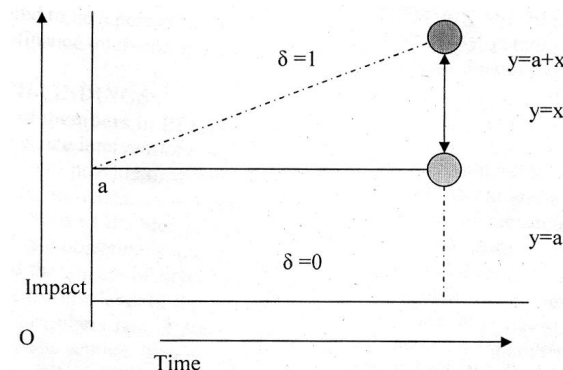


Figure 1: Graphical representation of the social impact after program intervention

8.2 : Before microfinance intervention vs. after microfinance intervention¹⁰: This method involves the comparison of the various aspects/variables of before microfinance intervention with that of after microfinance intervention.

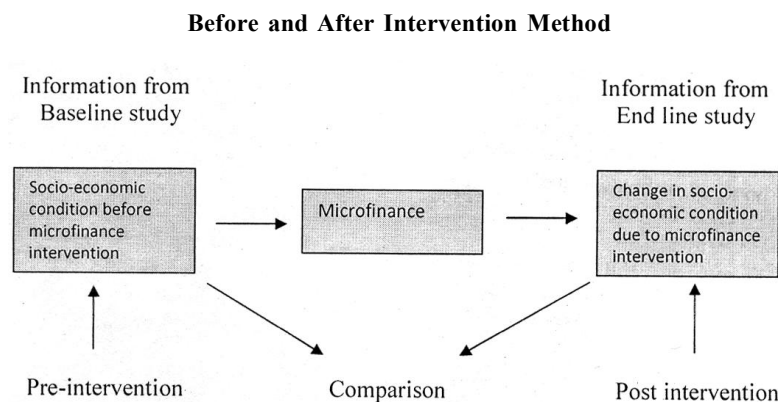


Figure 2: Before and After SHG Impact Assessment Model

Thus the income and poverty impacts are measured by using a combination of 'before- after' and 'with- without' approach where 'before SHG' and 'without SHG' are serving as control samples.

8.3: Concept of Poverty¹¹:

Poverty line is one of the indicators of poverty. For the purpose of this study, income based poverty line prescribed by the Government of Assam in 2009-10 has been accepted. According to this standard, a person lying below the income of Rs. 691.70 per month or Rs. 8300.40 p.a. is considered to be a person in the BPL category. In our study, persons crossing this line as a result of microfinance intervention are accepted to have crossed the poverty line.

9. RESEARCH FINDINGS:

9.1: Coverage of members in BPL category

Microfinance interventions are meant for the poor and vulnerable section of the society. Basic objective is to provide them access to formal financial system and assist them to take up income generating activities. In our study, borrowing members of the sample SHGs have been classified on the basis of the income based poverty line indicator prescribed by the Government of Assam. The basic objective is to examine the coverage of members in BPL category under the programmes and the impact of SHG based interventions on their income level. For the purpose of this study, the income level of the members has been divided into three strata- average annual income level of members upto Rs.5000, average annual income of members from Rs. 5001 to Rs. 8300.40 and average annual income of members above Rs. 8300.40. Members in the first two income brackets fall in BPL category. An analysis of the primary data collected from entrepreneur members of the SHGs, it is seen that as a whole only 32.5 per cent of the sample borrowing members fall in the BPL category and a large section of the borrowing members that is 67.5 per cent of the members does not fall in BPL category. Programme-wise analysis shows that SGSY covers a comparatively larger section of borrowing members from the BPL category (in the pre-SHG period). This programme covers 35.0 per cent of the members from BPL category against 30.0 percent under non- SGSY programmes (Table-3).

9.2: Head Count Index:

The impact of micro finance through SHGs on poverty can also be assessed through Head Count Measure. Head Count Measure is simply the number of individuals who cross the poverty line as a result of microfinance. The headcount index (HCI) is the proportion of the population with a standard of living below the poverty line². It is the proportion of the population whose economic welfare (y) is less than the poverty line (z). If q people are deemed to be poor in a population of size n then-

$$H=q/n.$$

Unit of Measurement of HCI is % i.e. poverty impact using this measure is the percentage of borrowers crossed the poverty line compared to control group.

Table 2: Change in Head Count Index under different programmes

Indicators	All Programmes	SGSY	Non SGSY
Head count Index before SHG (%)	32.5	35.0	30.0
Head count Index in 2009 (%)	13.3	18.3	8.3
Change in HCI in 2009 as compared to the control group (%)@	2.5	0.0	4.6

@ HCI change in control group during the period – 16.7 per cent.

An analysis of the HCI of the target group (sample members) as compared to control group shows that the index has declined under non- SGSY programmes i.e. a higher portion of the sample borrowers in BPL category have crossed the poverty line under this programme as compared to the control group. Under SGSY and non-SGSY programmes, HCI in 2006 were 35 per cent and 30 per cent respectively. It declined to 18.3 per cent and 8.3 percent respectively ~ 2010. Comparing the HCI change between the target group and control group, it is seen that as a whole rate of decline in HCI is 2.5 per cent higher than the control group. In the case of the respondents under non-SGSY category respondents it is 4.6 per cent higher than the control group while in the case of the respondents under SGSY programme, rate of decline is at par with the control group i.e. 16.7 per cent.

9.9: Poverty Gap Index:

Another measure of poverty is the poverty gap index. POI measures the depth of poverty; that is how far, on average, by which households/individuals fall below the basic needs poverty line (BNPL), and expresses it as a percentage of the poverty line³. This measure is the mean proportionate poverty gap in the population (where the non-poor have zero poverty gap). In simple words The poverty gap is the average, over all people, of the gaps between poor people's living standards and the poverty line. It indicates the average extent to which individuals fall below the poverty line (if they do). It is observed from Table-4.6 and Table-4.7 that as a whole, PGI is 0.066. Programme wise analysis shows that PGI is higher in the case of BPL category members under SGSY programme than the BPL category members under non-SGSY programme. In the case of these two programmes, the PGIs are 0.79 and 0.041 respectively. PGI under SGSY programme indicates higher intensity of poverty remaining in the case of BPL members under this programme.

Table – 6 : Calculation of PGI under SGSY programme

Calculating the Poverty Gap Index (PGI), assuming BNPL of Rs. 8300.40 per capita adult												
i) Individuals in population	1	2	3	4	5	6	7	8	9	10	11	Sum
ii) Per capita adult equivalent per year in Rs. (y _i)	7700	8120	7975	7550	8052	6975	7600	7800	7650	6950	7804	
iii) Poverty Gap in Rs. (BNPL y _i)	600.40	180.40	425.40	750.40	248.40	1325.40	700.40	500.40	650.40	1350.40	496.40	
iv) Poverty Gap/BNPL	0.072	0.021	0.051	0.090	0.030	0.160	0.084	0.060	0.078	0.163	0.060	0.87
v) Poverty Gap Index [(Poverty Gap/BNPL)/Population]												0.79

decline in the share of members in this category is higher in the case of the respondents under SGSY programme (8.3 per cent) than the non-SGSY programme. In the later case, all the 3 respondents in the income group of upto Rs. 5000 have crossed over either of the next two income groups. There is also significant decline in the number of borrowing members in the income group of Rs. 5000 to Rs. 8300.40. At the time of joining the SHGs the share of borrowing members in this category was 22.5 per cent which declined to 10.0 per cent in 2010. There is sharp decline in the share of members in this category under non-SGSY programmes. In this category, the share of borrowers declined by 16.7 per cent while it declined by only 10.0 per cent under SGSY. This shows that under non-SGSY programmes, reduction in both extent and intensity of poverty of the borrowing members is higher than the SGSY programme.

