

ISSN 2347-2839

# International Journal of Applied Management Research

Vol. 3, No. 1 & 2, 2016



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Tura Campus, Tura- 794002, Meghalaya, India

# **International Journal of Applied Management Research**

Vol. 3 (No. 1 & 2), 2016

© Department of Management, North- Eastern Hill University, Tura  
Campus (India), 2016

**Published by:**

Department of Management, North- Eastern Hill University, Tura  
Campus (India)

**International Journal of Applied Management Research**

Journal of Department of Management, NEHU, Tura Campus, Meghalaya (India)

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## Gender Disparity and Women Empowerment in Assam

Purusottam Nayak and Bidisha Mahanta

### Abstract

The present paper is an attempt to analyze the status of women vis-à-vis men and their empowerment in terms of various socioeconomic and political indicators such as access to education, employment, household decision making power, financial autonomy, freedom of movement, exposure to media, political participation, experience of domestic violence etc in the state of Assam using secondary data obtained from various sources. The study reveals that development process in the state is not gender neutral; women enjoy quite inferior status as compared to the average women in India. Percentage of women in the government services and their political participation is quite low and does not show any sign of significant improvement. Sex ratio though not in favor of women is improving over time. Women enjoy better status in the state as compared to women in India in terms of decision making power at the household level while the situation is reverse in case of their financial autonomy and sexual violence. Inter district disparity is rampant in the state. Districts like Kamrup and Tinsukia in spite of having high per capita DDP have not been able to transform the development effort to bridge the gender gap. Districts with high literacy rates are having high proportion of female main and marginal workers and low proportion of non-workers. Higher the literacy higher is the female workforce participation rate. Female enrolment rate is below fifty per cent in spite of universalization of primary education and provision of mid-day meal schemes. Although Government has undertaken a number of steps the situation has remained gloomy mainly because the educated women are not forward looking and cherish the baseless age old customs. There is a need to create awareness towards achieving the desired goal of women empowerment in the state.

**Key words :** *Gender disparity, women empowerment, Assam, India, household decision making power, financial autonomy, freedom of movement, domestic violence.*

### 1. Introduction

Assam is one of the eight states of North East India. It is the largest state in the Region in terms of population and second to Arunachal Pradesh in geographical area. In spite of her rich natural resources and culture the state is lagging behind the rest of the country. The socioeconomic set up of the state has not been conducive to overall

development. Since it is a multiethnic state with heterogeneous cultural backgrounds, it has been experiencing insurgency and ethnic strife for the last three decades because of which not only its economy but also the social fabric is under threat. The worst victims in the process are the women. Though the entire Region including Assam is free from some of the social evils like dowry, sati pratha, female feticide and infanticide because of the prevalence of tribal and indigenous culture, other forms of gender discrimination do exist as revealed in various gender gap studies. It is contrary to the general perception that women of Assam are as disadvantageous as the women in rest of the country. In certain respects the position of women in Assam is weaker than that in other states of the country. Study of Shivkumar (1996) on differential gender attainment of 16 major Indian states ranked Assam in the 10th position. NHDR (2002) reported higher gender inequality in the state as compared to all India situations. The state got 29th rank among the 32 States and Union Territories in the country. According to Assam Human Development Report (Govt. of Assam, 2003), the state lagged behind Manipur, Meghalaya, Arunachal Pradesh, Mizoram and Nagaland. Keeping these points in view it was thought to undertake an in-depth study in the state of Assam. The main objectives of the paper is to analyze the status of women vis-à-vis men and their empowerment in terms of various socioeconomic and political indicators such as access to education, employment, household decision making power, financial autonomy, freedom of movement, exposure to media, political participation, experience of domestic violence etc. in the state of Assam using secondary data obtained from various sources.

## **2. Gender Disparity and Women Empowerment: Conceptual Issues**

**Gender Disparity :** Past few decades have witnessed a steady increase in awareness of the need to empower women and achieve gender equality through various measures. The concept of gender equality has been gaining importance since subordinate status of women in relation to men has been seen in almost every facets of life. Gender equality is understood as that stage of human development at which the rights, responsibilities and opportunities of individuals are not to be determined by the fact of being born as male or female. It is a stage when both men and women realize their full potential and become partners in every sphere of their lives. Realizing the extent of gender inequality throughout the world, the United Nations Development Fund for Women (UNIFEM) was established as a separate fund within the United Nations Development Program (UNDP) in 1984. The General Assembly at that time instructed to ensure women's involvement with mainstream activities. The Platform of Action resulting from the 1995 Beijing World Conference on Women expanded the concept and called it as 'gender mainstreaming' i.e., the application of gender perspectives to all legal and social norms and standards, to all policy development, research, planning, advocacy, development, implementation and monitoring- as a mandate for all member states. As a result of the Beijing conference and many years of work leading

up to it, more than 100 countries announced new initiatives to improve the status of women. In 2000, the follow-up Beijing+5 Conference further strengthened the application of the mainstreaming concept and used it to highlight the need for more progress in reaching equality worldwide.

In 1995 main emphasis on gender equality was given in the Human Development Report (UNDP, 1995). At the global level for the first time just before the Fourth World Conference on Women held in Beijing two important gender indices were constructed by UNDP (1995): the Gender related Development Index (GDI) and the Gender Empowerment Measure (GEM). The GDI considered inequalities by gender in the Human Development Index (HDI) dimensions. It measured the inequalities confronted by women in achievement of those which were very essential for overall development of human being. The GEM focused on political participation (measured by women's shares of parliamentary seats), economic participation (shares of high level and professional positions) and power over economic resources (income gaps).

The disadvantages facing women and girls are a major source of inequality. Very often, women and girls are discriminated against health, education and in labor markets-with negative repercussions for their freedoms. In 2010 report, UNDP further introduced a third measure of inequality known as Gender Inequality Index (GII) built on the same framework as the HDI and the Inequality adjusted Human Development Index (IHDI) in order to better expose differences in the distribution of achievements between women and men. The GII is unique in including educational attainment, economic and political participation and female-specific health issues and in accounting for overlapping inequalities at the national level. Thus it became an important advancement on existing global measures of gender equity.

Along with those measures of gender inequality another measure to capture the magnitude and scope of gender-based inequalities is known as Global Gender Gap Index (GGGI). This was introduced by the World Economic Forum (WEF) in 2005. The Index benchmarks gender gaps on economic, political, education and health based criteria, and provide country rankings that allow for effective comparisons across regions and income groups, and over time. The GGGI examines the gap between men and women in four fundamental categories: economic participation and opportunity, educational attainment, health and survival and political empowerment.

**Women Empowerment:** The concept of empowerment of women has, however, undergone a sea change from welfare oriented approach to equity approach. Today empowering women refers not only to improve their material wellbeing but also their active participation in the development process. The concept of women in development emerged at a point of time when attention was shifted to enhancement of the role and status of women. Then equity and empowerment approach merged to form the gender and development concept (Mathew, 2003). Although many researchers made attempts to

explain the concept of empowerment, the most relevant definition is one provided by Sen and Batliwala (2000). According to them "Empowerment is the process by which the powerless gain greater control over the circumstances of their lives. It includes both controls over resources and ideology... a growing intrinsic capability, greater self-confidence and an inner transformation of one's consciousness that enables one to overcome external barriers [as quoted by Kishor & Gupta (2004): 694]. This definition mainly emphasizes on two important aspects: Firstly, empowerment is not a power over others but a power to achieve certain desired goals. Secondly, the idea of empowerment is more applicable to those who are powerless irrespective of sex, caste or class. According to the report on Human Development in South Asia (2000: 28), "Empowerment can be considered a change in the context of a woman or man's life that enables her/him increased capacity to lead a fulfilling human life, characterized by external qualities such as health, mobility, education and awareness, status in the family, participation in decision making, and level of material security, as well as internal qualities such as self-awareness and self-confidence".