9.5: Impact on average income on all the borrowers:

As a whole, average income of all the borrowers has increased from 9708.38 to 12872.45 recording a growth of 32.6 per cent. Average income growth is higher in the case the beneficiaries under non-SGSY programmes (42.3 per cent) as compared to beneficiaries under SGSY. Under SGSY, average income growth of the beneficiaries is 24.0 per cent (Table- 4).

9.6: Average income impact# : Target group vs. Control group:

Over time the income level of the borrowers may increase without SHG programmes. In this study our attempt is to examine only the effects of borrowing through SHGs on the income level of the borrower and seek to isolate all other impact on the income level of the borrowers. For this purpose, an attempt has been made to examine the impact on change in poverty by the income change of the poor borrowers on the basis of the control group. It is found from Table-4 that under both the programmes, net impact of borrowing on income level of the borrowing members is positive. Average income of all the sample borrowers has gone up by 234.7 per cent as compared to the control group. The average income of the borrowers in the non-SGSY category has gone up by 286.2 per cent as compared to the control group while it is 183.2 per cent in the case of borrowers under SGSY. Thus microfinance initiatives under non-SGSY programme are more fruitful in terms of growth in income level of the borrowing members of the SHGs.

Table-4: Impact on income level of all the borrowers under different programmes

Indicators and period		All Programmes	Programmes	
			SGSY	Non-SGSY
Average income of all borrowers (Rs.)	Before SHG	9708.38	10,291.05	9,125.70
	2010	12872.45 (32.6)	12,760.90 (24.0)	12,984.00 (42.3)
Average income impact #	All borrowers	234.7	183.2	286.2

(Average income of the control group before SHG = Rs. 10657.50)

Average income of the control group in 2009 = Rs. 12005.50

Amount of Change = Rs. 1348.00

* Figures within the brackets show the percentage change during the period.

#Average income impact is the change in income of the borrowers as percentage of income change of control group)

9.7: Impact on average income of the borrowers in BPL category:

Positive impact of borrowing is seen not only in the average income of all the borrowing members but also in the average income of the members under BPL category under both the programmes having income less than Rs. 8300.40 p.a. before the formation of SHOs. As a whole, average income of the borrowers in BPL category has increased from ~ 5963.94 to Rs. 7750.38 recording a growth of 30.0 per cent. Average income growth is the higher in the case of the beneficiaries under noi1-SoSY programmes (37.7 per cent) as compared to beneficiaries under SGSY. Under SGSY, average income growth of the beneficiaries is 25.0 per cent.

Table-5: Impact of SHG on income level of the borrowers in BPL category under different programmes

Indicators and period		All Programmes	Programmes	
			SGSY	Non-SGSY
Average income of all borrowers in BPL category (Rs.)	Before SHG	5963.94	6123.36	5777.94
	2010	7750.38 (30.0)	7656.91 (25.0)	7956.00 (47.7)
Average income impact #		132.5	113.8	161.5

9.8: Average income impact: Borrowers in BPL category vs. Control group:

Compared between all the borrowing members and borrowers in the BPL category, it is observed that average income impact is lower for the borrowers in BPL category than for all the borrowers. While the average income of all the borrowers has gone up by 234.7 per cent as compared to the average income of the control group, the same for the borrowers in BPL category has gone up by 132.5 per cent. It is observed that average income impact is lower for the borrowers in BPL category than for all the borrowers in the case of both the programmes. However, the average income impact is positive in the case of the borrowers in BPL category under both the programmes. There is marked difference in the average income impact on the BPL category borrowers under the two programmes. Average income impact for the borrowers under SGSY programme is 113.8 per cent against 161.5 per cent in the case of BPL category borrowers under non-SGSY programme (Table-5).

aspect of SHG based microfinance under different microfinance programme in Darrang district of Assam.

Table – 10 : Accessibility to Credit by SHG members under different programmes

Indicators	All programmes	Programmes	
		SGSY	Non- SGSY
Total amount of loan received by SHG members (from 2006 to 2010)	31,57,500.00 (100.0)	14,38,500.00 (44.5)	17,19,000.00 (55.5)
Average amount of loan received by each SHG member (from 2006 to 2010)	26312.50	23,975.00	28,650.00
Average amount of current loan proposed (Rs.)	6264.59	5804.17	6725.00
Average amount of current loan disbursed (Rs.)	6004.34	5413.17	6595.50
Disbursement as % of proposed amount	95.8	93.3	98.1
Average rate of interest (%) per month	2.82	2.79	2.83
Average repayment period (in month)	11.79	11.5	12

It is observed from the Table-10 that on an average both the programmes under our study have failed to meet 100 per cent credit requirements of the members, indicating that the SHG members have lesser access to credit, which is not a positive development. As a whole total amount of loan received by all the sample SHGs is Rs. 31,57,500.00 out of which 55.5 per cent of the total loan is received by the SHG members under non-SGSY programme. Average amount of loan received by the SHGs under this programme is Rs. 28,650.00 against Rs. 23,975.00 under SGSY programme (during the period of the study).

Both average amount of current loan proposed and disbursed are higher in the case of microfinance programmes under non-SGSY category. Disbursement ratio under this programme is 98.1 per cent against 93.3 per cent under SGSY programme. Prefixed limit of loan that can be obtained from banks by SHGs as well as limited number of linkages received by SHGs is mainly responsible for lower disbursement rate under this model.

Table – 7: Calculation of PGI under non-SGSY programme

Calculating the Poverty Gap Index (PGI), assuming BNPL of Rs. 8300.40 per capita adult equivalent (p.c.a.e) per year						
	1	2	3	4	5	Sum
i) Individuals in population						
ii) Per capita adult equivalent per year in Rs. (y_i)	8150	7900	7550	8230	7950	
iii) Poverty Gap in Rs. (BNPL- y_i)	150.40	400.40	750.40	70.40	350.40	
iv) Poverty Gap/ BNPL	0.018	0.048	0.090	0.008	0.422	0.21
v) Poverty Gap Index [(Poverty Gap/ BNPL)/ Population]						0.041

9.10: Impact on average asset level of all the borrowers:

Asset accumulation serves as a potential exit avenue from chronic poverty. Assets also help individuals reduce their vulnerability to shocks in that with assets, individuals are less subject to fluctuations in the short and medium term.¹⁴ Hence asset levels may be more stable and reliable indicator of poverty levels than income measures. Therefore in this part of the study, an attempt has been made to examine the asset impact.

As a whole, average asset value for all the borrowers has increased from {3214 1.82 to Rs. 37590.38 recording a growth of 17.0 per cent. Average asset level growth is higher in the case of the beneficiaries under non-SGSY programmes (19.9 per cent) as compared to beneficiaries under SGSY. Under SGSY, average asset level growth of the beneficiaries is 13.4 per cent (Table-8).

9.11: Average asset impact : Target group vs. Control group:

It is found from Table-8 that under both the programmes, net impact of borrowing on asset level of the borrowing members is positive and the rate of growth in asset level of the borrowers is more than the rate of asset level growth of the control group. Average asset level of all the sample borrowers has gone up by 192.0 per cent as compared to the control group. -The average asset impact for the borrowers in the non-SGSY category is 247.2 per cent while it is 136.9 per cent in the case of borrowers under SGSY. ,Thus microfinance initiatives under non- SGSY programme are more fruitful in terms long term sustainability of the programme.