### **3. Methodology**

In order to examine the status of women empowerment we have used secondary data from different sources at the disaggregate level. Analysis has been made by putting them into four categories on the basis of (1) employment (2) education (3) demography and (4) political participation across different district groups categorized on the basis of geographical location, level of literacy and district domestic product. As regards geographical location, the state is divided into three areas, namely Lower Assam (Barpeta, Bongaigoan, Dhubri, Goalpara, Kamrup, Kokrajhar and Nalbari), Central Assam (Cachar, Darrang, Hailakandi, Karbi Anglong, Karimganj, Morigoan, Nagaon, N.C. Hills and Sonitpur) and Upper Assam (Dhemaji, Dibrugarh, Golaghat, Jorhat, Lakhimpur, Sibsagar and Tinsukia). The districts are also grouped on the basis of literacy, namely Low Literacy districts (below 50%: Dhubri), Moderate Literacy districts (50-60%: Bongaigoan, Barpeta, Darrang, Goalpara, Hailakandi, Karbi Anglong, Morigoan and Kokrajhar,), High Literacy districts (60-70%: Bongaigoan, Cachar, Dhemaji, Dibrugarh, Golaghat, Karimganj, Nagoan, Lakhimpur, Nalbari, N.C. Hills, Sonitpur and Tinsukia) and Higher Literacy districts (above 70%: Jorhat, Kamrup and Sibsagar). Further, districts are divided into three groups on the basis of per capita District Domestic Product, namely Low DDP districts (below Rs.15000: Darrang, Dhemaji, Dhubri, Goalpara, Hailakandi, Karimganj, Kokrajhar, Lakhimpur, Morigoan, Nagoan, Nalbari and Sonitpur), Moderate DDP districts (Rs.15000-25000: Barpeta, Bongaigoan, Cachar, Dibrugarh Golaghat, Jorhat and Karbi Anglong) and High DDP districts (above Rs.25000: Kamrup, N.C. Hills, Sibasagar and Tinsukia).

### **4. Status of Women Empowerment**

**Employment Status:** To analyze the status of women on the basis of their employment status, we have considered in this section percentage distribution of workers

(main, marginal and non-workers), workforce participation rate, and formation of SHGs across different district groups in the state.

Let us have a look on the percentage of main, marginal and non-workers belonging to both the sexes in respect of Assam in 2001 on the basis of geographical location (Table 1). These data throw some light on the gender structure of workforce in the economy. In case of main workers, percentage of females is much lower than that of males irrespective of districts whereas more females are engaged as marginal and non-workers as compared to male counterparts. This shows the relative disadvantage of women in the state in respect of employment. From the table it is also clear that all the Upper Assam districts have higher proportion of female main and marginal workers and relatively lower proportion of female non workers. The districts in Central and Lower Assam exhibit almost same pattern of having low proportion of female main and marginal workers and high proportion of female non-workers.

**Table 1**  
**Area, Literacy and Per Capita DDP wise Workers in Assam, 2001**  
**(Figures in per cent)**

Category		Main Worker		Marginal Worker		Non Worker	
		Male	Female	Male	Female	Male	Female
Geographical Area	Lower Assam	43.23	7.31	5.59	7.85	51.34	84.84
	Central Assam	42.38	8.33	6.96	9.50	50.65	82.15
	Upper Assam	41.68	15.62	11.47	39.55	47.63	66.90
Level of Literacy	Low	44.37	4.27	4.81	3.85	51.76	91.87
	Moderate	42.56	8.48	6.17	10.61	51.25	80.90
	High	41.91	11.09	8.45	12.04	49.62	76.76
	Higher	43.39	10.68	7.62	10.74	48.97	78.56
Per Capita DDP	Low	42.51	8.60	7.42	10.92	50.17	80.47
	Moderate	42.01	10.75	7.54	11.38	50.44	77.70
	High	43.30	11.77	7.20	9.99	49.48	78.22
All Assam	42.45	9.82	7.41	10.89	50.13	79.28	

*Source : Govt. of India, Census of India, 2001*

Data further reveal that there is a positive relationship between overall literacy rate and percentage of female main workers. Dhubri, the low literacy rate district, shows highest proportion of female non workers (91.96%) and lowest proportion of female main workers (4.27%) and marginal workers (3.85%). High Literacy rate districts are having highest

proportion of female main and marginal workers and lowest proportion of female non workers. It is important to note that proportion of main workers is relatively high and non-workers and marginal workers are low among male population which is not true in case of female population.

There is also a positive relationship between the level of DDP and percentage of female main workers. Almost same pattern is observed in case of male main workers. However, the same relationship is not observed in case of female marginal and non-workers. We can see from the table that High DDP districts have lowest proportion of female marginal workers and Moderate DDP districts have the lowest proportion of female non workers. As usual proportion of main workers among male population is relatively higher than that of female counterparts. Similarly marginal and non-worker proportion of females exceeds that of males.

Now let us analyze the work force participation rate in Assam. If we analyze on the basis of geographical location, we find that most of the Upper Assam districts show high proportion of total workforce participation as well as high female workforce participation implying the area to be a relatively developed one (Table 2). Further the district Lakhimpur exhibits highest percentage of total workforce participation (55.99%) and high percentage of female workforce participation (49.87%). However, male workforce participation rate does not differ much across district groups. The districts in Lower Assam and Central Assam show almost same pattern of low workforce participation rate as compared to Upper Assam.

**Table 2**  
**Area wise Workforce Participation Rate in Assam, 2001**  
**(Figures in per cent)**

Category		Person	Male	Female
Geographical Area	Lower Assam	32.49	48.66	15.16
	Central Assam	32.23	49.05	14.42
	Upper Assam	42.98	52.36	32.90
Level of Literacy	Low	28.73	48.23	8.12
	Moderate	34.36	48.74	19.09
	High	37.20	50.37	23.13
	Higher	36.89	51.02	21.43
Per Capita DDP	Low	35.11	49.82	19.52
	Moderate	36.29	49.55	22.13
	High	36.83	50.51	21.77
<b>All Assam</b>		<b>35.78</b>	<b>49.87</b>	<b>20.71</b>

Source : Govt. of India, Census of India, 2001

Male workforce participation rate does not vary much with the literacy rate. However, percentage of female workforce participation significantly varies and it is positively related with the literacy rate. Dhubri, which exhibit low literacy i.e. below 50 per cent, shows a very poor participation of females (8%) in total workforce. High and higher literacy rate districts show relatively high percentage of female workforce participation.

Table further reveal that there is a positive relationship between the level of DDP and percentage of total workforce participation rates. The same pattern is observed in case of female workforce participation rate as long as the per capita DDP level is not reached to the extent of above 25000. However in case of males it does not differ much according to DDP. Thus from the above analysis it is clear that the upper Assam districts which have higher literacy rate and higher DDP show relatively better female employment status.

To examine the nature and status of women employment in the Public Sector (Govt.) of the state it is important to know their class wise distribution. Table 3 shows the number and percentage of total women employee in 1994. Data reveal that only 14.98% of total government employees were women. They were mostly employed in class III category of government services. This shows a very disappointing picture about status of women employment in Assam. Since class wise distributions of up-to-date data are not available for women employees we had to depend only on aggregate information on percentage of women govt. employee in the year 2006. As per the statistics of Govt. of Assam (2007) there were only 16.65% of women employees in the govt. jobs. There has not been any significant increase in the per cent of women govt. employees in a period of 12 years from 1994 to 2006.

**Table 3**  
**Distribution of Government Women Employees in Assam**

Category of Employees	No. of Employees in 1994		Percentage of Women Employee in	
	Total	Women	1994	2006
Class I	8,145	713	8.75	NA
Class II	6,242	374	5.99	NA
Class III	2,36,916	41,025	17.31	NA
Class IV	53,532	3,582	6.69	NA
<b>Total</b>	<b>3,04,835</b>	<b>45,694</b>	<b>14.98</b>	<b>16.65*</b>

Source : Govt. of Assam, Assam Human Development Report, 2003

\* Statistical Hand Book of Assam, 2007

Women's awareness about micro credit programme and formation of women Self Help Groups also indicate women's effort for economic emancipation and employment status. Table 4 presents data on the formation of women SHGs across different geographical regions in the state. It is seen that 61 per cent of total SHGs formed from 1999 to 2006 were women SHGs which was reduced to 5.19 per cent during 2006-07 in the state. Percentage of Women SHGs to total SHGs from 1999 to 2006 was observed to be highest in Upper Assam (68%). Central and Lower Assam showed poor performance as compared to Upper Assam in this respect. On an average Central Assam districts had highest number of SHGs formed since 1999 followed by Lower Assam and Upper Assam. Average number of women SHGs taking up economic activity during 2006-07 was much lower in Upper Assam as compared to Lower Assam and Central Assam. It was highest in Central Assam.