Table – 8 : Impact of SHG on the Asset Level of Borrowers under different programmes

		All programmes	Programmes	
			SGSY	Non- SGSY
Average asset value (Rs.)	Before SHG	32141.82	29050.50	35233.13
	2010	37590.38 (17.0)	32935.33 (13.4)	42245.42 (19.9)
Impact of change (as % of control group)		192.0	136.9	247.2
Target group : Average income before SHG Rs. SHG Rs. 30166.25 Average income in 2010 Rs. 33003.33 Change in income Rs. 2837.08 * Figures within the brackets show the percentage change during the period. # Average income impact is the change in income of the borrowers as percentage of income change of control group.				

9.12: Impact on average asset level of the borrowers in BPL category:

Positive impact of borrowing is seen in not only in the average income but also in the average asset level of the members in BPL. category under both the programmes having income less than Rs. 4416 p.a. before the formation of SHGs. However, the rate of growth in asset level of the borrowers in BPL category is less than the rate of growth in asset level of all the borrowers under both the programmes. As a whole, average asset level of the borrowers in BPL category has increased from Rs. 21951.01 to Rs. 24374.03 recording a growth of 11.0 per cent. Average asset level growth is the higher in the case of the beneficiaries under non-SGSY programmes (13.7 per cent) as compared to beneficiaries under SGSY. Under SGSY, average income growth of the beneficiaries is 12.8 per cent.

9.13: Average asset impact: Borrowers in BPL category vs. Control group:

Compared between all the borrowing members and borrowers in the BPL category, it is observed that average asset impact is lower for the borrowers in BPL category than for all the borrowers. While the average asset impact for all the borrowers is 192.0 per

cent, the same for the borrowers in BPL category is 85.4 per cent. That is the average income impact is negative in the case of the borrowers in BPL category as a whole. In other words, in the case of the BPL category borrowers, asset impact is lesser than the asset impact on control group. However, there is marked difference in the asset impact on the BPL category borrowers under the two programmes. Programme-wise asset impact for the borrowers under non- SGSY programme is higher than the asset impact on control group while in the case of the BPL category borrowers under SGSY category, the asset impact is lower than the control group. Under non-SGSY category borrowers asset impact is 111.8 percent of the asset impact on control against group while the same is 94.4 per cent in the case of SGSY category borrowers. From this analysis it can be concluded that the asset impact of the poorest borrowers is always lower as increasing income level of the poorest borrowers is mainly used for consumption purposes rather than utilizing in asset accumulation.

Table – 9 Impact of SHG on the Asset Level of Borrowers BPL category under different programmes

		All programmes	Programmes	
			SGSY	Non- SGSY
Average asset value (Rs)	Before SHG	21951.01	20885.25	23150.00
	2010	24374.03 (11.0)	23563.00 (12.8)	26320.50 (13.7)
Impact of change (as % of control group)		85.4	94.4	111.8

9.14 : Measurement of accessibility to credit :

Another factor, which has tremendous impact on success – failure ratio of microfinance programme, is accessibility to credit by the borrowing members. There are different factors – both quantitative and qualitative – which influence the accessibility to credit. Terms and conditions of credit like repayment period, rate of interest, formalities to be observed for getting the loan sanctioned and disbursed often determine accessibility to credit by the poor and vulnerables. In this part of the study we examine this particular

Table-12: Support services availed by borrowing members under different programmes

Sl. No	Indicators	All programmes (%)	Programmes			
			SGSY		Non-SGSY	
			No. of SHG	%	No. of SHG	%
1	Training on microfinance	107 (89.2)	51	85.0	56	93.3
2	Training on IGA	39 (32.5)	--	--	39	65.0
3	Marketing	54 (45.0)	23	38.3	31	51.7
4	Insurance	26 (21.7)	--	--	26	43.3
5	Housing finance	--	--	--	--	--
6	Counseling	63 (52.5)	19	31.7	44	73.3
7	Other	--	--	--	--	--

9.17: Findings on the quantitative aspects of microfinance programmes under different programmes:

Analysis of primary data reveals some important fact regarding the impact of microfinance initiatives under the two programmes covered in the study which are as follows:

There is no marked difference in the average repayment period of loans under the programmes. Similarly, the rate of interest charged on the loans provided to members is more or less same under both the programmes i.e. 2.79 and 2.83 per cent respectively. The rate of interest charged under microfinance programme is much higher than the bank rate of interest. This is one of the basic principles of microfinance. However compared to the rate of interest charged by the moneylenders, this rate of interest is much lower who charge 5 to 10 per cent interest per month. On the other hand; the interest amount is their group savings and hence their group assets and ultimately, the benefits of this group savings will go to the members. This interest rate is decided by the members of the group and not by any outside agencies. This shows that the members of the groups have lesser access to the source of fund but comparatively at cheaper rate of interest.

9.15: Measurement of vulnerability of borrowing members:

Another important aspect which requires careful analysis is the vulnerability of members. Vulnerability of members has been examined on the basis of Debt-Service ratio and Repayment ratio. Table-11 gives an idea about the total amount of loan disbursed, the repayment made and the ratios in connection thereto under different programmes.

Table-11 : Measurement of Vulnerability of borrowing Members on the basis of current loan availed in 2010)

Indicators	All programmes	Programmes	
		SGSY	Non- SGSY
1. Total Amount Disbursed (Rs)	7,20,520.00	3,24,790.00	3,95,730.00
2. Total Amount Repaid (Rs.)	4,84,800.00	1,99,050.00	2,85,750.00
3. Total Amount Outstanding (Rs.)	2,35,720.00	1,25,740.00	1,09,980.00
4. Average Amount Repaid (Rs.)	4,040.00	3,317.50	4,762.50
5. Average Loan Outstanding (Rs.)	1964.34	2095.67	1833.00
6. Repayment [§] Ratio (%)	67.3	61.3	72.2
7. Debt-Service [#] Ratio (%)	55.9	48.4	62.7
# <u>Total amount repaid</u>			
Total income			
§ <u>Total Amount Repaid</u>			
Total Amount Disbursed			

As a whole repayment ratio for all the borrowers is 67.3 per cent. It is observed from Table-10 that the repayment ratio is more than 60 per cent in case of the borrowers under both the SGSY and non-SGSY programmes. However, in the case of the borrowers under non-SGSY programme, the repayment ratio is much higher than the borrowers under SGSY programme. Under non-SGSY programme repayment ratio is 72.2 per cent against 6.3 per cent in the case of the borrowers under SGSY programme. This is a positive development under the microfinance programme which, once again proves high repayment ratio under microfinance programme and the viability of microfinance as a means for banking with the poor. However, the higher repayment ratio in the case of the borrowers under SGSY programme in spite of a lower disbursement ratio is not an encouraging development. It may adversely affect the productivity of loan taken by the SHG members. In the case of members under non-SGSY programme where disbursement ratio is comparatively higher, a higher repayment ratio is a clear indication that the groups under this programme are functioning well and they have attained maturity to absorb outside capital.

Vulnerability of the borrowing members can be seen from their debt-service ratio. It is observed from Table-10 that debt service ratio of the all the sample borrowers is 55.9 per cent. Under non-SGSY programme the ratio is comparatively higher (62.7) than the SGSY programme (48.4). This implies that greater amount of income is being spent for repayment of debt by borrowers under this programme. This will have negative impact on the socio-economic status of the SHG members of the under this programme, since higher Debt-Service ratio means that less amount of income is remaining in the hands of the borrowers to meet their basic needs. This could lead to vulnerability of the group.