**Table 4**  
**Area wise Physical Achievement under SGSY in Assam**

Area	Districts	No. of SHGs formed during		No. of Women SHGs formed during		No. of women SHG taken up economic activities during 2006
		1999 to 2006	2006	1999 to 2006	2006	
Lower Assam	Total	39617	4911	21895 (55.26%)	982 (20%)	303
	Average	5660	702	3128	140	43
Central Assam	Total	60118	21930	35791 (59.53%)	438 (1.98%)	408
	Average	6680	2437	3977	48	45
Upper Assam	Total	35887 (68.09%)	10904 (5.09%)	24437	555	188
	Average	5127	1558	3491	79	27
<b>All Assam</b>		<b>135622</b>	<b>37745</b>	<b>82123 (60.55%)</b>	<b>1959 (5.19%)</b>	<b>912</b>

*Source: Govt. of Assam, 2006-07*

Table 5 shows number of SHGs formed in different districts categorized on the basis of literacy. From the table it is clear that with increase in literacy rate, intensity of SHG formation increases from Moderate Literacy district onwards. With the increase in literacy the percentage of women SHGs to total SHGs formed from 1999 up till 2006 increases significantly. As an exceptional case, highest number of SHGs was formed in the Low

Literacy district, Dhubri. The number of women SHGs taken up economic activity was also the highest in this Low Literacy district.

**Table 5**  
**Literacy wise Physical Achievement under SGSY in Assam**

Literacy	Districts	No. of SHG during		No. of Women SHG during		No. of Women SHG taken up Economic Activities during the Year
		1999 to 2006	2006	1999 to 2006	2006	
Low (Below 50%)	Total	9453	57	4773 (50.49%)	4 (7.02%)	65
	Average	9453	57	4773 (50.49%)	4 (7.02%)	65
Moderate (50%-60%)	Total	38057	531	22388 (58.82%)	287 (54.04%)	257
	Average	4757	66	2798	36	32
High (60%-70%)	Total	66991	30070	41231 (61.55%)	966 (3.21%)	446
	Average	6090	2734	3748	88	41
Higher (Above 70%)	Total	21121	7087	13731 (65.01%)	715 (10.08%)	131
	Average	7040	2362	4577	238	44
<b>All Assam</b>		<b>135622</b>	<b>37745</b>	<b>82123 (60.55%)</b>	<b>1959 (5.19%)</b>	<b>912</b>

Source: Govt. of Assam, 2006-07

Table 6 shows the data on formation of Self Help Groups on the basis of per capita DDP. Data reveals that SHG formation, be it total or women, decreases first with increase in DDP up to moderate level of DDP and then it increases with DDP. Similarly if we see the percentage of women SHGs formed from 1999 to 2006 we find that it varies positively with DDP. But percentage of women SHGs formed during 2006-07 is significantly higher in Moderate level of DDP.

**Table 6**  
**Per Capita DDP wise Physical Achievement under SGSY in Assam**

Per Capita DDP (Rs.)	Districts	No. of SHG during		No. of Women SHG during		No. of Women SHG taken up Economic Activities during the Year
		1999 to 2006	2006	1999 to 2006	2006	
<b>Low</b>						
(Below 15000)	Total	84934	26736	48526 (57.13)	869 (3.25)	544
	Average	7078	2228	4044	72	45
<b>Moderate</b>						
(15000-25000)	Total	30649	575	19685 (64.22)	371 (64.52)	194
	Average	4378	82	2812	53	28
<b>High</b>						
(Above 25000)	Total	20039	10434	13912 (69.42)	732 (7.02)	161
	Average	5010	2608	3478	183	40
<b>All Assam</b>		<b>135622</b>	<b>37745</b>	<b>82123</b> <b>(60.55)</b>	<b>1959</b> <b>(5.19)</b>	<b>912</b>

Source: Govt. of Assam, 2006-07

**Educational Status :** The educational attainment of women of Assam at district level can be analyzed through female literacy rate and female enrolment rate at different stages of education. All the Upper Assam districts have high female literacy above state average except Tinisukia. Female literacy rate is highest in Upper Assam (60.35%) which is quite higher than state average (54.61%). Central Assam and Lower Assam show almost same performance in the field of female literacy rate which is far below Upper Assam. These rates are 52.61 per cent and 52.53 per cent respectively. Similar pattern is also observed in case of total literacy.

Now let us analyze the pattern of female literacy across the groups when classification of districts is made on the basis of total literacy. Female literacy rate increases across the districts along with the increase in total literacy rate. If we examine the table we

find that it is lowest (40.04%) in Low Literacy district and highest (66.91%) in Higher Literacy districts. Wide variation in female literacy rate is seen across the districts which range from as low as 40 per cent to as high as 68 per cent.

If we examine female literacy rate according to DDP, we find a positive relationship. Female literacy rate is increasing with the increase in district domestic product. It is lowest (51%) for Low DDP districts, 56 per cent for Moderate DDP districts and highest (63%) for High DDP districts.

**Table 7**  
**Area, Literacy and Per Capita DDP wise Female Literacy in Assam, 2001**  
(Figures in per cent)

	Category	Literacy Rate	
		Female	Total
Geographical Area	Lower Assam	52.53	61.19
	Central Assam	52.61	61.16
	Upper Assam	60.35	69.23
Level of Literacy-	Low	40.04	48.21
	Moderate	47.87	56.71
	High	55.96	64.85
	Higher	66.91	74.71
Per Capita DDP	Low	50.80	59.38
	Moderate	56.16	64.99
	High	62.54	70.94
<b>All Assam</b>		<b>54.61</b>	<b>63.25</b>

*Source: Govt. of India, Census of India, 2001*

Let us now examine the proportion of female enrolment in different stages of education on the basis of our previous classification of districts. District wise enrolment of females by stages of education gives an insight about the educational status of women in the state. The information presented in Table 8 tells us that enrolment is highest in primary level, slightly lower in middle level. The proportion of enrolment decreases with the increase in the stages of education. In almost all the districts, in primary level, enrolment rate is almost fifty per cent. In middle and high school level also the percentage of enrolment is

around 45%. However in higher secondary and junior colleges the female enrolment is much lower i.e. below 40%.

**Table 8**  
**Area, Literacy and Per Capita DDP wise Female Enrolments in Assam, 2005-06**  
**(Figures in per cent)**

Category		Pre Primary	Middle	High School	Higher Secondary	Junior College
Geographical Area	Lower Assam	49.69	45.52	42.53	33.30	37.93
	Central Assam	49.43	46.97	43.47	36.51	39.29
	Upper Assam	48.54	46.78	46.52	40.48	42.63
Level of Literacy	Low	49.86	45.14	40.15	30.46	29.03
	Moderate	49.71	46.21	43.56	38.69	39.18
	High	48.99	46.84	44.62	36.26	38.38
Per Capita DDP	Higher	49.27	45.83	44.41	35.08	41.86
	Low	49.62	46.78	43.86	33.64	38.00
	Moderate	48.78	46.06	44.25	41.70	38.2
	High	49.34	45.88	44.45	35.18	41.86
All Assam		49.32	46.38	44.11	36.27	39.53

*Source : Govt. of Assam, Statistical Handbook of Assam, 2007*

Female enrolment in primary level in the three regions -Lower, Central and Upper Assam are almost equal i.e. around 49-50 per cent. In middle level, enrolment rate is slightly lower in Lower Assam in comparison to Upper and Central Assam. Enrolment rate at high school level is much higher in Upper Assam (46.52%) as compared to Lower Assam (42.53%) and Central Assam (43.47%). Female enrolments at higher secondary and at junior college are also significantly higher in Upper Assam than in Lower and Central Assam. The corresponding figures for higher secondary and Junior College are around 41 per cent and 43 per cent in Upper Assam as compared to 33 per cent and 38 per cent in Lower Assam and 37 per cent and 39 per cent in Central Assam.

At pre-primary and middle level the rate of enrolments are almost similar for all the district groups based on literacy rates. However in higher level it varies positively with literacy. High School enrolment rate is comparatively lower (40%) in Low Literacy district and almost same (44% approximately) for moderate, high and higher literacy districts. Enrolment in higher secondary level is highest in Moderate Literacy districts (38.69%). It is

lowest (30.46%) in Low Literacy districts and in all the groups it is much lower than pre-primary and middle level enrolment. Since enrolment rate is decreasing with the level of education, it can safely be concluded that high drop out of girl students is associated with higher level of education. If we see the enrolment rate at junior colleges we find that it is highest in Higher Literacy district (41%), almost same for Moderate and High Literacy district and lowest in Low Literacy district (29%).

When we examine the relationship between the stages of enrolment with per capita DDP from the information provided in the Table 8, we find that no such variation of enrolment at primary level is seen along with DDP among the groups. At high school and in Junior College, enrolment positively varies with DDP whereas at middle level it varies negatively with DDP. If we analyse the female enrolment at higher secondary we see that it is highest for Moderate DDP districts and lowest for High DDP districts.

**Demographic Status :** Sex ratio is one of the important demographic factors that indicate the status of women in a particular society. A social system with higher sex ratio itself shows the higher status of women. In Table 9, district wise sex ratio for the years 1991 and 2001 is taken into account to study the demographic status of women in the state. The sex ratio of Assam is estimated to be 935, which is slightly higher than all India average of 933. When it has increased in the state from 925 in 1991 to 935 in 2001, it has shown a declining trend at the all India level during the same period. For the state of Assam it is indeed a positive development.

Let us examine the pattern of variation of sex ratio. Table shows that Central Assam has the highest sex ratio and is higher than that of the state average for both the periods (1991 and 2001) followed by Lower Assam and Upper Assam. Table further shows that sex ratios decrease with the increase in the literacy rate which is in fact a disturbing trend in a developing society. It is observed to be highest in Low Literacy district and lowest in Higher Literacy districts. It also shows a declining trend of sex ratio with the increase in DDP. It is highest for Low DDP districts and lowest in High DDP districts. Moderate DDP districts have an average sex ratio.

**Table 9**  
**Area, Literacy and Per Capita DDP wise Sex Ratio in Assam**

Category	Sex Ratio		
	1991	2001	
Geographical Area	Lower Assam	928	933
	Central Assam	930	940
	Upper Assam	915	931

Level of Literacy	Low	951	947
	Moderate	940	942
	High	924	936
	Higher	897	914
Per Capita DDP	Low	937	943
	Moderate	926	937
	High	891	909
<b>All Assam</b>		<b>925</b>	<b>935</b>

Source: Govt. of India, Census of India, 2001

**Status of Political Participation :** Women's political participation is another input to their empowerment. It is one of the important factors that contribute to their well-being. Empowered women have political freedom which in turn translates into their decision making capacity both at the community and national level (Nayak, 2011). Women's representation in political field even in its most modest form of local government has the ability to transform and reinterpret the practice of politics (Institute of Social Sciences, 2003). It helps to create better village communities based on harmony and cooperation achieved through gender balance and justice.

However, measurement of women's political empowerment through their political participation in the context of India and her constituent states including Assam poses sometimes doubts on the efficacy of the empowerment variable. This is because of the fact that strong family-based structure of Indian politics makes it difficult for women to assert independent political choices, as distinct from the male headed families. Therefore, judging women's political agency on the basis of their representation in political bodies is hazardous; women standing proxy for men are quite common in India (Govt. of Assam, 2003). In the absence of any other alternative we had to depend on indicator like elected women Members in Legislative Assembly in Assam from 1972 to 2006. Table 10 presents data on percentage of women voters and elected women members of Legislative Assembly in Assam during this period. From the table it is clear that the percentage of female voters though has increased steadily over time it has always been less than that of male voters. Similarly percentage of women MLA has increased during this period but it has been quite small in number and percentage. In 1972 there was not even a single woman MLA. The situation, however, has changed and in 2006 less than 11 per cent of MLA's were women.

**Table 10**  
Trend of Women Voters and MLA in Assam  
(Figures in per cent)

Year	Voters in Assembly Election		Elected Women Members of Legislative Assembly
	Male	Female	
1972	58.46	41.53	0
1978	58.08	41.91	0.8
1983	58.43	41.56	1.83
1985	54.10	45.89	3.97
1991	54.07	45.92	3.97
2001	53.82	46.15	7.94
2006	52.08	47.84	10.32

Source: Govt. of India, Election Commission of India, 2006

When we analyze the percentage of contestants and winners across districts and areas we observe some degree of disparities (Table 11). Though percentage of voters across districts does not vary much but gender gap is observed in this respect. Table also reveals that Upper Assam performs well as regards percentage of women contestants and winners are concerned. However percentage of electors does not vary significantly across the regions.

**Table 11**  
Area, Literacy and Per Capita DDP wise Winners in Legislative  
Assembly in Assam, 2006  
(Figures in per cent)

Category	Voters		Contestants		Winners		
	Male	Female	Male	Female	Male	Female	
Geographical Area	Lower Assam	51.74	48.25	93.57	6.42	90.70	9.30
	Central Assam	51.63	48.36	94.56	5.43	91.84	8.16
	Upper Assam	51.34	48.65	88.88	11.11	88.24	11.76
Level of Literacy	Low	51.38	48.61	93.24	6.75	100	0
	Moderate	51.79	48.20	94.69	5.30	89.47	10.53
	High	51.51	48.48	92.37	7.62	88.14	11.86
	Higher	51.56	48.43	90.72	9.27	95.45	4.55

Per Capita DDP	Low	51.42	48.57	93.95	6.04	92.06	7.94
	Moderate	51.78	48.21	90.61	9.38	85.37	14.63
	High	51.77	48.22	94.33	5.66	95.45	4.55
	Assam	51.6	48.4	92.97	7.02	90.48	10.52

*Source: Govt. of India, Election Commission of India, 2006*

Similarly we find that percentage of women contestants is high for higher literacy district and vice versa. However, percentage of winners among women varies positively along with literacy up to high level beyond which it shows a decline. It is worth mentioning that women in the low literacy districts did not win in the election.

From the Table it is also clear that percentage of women contestants and winners vary more or less positively with DDP per capita. It increases from low level to moderate level and then decrease at high level of DDP. However, percentage of voters does not show any variation across per capita DDP.

### **5. A Comparison between Assam and India**

National Family Health Survey - III pertains to data collected on various indicators of women empowerment (Govt. of India, 2005-06). On the basis of these data the status of women both in Assam and India can best be understood. Various indicators like women's capacity of household decision making, their access and control over resources, acceptance of unequal gender role, media exposure, freedom of movement etc are the key to the process of women's empowerment.

Decision making is the foremost step to the ladder of empowerment. In this regard data presented in Table 12 shows a comparison between Assam and India in respect of household decision making. The percentage of total women in Assam who participate in all the four decisions like decision about own health care, major household purchases, visiting relatives or friends and making purchases for daily household needs are much better in Assam i.e. 60.5% as compared to 37% in all India level. In respect of each of the four decisions also, greater percentage of women in Assam are involved as compared to all India level. For instance only half of the total women in India have the ability to take decision like major household purchases as compared to almost three fourth in Assam.

**Table 12**  
**Women's Household Decision Making in Assam**

Percentage of Women who Usually Make Specific Decisions Alone or Jointly with their Husband					
State/Country	Own Health Care	Making Major Household Purchases	Making Purchases of Daily Household Needs	Visit to the Family or Relatives	Participating in all the Four Decisions
Assam	80.0	72.0	70.6	80.9	60.5
India	62.2	52.9	60.1	60.5	36.7

Source: Govt. of India, NFHS - III

Employment is another important indicator of empowerment. If we see the percentage of non-workers in Assam and India as shown in Table 13 we find that higher proportion of females are non-workers in Assam as compared to India. But in urban areas the percentage of female non workers is almost same both in India and Assam. If we look at the rural urban divide we find that female non workers are more in urban areas as compared to rural areas both in Assam and India. As is obvious a wide gender gap is seen in this respect in the state.

**Table 13**  
**Percentage of Non Workers in Assam, 2001**  
(Figures in per cent)

India/ State	Person	Total		Rural			Urban		
		Male	Female	Person	Male	Female	Person	Male	Female
Assam	64.12	50.0	79.20	63.55	50.23	77.72	68.02	48.97	89.71
India	60.74	48.07	74.32	58.03	47.64	69.02	67.77	49.15	88.45

Source: Govt. of Assam, Assam Human Development Report, 2003

Workforce participation rate shows the number of persons employed per 1000 persons. Data for the year 2001 reveal that it is lower for Assam as compared to India as a whole (Table 14). The rate is much lower in rural Assam (36.4%) as compared to rural

India (42%). However the gap is narrower in case of urban areas, be it in India as a whole or in Assam. Further we find that it is lower for females both in absolute and relative terms. About half of the male population is engaged in workforce in Assam but in case of women, the rate is much lower, about a fifth are engaged in work. In rural areas, the rate is higher for women than that in urban Assam.