9.16: Support services

Success of a microfinance programme pre-supposes the existence of some basic services which are vital in capacity building efforts of the targeted group. Support services play an important role in future sustainability of SHGs. The field study revealed that 89.2

per cent of borrowing members have received training on different aspects of microfinance, 32.5 per cent of the members have received training on IGA. Programme wise analysis shows that under SGSY, 85.0 per cent of the sample beneficiaries have received training on microfinance against 93.2 per cent beneficiaries under non-SGSY programmes. About 32 per cent of the members in SGSY groups have not received any sort of training, not even training on SHG concept, awareness and orientation. Apart from training, SHG members have availed some other support services like insurance, marketing, counseling and so on. Under non-SGSY programmes 65.0 per cent beneficiaries have availed training facility on different income generating activities while 43.3 per cent of the beneficiaries have availed micro-insurance facility. SGSY beneficiaries have not availed both of these two basic services. Thus analysis of the primary data reveals that under the programmes the main thrust is to provide microcredit to borrowers. Little efforts have been made to provide related services like training on IGA, micro insurance, housing loan, pension etc. which are vital for effective implementation of microfinance programme. Under non-SGSY programme NGO-MFIs in the district have endeavored to provide these related services to their clients. However, due to some binding constraints like financial problems, inexperience, weak management and so on, their scale of operation has remained insignificant till date.

In this section, an attempt has been made to examine the impact of microfinance on the quality of life of the borrowers through 11 statements of assertion on three broad indicators viz. social empowerment, economic empowerment and political empowerment. For each of the statement of assertion specified in Table-13, respondents (here borrowing members) views have been sought on a five point likert scale viz. strongly disagree, disagree, neutral, agree and strongly agree. The respondents (120 borrowing members) have been categorized as follows:

1. Respondents in category- I (SGSY): Borrowing members of the SHGs under SGSY Programme.
2. Respondents in category- 2 (non-SGSY): Borrowing members of the SHGs under non-SGSY programmes

The opinions so collected are statistically analyzed by using Chi-square test to perceive the existence of any significant differences in opinion about the operative environment.

Table-13: Views of borrowing members about the change in quality of life after joining SHG

Domain	Sl.No	Group of respondents / Statements of assertion	Means		Chi ²
			SGSY	Non-SGSY	
Social	1.	Participation in the SHG based programmes has increased your self confidence	4.20	3.52	11.221
	2.	With the increasing number of linkages your decision-making capacity has significantly increased.	3.93	3.17	12.419
	3.	You are getting respectful treatment from other family members.	3.92	3.68	6.369
	4.	Now your decisions are given due weightage on purchase of household assets & investments.	3.67	3.72	0.421

I. Microfinance programme aims at improving the socio-economic condition of the poor and vulnerable section in the society. However, inclusion of a large section of APL category beneficiaries under the programmes indicates diversion of benefits of the programme to the non poor section which is an extremely undesirable development in the microfinance programme in the district. In this context the performance of the SGSY programme is comparatively better than non-SGSY programmes. Urban area centric microfinance programme initiated by the NGO-MFIs in the district is mainly responsible for inclusion of larger section of beneficiaries within the fold of the programme.

II. The study once again proves that microfinance is an effective tool for reducing the poverty level of the borrowing members. The programme has pulled up more than 14 percent beneficiaries from the BPL category within a period of five y Besides, the intensity of poverty has also declined. Non-SGSY programmes are more successful in this regard. Reduction in the extent and intensity of poverty in the case of 2 to 3 year old SHGs under non-SGSY programmes is a significant development in the microfinance sector of the district.

III. Average income level of the borrowers under both the programmes has increased. However the rate of growth in income level of the borrowers is higher in the case of the borrowers under non-SGSY programme. Similarly, the average income impact (i.e. growth in income level of all borrowers as compared to the control group) is also higher in the case of the borrowers under non-SaSY programmes. Higher number of linkages received by the sHas under this programme, higher amount of loan received by the members, NGO-MFIs relentless efforts to inculcate entrepreneurial traits in the minds of the borrowing members are some of the factors contributing to higher productivity as well as higher income in the case of the borrowers under non-SGSY programmes.

IV. In the case of the borrowers in BPL category, average income of the borrowers has increased under both the programmes. Average income impact in the case of the borrowers in BPL category is also higher than the control group. However, there is marked difference in the average income impact on the BPL category borrowers under the two programmes. Average income impact for the borrowers under SGSY programme is 116.1 per cent against 154.6 per cent in the case of BPL category borrowers under non -SGSY

programme. The average income impact in the case of the borrowers in BPL category under both the programmes is lower than the average income impact of all the borrowers.

V. In the case of these two programmes, the pals are 0.12 and 0.014 respectively. Higher pal under SGSY programme indicates higher intensity of poverty remaining in the case of BPL category members under this programme.

VI. Average asset level of the borrowers under both the programmes has increased. Positive impact of borrowing under microfinance programme is seen not only in average asset level of the borrowers but also in average asset impact. However, average asset impact in the case of borrowers under SGSY programme is higher than, the borrowers under non- SGSY programmes though the average income impact is higher in the case of the borrowers under these programmes. It may be because of the fact that a large number of the sample SHGs under these programmes are in the age group of 2 to 3 years and increasing income level of the borrowers- particularly the poorest borrowers is mainly used for consumption purposes rather than utilizing in asset accumulation.

VII. In the case of the borrowers in BPL category under both the programmes, the asset level has increased. But the rate of growth in the asset level of the borrowers under SGSY programme is lower than the rate of growth in asset level of the targeted group indicating zero impact of microfinance programme on the asset level of the borrowers in BPL category under this programme. Against this, the average asset impact on the borrowers in BPL category under non-SGSY programme 111.8 indicating positive impact of microfinance on the asset level of BPL category borrowers under these programmes.

VIII. Higher amount of average loan received by the borrowers and higher loan disbursement ratio under non-SGSY programmes indicates greater accessibility to credit by the clients under these programmes as compared to SGSY programme. However, there is no marked difference in the average repayment period of loans under the programmes. Similarly, the rate of interest charged on the loans provided to members is more or less same under both the programmes i.e. 2.79 and 2.83 per cent respectively.

IX. High repayment ratio in spite of low disbursement ratio under SGSY programme and higher debt service ratio in the case of non-SGSY programmes indicate higher degree of vulnerability of borrowers under both the programmes. It shows that the lending policy

followed by the financing institutions is not at all poor- friendly even under microfinance programme. Very high debt service ratio in the case of the borrowers under non-SGSY programmes will have negative impact on the socio-economic status of the SHG members of the under this programme, since higher Debt-Service ratio means that less amount of income is remaining in the hands of the borrowers for their own expenditures. This could lead to vulnerability of the group.

X. Near absence of vital support services under both the programmes is a matter of serious concern which will have adverse impact on productivity of loan money. Provision for support services like micro insurance, housing finance, training on income generating activities, consumption loan etc. are totally nil under SGSY programme while under Non-SGSY programmes some MFIs particularly the NGO-MFIs have been rendering such services in some pockets of the district on a limited scale.

10: QUALITATIVE IMPACT OF MICROFINANCE MODELS:

Microfinance programme has positive impact on human development that is geared towards both the economic and social uplift of the clients. Apart from economic impact of microfinance, it has some secondary outcomes which are often described by the researchers as 'qualitative impacts' or 'spillover' impacts. These secondary effects tend to be more predisposed towards spheres that go much beyond influencing lives of individuals alone, but encompass entire households, communities and the society at large, thereby eventually having a compounded impact on the beneficiaries in the broader perspective. Khalily argues that these consequential, secondary and intermediate outcomes have a compounded impact on the end- outcome of poverty reduction programs¹⁵.