Table 14  
Workforce Participation Rate in Assam, 2001  
(Per 1000 Persons)

State/ Country	Total			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Assam	359	499	205	364	498	223	320	510	103
India	393	519	257	420	524	310	322	508	115

Source: Govt. of Assam, Assam Human Development Report, 2003

Women's access to monetary resource and credit is another important element of empowerment. Employment opportunity of women is necessary but not sufficient condition for financial empowerment. For economic empowerment control over resources is more important. Table 15 shows women's access to these resources in case of India and Assam. From the table it is clear that in Assam, women have less financial autonomy as compared to all India level. Only 26.9% of total respondents in Assam take decisions by themselves about the use of their own earnings as compared to almost 50% in case of India. However, awareness about micro credit programme is slightly higher in Assam (41.7%) than in India (38.6%). Yet, an insignificant percentage of women have availed loan from micro credit programme both in India (4%) and Assam (1.4%)

Table 15  
Women's Access to Money and Credit in Assam, 2005-06

India/states	Percentage of Women having			
	Access to Money and its Use	Bank A/C and its Use	Knowledge of Micro Credit Programme	Taken Loan from a Micro Credit Programme
India	44.6	15.0	38.6	4.0
Assam	26.9	11.7	41.7	1.4

Source: Govt. of India, NFHS - III

Another important evidence of empowerment of women is their attitude towards unequal gender role that prevails in the society (Gupta & Kishor, 2004). If women believe that wife beating is just or only male child should be given all the opportunities including better education, nutrition etc and female child should be taught to make sacrifice from very childhood so that she would be a so called ideal woman then it indicates that women accept their subordinate status by themselves. Table 16 shows women's attitude towards wife beating in India and Assam. Less number of women in Assam believes that wife beating is justified in comparison to India as a whole. In Assam, women justify wife beating if they neglect their home and show disrespect to in laws.

**Table 16**  
**Women's Attitude towards Wife Beating in Assam, 2005-06**

State/ Country	Percentage of Women who believe Wife Beating to be justified for any of the following Specific Reasons						
	Not Cook- ing Properly	Neglecting Children /Home	Disresp- -ecting In Laws	Suspec- ted by Husband as Unfai- thful	Refusing to have Sex with Husband	Going out of Home without Permiss- ion of Husband	At Least One of the Specific Reasons
Assam	11.0	31.4	32.4	16.4	11.5	23.4	44.6
India	20.4	34.7	40.0	25.1	14.1	29.0	54.4

*Source: Govt. of India, NFHS - III*

Domestic violence is one of the factors which affect the process of women empowerment. An environment in which women are under threat of continuous violence curtails their ability to control, or even access resources (Heise, Ellsberg and Goitmoeller, 1998). Unfortunately domestic violence is prevalent in Assam. Table 17 shows women's experience of different forms of violence in the state vis-à-vis India in 2005-06. Relatively less women (24.7%) in Assam experience physical violence as compared to all India situations (26.9%). However women of Assam are more prone to both physical and sexual violence (36.5%) than India as a whole (35.4%).

**Table 17**  
**Women's Experience of Different Forms of Violence, 2005-06**

Experience of different Forms of Violence by Women in the Age Group 15-49 Years				
State/ Country	Physical Violence only	Sexual Violence only	Either Physical or Sexual Violence	Both Physical and Sexual Violence
Assam	24.7	2.2	9.6	36.5
India	26.9	1.8	6.7	35.4

*Source: Govt. of India, NFHS - III*

## 6. Summery and Conclusion

Thus from the above analysis it is quite clear that development process in the state is not gender neutral; women enjoy inferior status as compared to the average women in India. The percentage of women employees to total employees in the state in the Government services is low. There has not been any significant improvement in this regard in the last decade. As regards women's political participation it is found that percentage of women voters has always been less than that of male voters in all the years under study but the gender gap is not very significant. But percentage of women elected members is very less compared to male counterparts and has not been showing any sign of significant improvement. This shows only poor participation of women in the state politics. Study at the disaggregate level reveals that percentage of women contestants and winners in the Assembly Election in the state was relatively high in Upper Assam and it varied more or less positively with Literacy and DDP per capita. No Such variation was seen when we examined the percentage of voters. However gender gap existed in all the situations.

Inter district disparity is rampant in the state. Districts like Kamrup and Tinisukia in spite of having high per capita DDP have not been able to transform the development effort to bridge the gender gap. Districts with high literacy rates are having high proportion of female main and marginal workers and low proportion of non-workers. In the areas of employment and education, most of the Upper Assam districts have performed well. Both Lower and Central Assam have low employment and educational status. Employment and educational status vary positively with per capita DDP. It is seen that total work force participation rate, proportion of female main, marginal and non-workers, female literacy and female enrolment rates are low in Low DDP districts and high for High DDP districts. As regards sex ratio, it is not in favor of women; however it is improving over time. It is high both in Lower and Central Assam. Upper Assam has sex ratio which is far below the

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state average. Sex ratio shows a declining trend with the increase in literacy rate and DDP per capita.

When we examine the factors like household decision making, control over resources, freedom of movement, workforce participation rate, women's experience of violence, attitude towards unequal gender role etc in the context of both Assam and India, we find some interesting result. Women in general enjoy better status in the state as compared to women in India in terms of decision making power at the household level. Higher percentage of women in Assam participates in all the four household decision making as against India. Proportion of women taking decision jointly with their husband or alone in any of the decisions is also higher in Assam than in India. Female workforce participation rate is lower in the state than that in India.

Rural urban gap in respect of employment is seen both in Assam and India. Minor differences are seen in this regard in case of rural female employment in Assam and India; however urban female employment is almost same for both Assam and India. Regarding female non worker, it is higher in Assam than in India. More women of Assam are prone to sexual violence in comparison to India; however physical violence is more in India than in Assam. When we analyse women's attitude towards wife beating, we find that less women of Assam support the cases of wife beating as compared to India. Women access and control over resources is far less in Assam in comparison to India. However awareness about micro credit programme is more in Assam than in India. Formation of SHGs from 1999 to 2006 is highest in Central Assam. However percentage of women SHGs to total SHGs is highest in Upper Assam during the same period. SHGs formation varies more or less positively with literacy rate and DDP Per Capita.

Although Government has undertaken a number of steps the situation has remained gloomy mainly because the educated women are not forward looking and cherish the baseless age old customs. Thus there is a need to create awareness towards achieving the desired goal of women empowerment in the state.

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## Gaps in MSME Financing in Assam : The MSME Side

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### Abstract

An empirical study has been carried out to find out for borrowers what factors lead to difficulty or satisfaction in the borrowing process and for non-borrowers it has tried to identify reasons behind not seeking institutional finance. The broad objective of the study is to find out the problems being faced by MSMEs in obtaining institutional finance. The survey was conducted in the Kamrup district of Assam using questionnaires presented to both registered and unregistered MSMEs. The conclusion from the study was that registration did not have much influence over borrowing behaviour of MSMEs. Also, both borrowers and non-borrowers were found to have the highest problems with security requirements.

**Keywords :** MSME, Financing Gaps, Banks, Lending, Credit.

### 1. Introduction

A number of surveys conducted have found that MSME sector has been playing an important role in the socio economic development of the country and contributes about 8 per cent of GDP and accounts for around 40 per cent of the total exports and around 45 per cent of the manufacturing output (Good Governance for MSMEs, 2015). In his valedictory speech, R. Gandhi, Deputy Governor of RBI stated that MSMEs are particularly important for emerging countries. This is primarily because of MSME's potential in job creation. Yet, lack of access to finance is a major obstacle to their growth (2015).

The limits for investment in plant and machinery/equipment for manufacturing / service enterprise, as notified by Ministry of Micro, Small and Medium Enterprises, vide S.O.1642(E) dated September 9, 2006 are as under -

**Table 1**  
**Investment Limits for Micro, Small and Medium Enterprises**

<b>Manufacturing Sector Enterprises</b>		<b>Investment in plant and machinery</b>
Micro Enterprises	Does not exceed twenty five lakh rupees	
Small Enterprises	More than twenty five lakh rupees but does not exceed five crore rupees	
Medium Enterprises	More than five crore rupees but does not exceed ten crore rupees	
<b>Service Sector Enterprises</b>		<b>Investment in equipment</b>
Micro Enterprises	Does not exceed ten lakh rupees	
Small Enterprises	More than ten lakh rupees but does not exceed two crore rupees	
Medium Enterprises	More than two crore rupees but does not exceed five crore rupees	

Source: msme.gov.in

The All India MSME Census presents the amount of finance received by MSMEs from various sources as per the Fourth Census of MSMEs 2006-07 (Quick Results Fourth All India Survey of MSME 2006-07, 2009). As observed from Table 2, institutional sources could cover only a negligible proportion of total MSMEs.

**Table 2**  
**Sources of Finance Received by MSMEs in India as per 4th Census of MSMEs (amount in lakhs)**

<b>Source of Finance</b>	<b>Distribution of MSME units</b>			<b>Percent Distribution</b>		
	<b>Registered</b>	<b>Unregistered</b>	<b>Total</b>	<b>Registered</b>	<b>Unregistered</b>	<b>Total</b>
No finance/ Self finance	1362568	22850626	24213194	87.77	93.08	92.77
Finance through institutional sources	174060	1177212	1351272	11.21	4.80	5.18
Finance through non-institutional sources	15864	520467	536331	1.02	2.12	2.05
<b>Total</b>	<b>1552492</b>	<b>24548305</b>	<b>26100797</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Quick results Fourth All India Census on MSME 2006-07

## 2. MSME Scenario in Assam

Assam stood at 15th out of 35 states in India with respect to number of unregistered MSMEs and at 18th position in case of registered MSMEs as per the census carried out in 2006-07 (Final Report on Fourth All India Census of MSME - Unregistered Sector 2006-07, 2011). On the other hand, in addition to limited development of industries in NER, there is limited availability of data on whatever industries exist there. Around 54 per cent of industrial units of North-eastern states are concentrated in Assam (Khanka, 2006). There were 37,356 registered MSME units in Assam providing employment to 2.05 lakh persons till the end of March 2013 (Economic Survey of Assam 2013-14, 2014). The SLBC data showing the credit disbursals towards MSME sector by commercial banks in Assam for the year 2014-15 as a percentage of their total credit disbursements do not show a favourable picture for the MSMEs. Majority of the banks' (73 per cent) MSME credit disbursal as a proportion of total credit disbursals ranges between 1 to 6 per cent (Financing under MSME Sector of Assam in the FY2014-2015, 2015).

**Table 3**  
**Credit Disbursals Towards MSME Sector by Commercial Banks in Assam**  
**During 2014-15**  
**(Amount in lakhs)**

Sl. No.	Bank Name	Total Disbursements	MSME DISBURSEMENTS			Total MSME Disbursal	MSME (% of Total Disbursements)
			Micro	Small	Medium		
1	Allahabad Bank	163409.7	4206	6268	0	10474	6.40
2	Andhra Bank	24231.5	154.2	412	0	566.2	2.33
3	Bank Of Baroda	65761.1	1977.4	0	0	1977.4	3.00
4	Bank Of India	40650	945	120	600	1665	4.09
5	Bank Of Maharashtra	2076.4	19.2	73.09	0	92.3	4.44
6	Canara Bank	116838.8	715.1	1428.9	150.8	2294.9	1.96
7	Central Bank Of India	154234	2651	1868	685	5204	3.37
8	Dena Bank	11432	1	529	89	619	5.41
9	HDFC	176220.2	6602.1	2466.9	952.7	10021.7	5.68

10	Federal Bank	23870.4	2375.2	2858.7	1229.4	6463.3	27.07
11	ICICI Bank	48757	8648	6935	1250	16833	34.52
12	IDBI Bank	123694	694	1038	727	2459	1.98
13	Indian Bank	59423.9	927.7	1479	200	2606.7	4.38
14	Indus Ind Bank	56117.3	2297.6	5299.1	294.8	7891.6	14.06
15	Indian Overseas Bank	25348	493	641.5	0	1134.5	4.47
16	Oriental Bank Of Commerce	7237.2	865	0	0	865	11.95
17	Punjab National Bank	161888.9	1024.2	1568	2135.7	4727.9	2.92
18	Punjab And Sindh Bank	6014.4	255.2	300	0	555.2	9.23
19	SBBJ	1433	0	0	0	0	0
20	State Bank Of India	1355412.1	3900	7900	6900	18700	1.37
21	Syndicate Bank	46594	118.2	1098.1	0	1216.3	2.61
22	Union Bank Of India	400228.3	14312	9250	0	23562	5.88
23	UCO Bank	150619.4	425	758	0	1183	0.78
24	United Bank Of India	65961.9	1765.6	490.8	60.1	2316.5	3.51
25	Axis Bank	93199.9	20.4	22.1	627.3	669.9	0.71
26	Vijaya Bank	22348.6	765.2	1092.4	0	1857.6	8.31
27	Corporation Bank	7854.3	173	1650	1	1824	23.22
28	AGVN	378136.6	18940.8	2263.5	594.4	21798.8	5.76
29	Langpi Dehangi	23785.2	122.8	0	0	122.8	0.51
30	Apex Co-operative Bank	66282	0	32	0	32	0.04

*Source : State Level Bankers' Committee Background Paper Agenda for March 2015 meeting and percentage author calculated.*

This study tries to find out what hinders the MSMEs in obtaining finance. For borrowers it tries to find out what factors lead to difficulty or satisfaction in the borrowing process. For non-borrowers it has tried to identify reasons behind not seeking institutional finance.

### 3. Theoretical Framework

Bank financing of MSMEs has always been an area of much debate. While development economists may propagate more finance towards MSMEs, growth economists may argue that the sector does not help the growth of banking industry. A number of researches conducted over the World have focused on MSMEs. As shown below is a list of articles reviewed for this paper :

**Table 4**  
**List of Articles Reviewed**

Author(S) (Year)	Title	Geographical Area	Sample Size
Robert Cull, Lance E. Davis, Naomi R. Lamoreaux and Jean-Laurent Rosentha(2005)	Historical financing of small- and medium-size enterprises	North Atlantic Core	-
Alex Coad and Jaganaddha Pawan Tamvada(2011)	Firm growth and barriers to growth among small firms in India	India	Based on MSME Census
Dr.K. Alamelu and R. Baskaran(2011)	MSMEs: The Key to Entrepreneurship Development in India	India	-
Bedman Narteh (2013)	SME bank selection andpatronage behaviour in the Ghanaian banking industry	Ghana	503
Thorsten Beck and AsliDemirguc-Kunt(2006)	Small and medium-size enterprises : Access to finance as a growth constraint	Cross-country	-
Ram JassYadav (2012)	MSME Finance: Viability Study from Bankers' Perspective	India	80

Allen N. Berger and Gregory F. Udell (2006)	A More Complete Conceptual Framework for SME Finance	-	-
Dr. Urmila Moon (2012)	Problems and Prospects of MSMEs in India	India	-
Ashish Kumar, VikasBatra and S. K.Sharma(2009)	Micro, Small and Medium Enterprises (MSMEs) in India : Challenges and Issues in the Current Scenario	India	-
Mahendra Reddy (2007)	Small Business in Small Economies: Constraints and Opportunities for Growth	Fiji	240
Naidu and Chand (2011)	A Comparative Study of the Financial Problems Faced by Micro, Small and Medium Enterprises in the Manufacturing Sector of Fiji and Tonga	Fiji and Tonga	200
Chandana Goswami (2014)	Credit Preference of Micro and Small Enterprises of Assam (India)	Assam, India	152

Cull, Davis, Lamoreaux and Rosenthal (2005) stated that a common explanation for the comparative absence of SMEs in poor countries today is that they cannot obtain access to capital. They referred to a survey conducted by the World Bank which confirms, large firms everywhere generally have more access to bank credit, both local and foreign, than small firms, whereas the latter rely heavily on internal funds and retained earnings. They also implicated that the countries in which SMEs have access to external sources are those with more advanced financial systems, suggesting there may have been a causal relationship between financial development and the viability of SMEs. Coad and Tamvada(2011) identified that while problems of labor and market were more visible in large enterprises, smaller and younger enterprises seemed more susceptible to problems relating to working capital, lack of demand, power shortages, equipment problems and also raw materials and management problems. Alamelu and Bhaskaran (2011) stated that the MSME sector in India is heterogeneous, dispersed, and mostly unorganized. In this regard, they believe that some of the core challenges of MSMEs are inadequate access to credit and Dwindling working capital.