In this section an attempt has been made to assess the qualitative impact of SHGs on the borrowing members under the two microfinance programmes under the study. This type analysis deals with the non-economic dimension of project impacts that are often downplayed in conventional impact evaluation studies (Afrane 2002). Qualitative impacts measure variables that are critical human development indices and represent real improvement in the quality of life of the poor. Since these variables are value laden and sometimes perceptual, they are often difficult to capture¹⁶.

to neutral point i.e. 2.55 in a five point likert scale while in the case of respondents under non-SGSY, AM tends to agree points i.e. 3.28. This is an indication that the statement is not valid for both the categories of respondents.

10. Views expressed by the different categories of MFIs on statement-10 that 'You show group solidarity and participate in the activities of other organizations' show that the respondents under all the four models have a positive view on the statement of assertion. Calculated AMs are very much on the higher side of agreement that is agree and strongly agree point and programme wise difference is the minimum. The AMs calculated on the basis of borrowing members' views are SGSY =4.10 and non-SGSY =3.90 respectively.

11. The statement-II 'You protest drinking/gambling, wife beating by husbands, domestic violence' intends to obtain opinion of the MFIs regarding the impact of microfinance services in creating awareness among the members about the basic social problems. From the calculated weighted AMs based on the views of different categories of respondents, it has been observed that AMs are very much on the higher side agreement i.e. agree and model-wise difference is the minimum. The calculated AMs are SGSY =3.87 and non-SGSY =3.77 respectively.

10.1: Comment on the qualitative impact of microfinance programme under different models:

Table-13 contains eleven statements of assertions divided into three separate domains and their respective AMs based on views of respondents under two microfinance programmes covered for the purpose of this study. These three different domains include social, economic and political domains. From the table, it has been observed that in the case of the respondents under both the programmes, calculated AMs under social domain are on the higher side of agreement that is agree and strongly agree. In the case of statements 8, 9 and 10 under economic and political domain, the calculated AMs under SGSY are on the higher side of disagreement. They are above the disagree point and tend to neutral point, in some case they are slightly above the disagree point in a five point likert scale. The responses of disagree, neutral, agree and strongly agree have been numerically

	5.	Your decisions are given due weightage on social matters like, education of Children, their marriage.	3.77	3.63	0.928
	6.	There has been significant change in your self-reliance after joining the SHG.	3.17	3.12	0.336
Economic	7.	Now you can confidently meet the financial crisis in your family.	2.23	2.90	5.924
Political	8.	Your leadership quality has improved after joining the SHG.	2.40	3.17	7.988
	9.	In the public meetings you can freely give your opinions on the matters discussed.	2.55	3.28	7.963
	10.	You show group solidarity and participate in the activities of other organizations.	4.10	3.90	3.884
	11.	you protest drinking / gambling, wife beating by husbands, domestic violence etc.	3.87	3.77	2.851

1. In the statement -1, borrowing members opinion are sought about 'Participation in the SHG based programmes has increased your self-confidence'. AMs calculated on the basis of the responses show that they are on the higher side of agreement, i.e. AMs tends towards agree and strongly agree. In the case of the respondents in SGSY category AM is 4.20 while in the case of the respondents in category non-SGSY, AM tends to agree point i.e. 3.52. It shows that on an average, both the SGSY and non- SGSY categories of respondents have a positive view on the statement of assertion that there has been significant change in their self-confidence after joining the SHG. However, the higher AM in the case of the respondents in SGSY category is an indication that under this programme there is higher impact of SHG based microfinance on the confidence level of the borrowers.

2. The statement-2 in the table seeks the opinion of the SHG members about 'With the increasing number of linkages your decision-making capacity has significantly

increased' From the views expressed by the respondents under category SGSY and non-SGSY, it has been observed that in a five point likert scale, they are on the higher side of agreement that is agree point. The AMs calculated on the basis of borrowers views are SGSY =3.93 and non- SGSY=3.17 respectively indicating higher impact of SHG based microfinance programme under SGSY programme.

3. Views expressed by the borrowing members under different models on statement-3 that *"You are getting respectful treatment from other family members"* show that the borrowers under both the programmes have a positive view on the statement of assertion i.e. they are very much on the higher side of agreement. The AMs calculated on the basis of members views are SGSY =3.92 and non-SGSY=3.68 respectively. Thus respondents under all the models subscribe to the statement and programme-wise difference in impact is the minimum.

4. The statement-4 *'Now your decisions are given due weightage on purchase of household assets & investments'* intends to obtain opinion of the members regarding the impact of SHG based finance facility on the status of the SHG members in their family. From the calculated weighted AMs of different views expressed by the respondents, it has been observed that the calculated AMs are very much on the higher side of agreement i.e. agree in a five point likert scale. Calculated AMs in the case of the respondents under the two categories are 3.67 and 3.72. Thus going by the numerical, it can be commented that both the programmes under our study have succeeded in improving the status of the members in their family.

5. The statement-5 *'Your decisions are given due weightage on social matters like, education of children, their marriage'* intends to obtain opinions from the respondents regarding the impact of microfinance on the social status of the borrowing members. From the calculated weighted average means of different views of respondents; it has been observed that in the case of respondents under both the programmes, AMs tend to agree point i.e. 3.77 and 3.63 respectively. Thus on the basis of the AMs it can be commented that microfinance initiatives under both the programmes have positive impact in improving the social status of the members.

6. The statement-6 *'There has been significant change in your self-reliance after joining the SHG'* intends to obtain opinions from the respondents regarding the impact of microfinance on improving the self reliance of the borrowing members. AMs calculated on the basis of the views of the respondents show that in the case of respondents under both the programmes they are slightly above the neutral point and tends to higher side of agreement in a five point likert scale i.e. 'agree' point. Calculated AMs in these two cases are 3.17 and 3.12. Thus going by the numerical it can be commented that the microfinance initiatives under both the programmes have some positive impact in improving the self reliance of the members.

7. In the statement- 7 *'Now you can confidently meet the financial crisis in your family'* AMs calculated on different views of the respondents are on the lower side of agreement, i.e. AMs tends towards neutral point. In the case of respondents under both the programmes AMs are above the disagree point and tend to neutral point in a five point likert scale. The calculated AMs are SGSY =2.23 and non-SGSY =2.90 respectively. It shows that on an average, impact of both the programmes in improving the financial condition of the borrowing members is insignificant.

8. The statement-8 *'Your leadership quality has improved after joining the SHG'* intends to obtain opinion about the impact of microfinance services on the leadership quality of the borrowing members. From the calculated weighted AMs of different views expressed by the respondents, it has been observed that there is difference in the opinions of different respondents under different programmes. In the case of respondents under SGSY, calculated AM is above the disagree point and tends to neutral point i.e. 2.40 while in the case of respondents under non- SGSY, AM tends to agree points i.e. 3.17. This is an indication that the statement is not valid for both the categories of respondents.

9. The statement-9 in the table seeks the opinion of the MFIs about the SHG members' ability to freely give their opinions on the matters discussed in public meetings. From the views expressed by the respondents under both the categories it has been observed that there is difference in the opinions of different respondents under different programmes. In the case of respondents under SGSY, calculated AM is above the disagree point and tends

12: SUGGESTED ACTION AREAS

As learnings emerged from the course of the study- so did areas of action- actions that could improve the impact of SHG based microfinance programme under different programmes. Though some differences have been noticed in the case of impact of microfinance initiatives on the socio-economic life of the programme participants, yet there is room for furthering the impact of microfinance initiatives under both SGSY and non-SGSY programmes. In this part of the paper, we focus on some key action areas that could significantly improve the impact of microfinance programmes on participants.

1. Selection of programme participants:

- (i) Selection of beneficiaries from the targeted group under microfinance programme.
- (ii) Selection of beneficiaries through 'Gram Sabha' or the 'Gaon Burha' (village head). Services of *Namghar* Committees may also be utilized for this purpose.
- (iii) Assistance (both financial and non financial) to SHPIs by Government or any other agency should be linked to their performance standard in terms of composition of group members.
- (iv) Fixation of performance standard for SHPIs.

2. Redefine families in BPL category:

Redefine families in BPL category and revision of the accepted income level for this purpose taking into consideration their requirements for basic essential items like food, health, education etc.

3. Support services:

- (i) Intensive training programmes to develop entrepreneurship traits among the targeted group. Such training should be provided to the probable clients before they join the microfinance programme.
- (ii) Training on IGAs to targeted groups under microfinance programme before the formation of SHGs.

indicated as 2, 3, 4 and 5 respectively. Against this, the calculated AM in the case of statement 7 under non-SGSY programme is on the higher side of disagreement.

Thus going by the numerical it can be commented that, on an average, microfinance initiatives under non-SGSY programme have higher positive impact on socio-economic and political life of the borrowing members of the SHGs formed under these programmes. However, their social and political impact is more significant than economic impact. Against this, microfinance initiatives under SGSY have higher impact on social life of the borrowing members but little impact on economic and political life of the borrowing members of the SHGs formed under these programmes.

10.2: Expectation Gap based on views expressed by respondents.

Chi square test as a non-parametric test has been used to find out the differences in opinions expressed by the four categories of respondents under the four microfinance models in Darrang district, Assam. In the table-13, there are 11 statements of assertions relating to the qualitative aspects of borrowing members under the four models. It has been found that in the case of the statements 1, 2, 3, 8 and 9, chi-square values are very much on the higher side at 5 per cent level of significance (at 2 degree of freedom). The calculated values of chi square of each statement are 11.221 (df-2), 12.419 (df-2), 6.369 (df-2), 0.421 (df-2), 0.928 (df-2), 0.336 (df-2), 5.924 (df-2), 7.988 (df-2), 7.963 (df-4), 3.884 (df-2), 2.851 (df-2). From the chi square table it has been observed that the chi-square value of statement 4, 5, 6, 7, 10 and 11 are below the tabulated value. This indicates that there is a significant expectations gap regarding the views expressed by the various respondents under the two microfinance programmes in Darrang, district, Assam.

11: COMPARATIVE ANALYSIS OF THE IMPACT OF MICROFINANCE INITIATIVES' UNDER SGSY AND NON-SGSY PROGRAMMES:

From the above analysis of primary data in regard to quantitative and qualitative impact of microfinance initiatives on the borrowing members under SGSY and non-SGSY programmes, it has been observed that the impact of microfinance programme under different programmes has not been the same. Main findings of the study are as follows.

(i) Both the programmes, covered for the purpose of this study, include a large section of the beneficiaries from non-poor category. Each one of them has failed to include even 50 per cent of the beneficiaries from the BPL category. In this regard, the achievements of the SGSY programme is comparatively better than the achievements of the non-SGSY programmes.

(ii) Analysis of short term impact (income impact) under both the programmes shows that microfinance initiatives under non-SGSY programmes have higher impact on the participants of the programme than the participants under SGSY programme. Various impact indicators used for the study of short term impact of microfinance programmes viz. impact on income level of members, extent and intensity of poverty of the programme participants, impact on income level of members in BPL category show that non-SGSY programmes have higher impact on the participants as compared to the participants under SGSY programme. Decline in Head Count Index is lower under SGSY programme while Poverty Gap Index is higher under non- SGSY programme.

(iii) Analysis of long term impact (asset impact) under both the programmes shows that microfinance initiatives under non-SGSY programmes have higher impact on the participants of the programme than the participants under SGSY programme. Rate of increase in the average asset level of borrowing members under non- SGSY programmes is higher as compared to SGSY programme. However, rate of increase in the asset level of the borrowers under both the programmes is lower than the rate of increase in the income level of the borrowers. However, keeping in view the age of the SHGs under non-SGSY programmes, the asset impact appears to be significant.

In the case of the borrowers in BPL category under both the programmes, the rate of increase in the asset level as well as asset impact. (rate of increase in asset level as compared to the control group) are lower than the rate of increase in the asset level and asset impact on all the borrowers. In the case of the programme participants in BPL category under SGSY programme asset impact is negative i.e. rate of increase in asset level is lower than the rate of increase in asset level of the control group.

(iv) An analysis of data in regard to accessibility of the borrowing members reveal that SHGs under non-SGSY are of comparatively better quality than the SHGs under

SGSY Loan disbursement ratio is lower under SGSY programme, However, there is no marked difference in the average repayment period of loan under both the programmes. Similarly, the rate of interest charged on the loans provided to members is more or less same under both the programmes.

(v) Under both the programmes repayment ratio and debt service ratio are high. However, higher repayment ratio and higher debt service ratio under non-SGSY programme indicate frequent and higher repayment of loans leaving the borrowers in extreme vulnerable conditions. It implies that participants under non- SGSY programmes have to spent higher amount of income for repayment of debt and lesser amount of income is left with them to meet their basic needs. This could lead to vulnerability of the group.

(vi) As far as support services are concerned, it is observed under both the programmes the main thrust is to provide microcredit to borrowers. Little efforts have been made to provide support services like training on IGA, micro insurance, housing loan, pension etc which are vital for effective implementation of microfinance programme. Under non-SGSY programme NGO-MFIs in the district have endeavored to provide these related services to their clients in a limited scale. Under SGSY programme provision for such services is virtually nil.

(vii) As far as qualitative impact microfinance programmes is concerned, non-SGSY programmes have some positive impact on socio-economic and political life of the borrowing members of the SHGs formed under these programmes. However, their social and political impact is more significant than economic impact. Against this, SGSY has little impact on economic and political life of the borrowing members of the SHGs formed under this programme while, on an average, economic impact of this model on the borrowing members is insignificant.

Thus on the basis of the analysis of primary data collected from the borrowing members of SHGs it can be commented that the microfinance initiatives under non-SGSY programme are more effective in uplifting the socio-economic condition of the borrowing members under the programme. Though small in number, the clients under these programmes have availed better facility, higher amount of loan resulting higher productivity of the loan money as well as higher income and asset level.

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- (iii) Special emphasis should be on imparting training on non-traditional livelihood initiatives like *agarbatti* production, *papad* making, candle making, *sal* leaf plate making, decorative items, floriculture, pisciculture etc.
- (iv) Supporting possibilities for value addition of indigenous rural products by training and skill upgradation.
- (v) Composite financial services approach.
- (vi) Introduce products and services that are better tailored to the needs of the poor.
- (vii) National and international exposure to successful microfinance practices.
- (viii) Financial literacy campaign by banks among the probable clients under microfinance programme before they join SHGs.
- (ix) Government in association with the NABARD should promote capacity building resource centres in each block to support livelihood and enterprise promotion among SHG members.
- (x) Market driven skill requirements be identified and necessary courses and infrastructure created.
- (xi) SHPIs should take active steps in providing forward and backward linkages to the SHGs.
- (xii) Provide low-cost insurance products covering life and asset of the clients.
- (xiii) Skill formation and marketing linkages.

4. Internal lending programme of SHGs

- (i) Pre and post credit assessment of SHG members by SHPIs.
- (ii) Rate of interest should be linked to the purpose of the loan. Higher interest should be charged on consumption loan beyond a particular limit.
- (iii) Term of loan should be linked to the purpose of loan. In the case of the production loan, the term should be extended upto two years depending upon the nature of the project financed.
- (iv) Flexibility in lending period. There should be provision for extending the period of loan in special circumstances.
- (v) Group as a whole should keep eyes on the end use of loan money by individual members.