Narteh(2013) stated how availability of credit was found highly vital to the success of SMEs. In Ghana, due to low incomes and consequently low savings rates, SME managers require external support mostly from the banks in order to operate profitably. However, most SMEs cannot meet the rigid collateral demands of the banks. Beck and Kunt(2006) in their article summarized recent empirical research which shows that access to finance is an important growth constraint for SMEs and financial and legal institutions play an important role in relaxing this constraint, and that innovative financing instruments can help facilitate SMEs' access to finance even in the absence of well-developed institutions.

Yadav (2012) in his study reported that bank finance has been observed as the most preferable source of funding by SMEs with the highest weightage of 94 per cent followed by retained earnings at 81 per cent and others. It was also found in the study that 79 per cent of SMEs reported that bankers were unwilling to provide loans whereas out of bankers' 21 per cent were observed to be indifferent to help SME firms. Berger and Udell(2006) stated that their investigation strongly suggests that lending infrastructures have important effects on SME credit availability. "Better" lending infrastructures may significantly improve SME credit availability through facilitating the use of the various lending technologies. Dr. Urmila Moon (2012) stated that the inherent weakness of small enterprises and lack of transparency in the financial data make the process of rating difficult for MSMEs. The author further adds that in spite of promotional measures of RBI, there has been high rate of NPAs in this sector leading to further hindrances in flow of credit to the sector. Kumar, Batra& Sharma (2009) reasoned how due to their weak financial strength, unclear information of business plans and accounting statements, the credit worthiness of MSMEs cannot be ascertained and as such they are considered as high-risk borrowers by investors and banks. Reddy (2007) believed that lack of security, insecure environment, lack of experience and lack of capital are stated as a major threat to credit procurement by small firms. The financial sector also is quite biased towards more developed firms. Naidu and Chand (2011) reported that MSMEs find it difficult to compete with their large counterparts and access the various financial services on offer which constrains their growth and survival. The "Report on Trend and Progress of Banking in India 2012-13" states that the lack of financial literacy and operational skills pose formidable challenge for MSE borrowers, underscoring the need for facilitation by banks in these critical areas. A study conducted on SMEs in Assam by Goswami (2014) revealed that 75 per cent respondents used their own fund for initial investment, while 93 per cent stated using bank loans. It also found that majority of borrowers sought cash credit, but after availing the loan majority of the borrowers had utilised the fund for starting the business. It was also found that banks generally do not go out to woo this segment of customers. Majority of the respondents stated that it took longer than the stipulated time for the credit to be sanctioned.

From the review of existing literature, it can be seen that considerable work has been done on the MSME sector. But limited research has been done for MSMEs located in

the state of Assam. The research work done in the state of Assam mostly concentrates on managerial skill development and only limited study focuses on the finance gap in MSME financing. Also the registration status of MSMEs has not been taken as a factor in the previous studies done. In fig 1, we have listed the factors affecting MSME financing from supply side (Bank) as well demand side (MSME) as summarized from the literature review.

**Fig 1  
Factors Affecting MSME Financing**

MSME Side		Bank Side
Weak financial base	MSME Financing	Lack of adequate financial records
Lack of financial literacy		High rate of NPAs
Lack of experience		Low credit-worthiness
Competition with bigger firms		Lack of security
Lack of operational skills		
Hassles of bank loan processing		

**4. Objectives**

The broad objective of the study is to find out the problems being faced by MSMEs in obtaining institutional finance. The study tries to find out what influences MSMEs in going for institutional finance and how satisfied they are with the various aspects of institutional finance.

**5. Research Methodology**

**5.1 Geographical Area**

The geographical area for the study is Kamrup district in the state of Assam as it has the highest concentration of registered MSMEs (9270 units).

**5.2 Population**

Registered and Unregistered MSMEs in the State of Assam.

**i) Registered MSMEs**

Enterprises registered with District Industries Centres in the State/UTs., Khadi and Village Industries Commission/ Khadi and Village Industries Board, Coir Board as on 31.03.2007 and factories under the coverage of section 2m(i) and 2m(ii) of the Factories Act, 1948 used for Annual Survey of Industries having investment in plant & machinery up to Rs.10 crores, are considered as belonging to the registered sector . The total number of registered MSMEs in Assam in 2010-11 was 34,618 units. Appendix 1 shows the number of registered MSMEs district-wise in Assam.

## ii) Unregistered MSMEs

All MSMEs engaged in the activities of manufacturing or in providing/rendering of services, not registered permanently or not filed Entrepreneurs Memorandum Part-II/ [EM-II] with State Directorates of Industries/District Industries Centres on or before 31-3-2007 are called unregistered MSMEs ("Annual Report 2013-14" 14). The definite population size for unregistered MSMEs is not available. A sample survey conducted by the Govt. of India in 2006-07 and reports from Economic Census (2005) reported that the strength of the unregistered sector is approximately more than 6 lakhs in Assam ("Annual Report 2012-13" 23).

## 5.3 Sampling Design

### Sample Size

The study has taken the responses of 81 sample units, 47 were borrowers of bank finance and 34 were non-borrowers. The sampling unit is MSME units and sampling element is owner/s, proprietor/s, manager/s or competent representative.

### Sampling Procedure

For registered MSME units, Random Sampling method was used to select samples. The website [stattrek.com](http://stattrek.com) was used to generate random numbers. The EM-II list of MSMEs compiled by DICCC, Kamrup was consulted using the random numbers generated to select the samples for the study. For unregistered MSME units, Convenience Sampling method was used. The respondents were selected on the basis of location, availability and willingness to respond.

## 5.4 Data Collection

Primary and secondary data were collected. The primary data collection was carried with the help of a schedule. Secondary data was collected from published reports and other data source from websites and personal visits to offices, such as RBI reports, SLBC reports, reports and lists by District Industries and Commerce centres, Annual Reports by MSME Development Institutes, Planning Commission Reports, journals and articles.

## 6. Data Analysis

### 6.1 Sample Profile

91% of the MSMEs were micro units, 8% were small and 1% was medium. 58% of the units were borrowers from bank while the rest, i.e. 42% have not borrowed from banks. Half the sample comprised of registered units and the rest unregistered units. 20% of the firms have existed for more than 15 years old, 26% between 11-15 years, 48% between 5-10 years and 6% of less than 5 years. 66% of the respondents were simple matriculate, 28%

have studied till 10+2, 4% were graduates and only 2% were post graduates. 83% of the firms had up to 10 workers, 15 % had 10-30 workers and only 2% had above 30 workers. 89% of firms were proprietorship, 9% were partnership and the rest 2% were private limited companies. Out of surveyed firms 91% were located in urban area whereas 9% were located in semi-urban areas.

**Table 5**  
**Profile of Respondents**

<b>PROFILE OF RESPONDENTS</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
<b>OWNER PROFILE</b>		
<i>Gender of owner</i>		
Male	51	63%
Female	30	37%
<i>Age of owner</i>		
Up to 30 years	4	4.9%
31 to 40 years	45	55.6%
41 to 50 years	27	33.3%
Above 50 years	5	6.2%
<i>Education level of owner</i>		
10	3	3.7%
10+2	35	43.2%
Graduate	41	50.6%
Post graduate	2	2.5%
<b>UNIT PROFILE</b>		
<i>Type of Unit</i>		
Micro	74	91%
Small	6	8%
Medium	1	1%
<i>Borrowing status</i>		
Borrowers	47	48%
Non-borrowers	34	52%
<i>Registration status</i>		
Registered Borrowers	18	22.2%
Registered non-borrowers	23	28.4%
Unregistered borrowers	29	35.8%
Unregistered non-borrowers	11	13.5%
<i>Age of business</i>		
Upto 5 years	35	43.8%

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5-10 years	32	40%
11-15 years	4	5%
Above 15 years	9	11.3%
<b>Workers</b>		
Upto 10	71	87.7%
11-30	9	11.1%
Above 30 workers	1	1.2%
<b>Form of business</b>		
Proprietorship	76	93.8%
Partnership	4	4.9%
Private limited company	1	1.2%
<b>Location of business</b>		
Urban	72	88.9%
Semi-urban	9	11.1%

## 6.2 Analysis

### 6.2.1 Registration Status Vs Satisfaction Status

It is believed that registration will help in easing credit procurement for the firm. Table 5 shows the cross-tabulated data for registration status and satisfaction with the amount of loan sanctioned for the borrowers.