(vi) Maximum importance should be given on productive use of loan money rather than frequent return of loan.

(vii) In the case of production loan, there should be a gestation period. The gestation period should depend on the nature of activity where loan money has been utilized.

(viii) As the group members are very much familiar with each others and the economic activities they undertake, period of repayment of loan and the amount of loan installments should be linked to cash flows from the business of the member concerned.

5. Structural changes:

i) Single window approach:

The State Government should take immediate steps to bring all the agencies viz. NABARD, SIDBI, NEDFi, IIE, banks including RRBs and co-operative banks, government organizations like DRDA, SIRD, organizations for imparting training like IIE, semiformal organizations like NGOs to a common platform in order to develop a collaborative mechanism among them and direct their efforts to a common goal. All services in connection with SHG formation, nurturing and credit linking should be available in one window. Such an approach can solve a lot of problems faced by SHGs like involvement of intermediaries in the credit linking process, exclusion of SHGs from credit linkage and support services and so on.

ii) Developments in related areas:

Microfinance sector can not grow in isolation. It must be accompanied by balanced development in some related areas like agriculture and allied sector, micro and small scale industries and so on. Focus should be on improving the situation in those areas where banking and other economic infrastructures are poor and inadequate. These regions require adequate infrastructure development to absorb the credit productively. There is urgent need for improving the banking network, Credit- Deposit ratio (CD Ratio) of the banking system along with other infrastructure facilities like roads, bridges, transport, market yards, power, warehouse” communication etc. for effective broadening the financial outreach. Development in these related areas will ensure sustainable financial broadening as well as increase financial inclusion with enhancement of productivity of micro credit on the other.

iii) Convergence of Government agencies and schemes:

In recent times, the Government of Assam has undertaken a number of schemes viz. Bayanjyoti, Kalpataru, Randhanjyoti and so on directed towards poverty alleviation

and employment generation. Innovative schemes introduced by the health department for the promotion of health facilities in the rural areas have been applauded by various quarters. Care should be taken to synchronize SHG promotion efforts with other schemes and programs. The state Government should take all efforts to co-ordinate the activities of various government departments like P&RD, Social Welfare, Health, Education and so on. SHG mode of intervention can also be linked to larger structural bottlenecks like inadequate agricultural infrastructure-irrigation, roads and highly egalitarian distribution of land. This allows for optimum utilization of resources and avoids duplication and overlap.

13: CONCLUSION:

The main significance of microfinance lies in the fact that it emphasizes on assisting the excluded masses in the creation of income generating activities and linking them with the formal financial system- two vital aspects of financial inclusion. During the last few years, there has been spectacular increase in the number of both savings linked and credit linked SHGs in the state of Assam. It is mainly because of the deliberate interventions in the last few years by major players in the sector including NABARD to address to inequity in the distribution of SHGs’: However, promoters varying approach to SHGs will have different impact on the borrowing members in terms of their socio-economic development. Hence, it is imperative to examine the quantitative as well as qualitative impact of the SHG programmes of different SHG promoting agencies separately so as to ascertain the strength and weaknesses of their microfinance programmes. This will help in ascertaining the relative effectiveness of the different microfinance programmes, identify the deficiencies, if any and take corrective measures which will assist in implementation of the programme in the state on a sustained basis.

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The CSR Policy of H.P.C. Ltd is designed to include the following:

- To enrich the quality of life of the community of the nearby areas of the mills.
- To create a positive impact by making sustainable development in the society and promote good environmental practices.
- To be responsible and responsive corporate citizen through endeavors to create a safe, harmonious and ecologically balanced environment for its members and the community at large.
- To maintain commitment to quality, health and safety in every respect of the business and people.
- To promote equality of opportunity and diversity of workforce through its business operations.

CSR ACTIVITIES UNDERTAKEN BY H.P.C. LIMITED:

The CSR activities initiated by H.P.C. Ltd are highlighted below:

(i) Social & Economic Upliftment of the Community: H.P.C.'s emphasis is on the economic Upliftment of the community in the villages located around the mills. Instead of providing one – time monetary help, H.P.C. provides financial assistance and helps in constructing small projects, which would provide self – employment and assured steady income. This gesture of the company has generated confidence among the local people, who were not having a steady source of assured income. Moreover, several families amongst the local community have found gainful employment either directly or indirectly in the mills and in the townships where grocery, consumer electric stores etc have been set up. Such activities of the Company have given a fresh lease of life to the local inhabitants.

(ii) Community Development: H.P.C. considers community development as a social responsibility and an integral part of business. H.P.C. has made significant contribution to the development of the local community by encouraging education, sports and cultural activities. It has also contributed in the construction of roads and providing safe drinking water in the villages.

A brief insight into these activities is highlighted below:

(a) Education: Expansion of education is an important area of community development. Illiteracy is one of the social evils being faced in the country, and the adjoining

CORPORATE SOCIAL RESPONSIBILITY IN THE PAPER INDUSTRY OF ASSAM

Soumendra Bhattacharjee*

ABSTRACT

In recent years, the concept of Corporate Social Responsibility has gained prominence from all avenues. Organizations must realize that government alone will not be able to get success in its endeavor to uplift the downtrodden of the society. The present societal marketing concept of companies is constantly evolving and has given rise to a new concept – Corporate Social Responsibility which in the abbreviated form is CSR. Many of the leading corporations across the globe had realized the importance of being associated with socially relevant causes as a means of promoting their brands. The idea that corporations bear a responsibility that stretches beyond their shareholders is not new. The field of CSR has grown exponentially in the last decade. Almost all leading organizations in India are involved in CSR Programmes in areas like education, health, livelihood creation, skill development and empowerment of weaker sections of the society. This paper is a modest attempt to highlight the various CSR activities undertaken by the Paper Mills of Assam.

Keywords: Corporate Social Responsibility, Paper Mills, Hindustan Paper Corporation Limited, Community Development, Health, Education.

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Corporate Social Responsibility in the Paper Industry of Assam

Every business starts with the motive of profit making but it cannot grow when surroundings start failing. Corporate Social Responsibility is basically a concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment. Corporate Social Responsibility is represented by the contributions undertaken by the companies to the society through its business activities and social investment.

In India, Corporate Social Responsibility is not a new concept. Ever since their inception, corporates like the Tata Group, the Birla Group, Indian Oil Corporation to name a few, have been involved in serving the community. Through donations and charity events, many other organizations have been doing their part for the society. The basic objective of CSR in these days is to maximize the company's overall impact on the society and the stakeholders. Many corporates feel that CSR is not just another form of indirect expense but it is important for protecting the goodwill and reputation and increasing business competitiveness. The companies have specialized CSR teams that formulate policies, strategies and goals for their CSR Programmes and set aside budget to fund them. The programmes are put into practice by the employees who are crucial to this process. CSR Programme ranges from community development to development in education, environment and health care. Moreover, the corporates increasingly join hands with non – governmental organizations (NGOs) and use their expertise in devising programmes which address wider social problems.

The Indian Paper Industry, the 15th largest industry in the world provides employment to 1.3 million people and contributes Rs 25 billion to the government. Due to the availability of forest products like bamboo, softwood etc, Assam, in the North – eastern part of India has a good potentiality for establishing quite a number of Paper and Paper Pulp Mills. Considering the same, Hindustan Paper Corporation Limited (H.P.C.) – A Public Sector Undertaking, has set up two Paper Mills i.e. Nagaon Paper Mill and Cachar Paper Mill. H.P.C. plays a pivotal role in the economic development of the state by providing employment opportunities – both direct and indirect to a large mass of people.

The Ministry of Corporate Affairs, Government of India, has come up with voluntary guidelines for the firms to follow. According to Section 135 of the Companies Act 2013, any company having a net worth of Rs 500 crores or more or a turnover of Rs

1,000 crores or more or a net profit of Rs 5 crores or more during any financial year should mandatorily spend 2% of their net profit per fiscal on CSR activities. This rule came into effect from 1st April, 2014. Companies meeting these thresholds are required to develop a CSR Policy, spend a minimum amount on CSR activities and report on these activities, or prepare to explain why they did not. Many companies in India have been quite pro active in taking up CSR initiatives and integrating them in their business processes.

OBJECTIVE:

The objective of this paper includes:

- To know about the CSR Policy of Hindustan Paper Corporation Limited.
- To have an insight towards the various CSR activities undertaken by the Paper Mills of Assam.

METHODOLOGY:

This paper is an attempt of exploratory research based on the information obtained from the interactions held with the officials of both the mills and also from journals, articles, websites etc. Looking into the requirements of the objective of the study, the research design employed for the study is of descriptive type.

Hindustan Paper Corporation Limited (H.P.C.) — a Public Sector Undertaking under the administrative jurisdiction of the Department of Heavy Industries, Ministry of Heavy Industries & Public Enterprises, Government of India was set up on 29th May, 1970 with a motive to produce cultural varieties of paper and newsprint.

The Paper Industry of Assam constitutes two Paper Mills namely, Nagaon Paper Mill and Cachar Paper Mill which are directly under the control of Hindustan Paper Corporation Limited.

Blending passion for corporate performance with compassion for communities is central to H.P.C.'s Corporate Philosophy of peripheral area development and community development. H.P.C. has been playing a dominant role in the Socio – Economic development of the North – Eastern Region and recognizes that its business activities have direct and indirect impact on the society. The Company strives to integrate its business values and operations so as to demonstrate its commitment to sustainable development.

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areas of the paper mills is also not an exception. H.P.C. is making continuous efforts in the construction and renovation of buildings for schools and colleges and also providing laboratory equipments, free exercise books, computers etc to the students. It also conducts vocational training programmes, presents awards to the meritorious students so as to encourage education.

(b) Economic Empowerment of Women: H.P.C.'s aim to create sustainable income opportunities and employment for women has been met through the women self-help groups in the nearby villages in the mill. Towards this end, H.P.C. has selected three villages which are predominantly inhabited by the economically backward communities and set up handloom weaving centres. Women from each village are selected through Mahila Samitees (Women Council) to form a group to manage and run the Handloom Weaving Centres. H.P.C. has constructed three buildings and provided three looms to each centre. The 'Gamochas' and traditional dress materials, woven by the women in these weaving centres has found ready acceptance in the local market. These Centres has created a positive impact. However, H.P.C. needs to provide modern equipments to these groups so that these cottage industries can produce household items such as bed covers, table cloths etc. By the year 2015, H.P.C. has planned to cover three more villages.

(c) Relief Efforts: H.P.C. responded to several natural disasters not only around the mill areas, but in the country as a whole. Floods are chronic and intractable problems in Assam. The recurrent floods in the state have unleashed great damage and create havoc. Due to inundation, normal life of the villagers is thrown out of gear. Supporting recovery operations, H.P.C., donates to the Chief Minister's and Prime Minister's Relief Fund, and to local Self Governments to help and mitigate the sufferings of the local populace. The Company and the employees also offer succor and support with medicines, clothes and items to those affected by the disaster. Besides, H.P.C. and its employees always volunteer to extend all sorts of help to those who gets affected in natural calamities such as floods, earthquakes etc, not only in the areas where its mills operate, but also in other parts of the country.

(d) Drinking Water: As the inhabitants of local villages do not have access to clean and safe drinking water, they are afflicted to with fatal water-borne diseases. So, H.P.C. has taken steps to construct sunk deep wells in several villages to provide safe drinking water

to the inhabitants of those villages. H.P.C. has also made provisions for supply of drinking water from its mills to some of the villages within their vicinity.

(e) Connecting Roads: The villages located at remote areas in the vicinity of the Mills were inaccessible due to poor roads. Children in these villages found it very difficult to attend their schools, especially during the rainy season. H.P.C., being a responsible corporate citizen and committed to social development, contributed towards the construction of connector roads. Such social activities of the Company have improved the lives of the villagers as the roads and foot bridges constructed by the Company have made the movement easier.

(f) Health Care & Family Welfare: As a part of the Community out – reach Programme, the company has identified ten villages in the area and organizes Medical Camps. Company's doctors and para – medical staff visit these villages at certain intervals, conduct free medical check – ups and provide necessary treatment. Wherever follow-up treatment is required, the patients are treated at the Company's hospital. H.P.C. also arranges eye check – up and blood donation camps with the help of external agencies and also provides ambulance services. The company also extends special services to the physically handicapped and mentally challenged people.

(g) Sports Promotion: H.P.C. also extends financial assistance to various Sports Organizations for conducting games like football, badminton, tennis, taekwondo etc which are very popular in the state of Assam.

(h) Employment Generation: Considering the unemployment scenario of the H.P.C. has been conducting entrepreneurship incubation programmes for the local unemployed youth by sponsoring them for entrepreneurship development training and encouraging them to start ancillary units. Moreover, the company has also introduced the Farm Forestry Scheme to encourage the local youths and the villagers to cultivate and supply bamboo to the Mills thereby promote self – employment and income generation.

Apart from the aforesaid activities, H.P.C. in order to promote bamboo plantation and distribution of the same through the NGOs, SHGs etc at free of cost / subsidized rate, H.P.C. has started operation and maintenance of state – of – the – art Bamboo Tissue Culture Laboratory, the first of its kind in the North – East where mass production of quick growing, high yielding, disease resistance quality bamboo are carried on.

In H.P.C., budget for CSR activities are decided by the Board and the CSR Programmes are planned according to the budget allocation. Moreover, in exceptional circumstances the Percentage of budget allocation may vary, but with the approval of the Board.

The Chairman – cum – Managing Director of the Company nominates the Head of the Human Resource Department of the Central Head Quarter / the Mills to deal with all activities related to CSR. H.P.C. takes up the projects directly or through any of the reputed NGOs or any other agency / respective district authorities as may be decided with the approval of the CMD.

It can be observed from the above stated paragraphs that H.P.C. endeavors to be a socially responsive and responsible corporate citizen and has extended its support to the local community development in the vicinity of the mills, the state where they are located and nation as a whole ranging from the alleviation of unemployment, relief and rescue operations during natural calamities like flood, earthquake, tsunami etc. The company has made remarkable forays in the development and upliftment of the under privileged sections of the community within the periphery of its mills. It also makes a variety of social contributions designed to meet the needs of the region, encourage and contributes to the education and welfare facilities in the areas where it operates. Last but not the least; it appears that such activities of the company have generated tremendous goodwill amongst the local populace. However, it is suggested that instead of its present practice to entrust the task of all activities related to CSR to the Head of the Human Resource department, H.P.C. should create a separate cell under the Human Resource department to co-ordinate its CSR activities and demonstrate its commitment of social responsibility in a better and more effective manner.

It can be concluded that in today's informative world where information are readily available to general public, CSR has been an important part of any organization to be successful. Organizations in the present world cannot be successful without taking into account the social responsibility. CSR has been a vital component for any organization to have perpetual success and to create brand.