**Table 6**

**Cross- Tabulation of Registration of Unit and Satisfaction with Sanctioned Amount**

		Whether satisfied with amount sanctioned		Total
		Yes	No	
Whether unit registered	Yes	13	5	18
	No	26	3	29
Total	39	8	47	

A chi-square test was done to check for association. The hypothesis formulated was as follows:

$H_0$  = There is no relation between registration status of firms and satisfaction with amount sanctioned as bank loans.

$H_1$  = There is a relation between registration status of firms and satisfaction with amount sanctioned as bank loans.

**Table 7**  
**Chi-Square Tests for Registration and Satisfaction**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.390a	1	.122		
Continuity Correction <sup>b</sup>	1.315	1	.252		
Likelihood Ratio	2.324	1	.127		
Fisher's Exact Test				.230	.127
Linear-by-Linear Association	2.339	1	.126		
N of Valid Cases	47				

a) 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.06.

b) Computed only for a 2x2 table

Since the p-value is more than 0.5, the null hypothesis cannot be rejected. It can be concluded that there is no relation between registration status and satisfaction with sanctioned loan amount.

### 6.2.2 Business Nature Vs Satisfaction Status

It is also believed that nature of business will help in easing credit procurement for the firm. Table 6 shows the cross-tabulated data for nature of business and satisfaction with the amount of loan sanctioned. For this analysis, two respondents who were into both manufacturing as well as service were excluded so that a chi-square test was possible.

**Table 8**  
**Cross-tabulation of Nature of Business and Satisfaction with Sanctioned Amount**

		Whether satisfied with amount sanctioned		Total
		Yes	No	
Nature of business	Manufacturing	10	5	15
	Service	27	3	30
	Total	37	8	45

A chi-square test was done to check for association. The hypothesis formulated was as follows:

$H_0$  = There is no relation between nature of business and satisfaction with amount sanctioned as bank loans.

$H_1$  = There is a relation between nature of business and satisfaction with amount sanctioned as bank loans.

**Table 9**  
**Chi-Square Tests for Nature and Satisfaction**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.725a	1	.054		
Continuity Correction <sup>b</sup>	2.299	1	.129		
Likelihood Ratio	3.520	1	.061		
Fisher's Exact Test				.095	.068
Linear-by-Linear Association	3.642	1	.056		
N of Valid Cases	45				

a) 1 cell (25.0%) has expected count less than 5. The minimum expected count is 2.67.

b) Computed only for a 2x2 table

Since the p-value is more than 0.5, the null hypothesis cannot be rejected. It can be concluded that there is no relation between nature of business and satisfaction with sanctioned loan amount.

### 6.2.3 Weighted Average Scores of Likert Scales Statement-Wise

Statement-wise weighted score was calculated separately for difficulty level and satisfaction level using the following formula :

$$N(VL)*1+N(L)*2+N(M)*3+N(H)*4+N(VH)*5$$

Where,

N(VL) = No. of respondents selecting VERY LOW

N(L) = No. of respondents selecting LOW

N(M) = No. of respondents selecting MODERATE

N(H) = No. of respondents selecting HIGH

N(VH) = No. of respondents selecting VERY HIGH

Higher the weighted score, higher is the difficulty or satisfaction level associated with that statement.

**Table 10**  
**Level of Difficulty**

Statement	Very Low	Low	Mode-rate	High	Very High	Weighted Score	Average Weighted Score
Loan application format	6	26	4	11	0	114	
Language used in application	5	29	7	6	0	108	
Time required to fill the application	4	29	5	7	2	115	
Details demanded in application format	5	25	8	8	1	116	
Relevance of details asked in the application	4	30	6	7	0	110	113.7
Enclosures to be furnished	4	26	8	9	0	11	
Certificates to be produced from legal authorities	4	25	8	9	1	119	
Time given to furnish the additional information	4	32	7	2	2	107	
Application processing time	3	30	6	5	3	116	
Application processing charges	4	30	7	4	2	111	
Legal fee attached with the procedure, if any	3	27	8	7	2	119	
Procedure of sanctioning the loan	1	35	9	1	1	107	
Time gap between submission and sanctioning	1	29	12	4	1	116	
Examination and review procedures	1	32	11	3	0	110	
Intimations by bank about disputes in approvals	1	29	13	4	0	114	111.8
Procedures for submitting clearance documents	1	35	5	5	1	111	
Procedure for collection of documentary evidences	1	34	9	2	1	109	

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Financial statements to be submitted	1	31	8	6	1	116	
Procedure for analysing credit worthiness	1	32	10	3	1	112	
Feasibility analysis procedures, if any	1	31	12	3	0	111	
Post sanction formalities	2	38	6	1	0	100	
Terms and conditions of loan	1	35	7	4	0	108	
Follow-up procedure with regard to sanctioning	1	35	10	1	0	105	
Procedure for calculation of interest amount	1	33	10	3	0	109	
Procedure of submission of updated business plan	2	34	9	2	0	105	104.6
Procedure for releasing of funds in instalments	1	38	6	1	1	104	
Monitoring the utilization of sanctioned amount	2	37	7	1	0	101	
Collateral security requirements	2	26	5	10	4	129	
Margin amount requirements	1	27	13	5	1	119	
Request for personal guarantor	1	32	8	5	1	114	
Type of assets accepted as collateral security	1	29	10	6	1	118	120.7
Valuation of assets produced as collateral security	0	29	11	5	2	121	
Documents as proof of assets provided as securities	1	28	7	10	1	123	
Documentation for repayment procedure	2	39	6	0	0	98	
Repayment reminders	2	37	6	2	0	102	
Release of security after repayment of loan	2	38	6	1	0	100	101.3
Terms and conditions for relaxation on repayment	3	31	12	1	0	105	

From Table 9, we conclude that security requirement is the area where highest level of difficulty was experienced by the borrowers, followed by application procedure,

pre-sanction, post- sanction and repayment procedure. The top five specific points of difficulty are :

- (i) Collateral / security requirement.
- (ii) Documentary evidence of asset based security.
- (iii) Valuation of asset based security.
- (iv) Certificate from legal authorities, legal fees, margin money.
- (v) Type of assets accepted as security.

The top specific points of where borrowers faced least difficulty are:

- (i) Documentation for repayment procedure
- (ii) Release of security after repayment of loan
- (iii) Post sanction formalities
- (iv) Monitoring the utilization of sanctioned amount
- (v) Repayment reminders.

**Table 11**  
**Level of Satisfaction**

Statement	Very Low	Low	Mode- rate	High	Very High	Weighted Score	Average Weighted Score
Quantum of financial assistance	0	4	16	26	1	165	
Ad-hoc increase in the sanctioned limit	0	3	23	19	2	161	
Rate of interest charge	1	12	15	18	1	147	
Tenure of the loan	0	5	17	24	1	162	157.7
Repayment period for interest	0	7	14	25	1	161	
Repayment period for principal amount	0	4	18	24	1	163	
Amount of relaxation on repayment offered	2	11	17	15	2	145	
Suggesting the right scheme for availing loans	3	3	19	21	1	155	
Support in the application procedure	1	1	18	26	1	166	156.3
Information on available subsidies	1	11	18	16	1	146	

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Approach in loan sanction procedure	0	2	21	23	1	164	
Intimating about the new schemes	6	7	14	19	1	143	
Reminder about eligibility for additional loans	0	9	24	13	1	147	
Information on relaxations in repayment	2	9	16	19	1	149	
Information on reason for not sanctioning the loan	0	5	21	20	1	158	
Information on procedure for retaining documents	1	2	16	26	2	167	
Proving timely information	0	2	18	25	2	168	
Providing more appropriate and relevant information	0	4	15	23	5	170	
Prompt response	0	3	15	25	4	171	
Personal attention	2	21	13	10	1	128	
Awareness drives by banks	3	21	15	7	1	123	
Promotional drives by banks for inviting MSMEs	2	8	12	22	3	157	
Overall attitude of the bank towards MSME	0	5	19	20	3	162	
Discretion of the bank towards size of MSME	0	2	4	28	13	193	160.2
Maintaining customer confidentiality	0	9	13	21	4	161	
Institutional framework for grievance redressal	0	4	16	26	1	165	

From Table 10, we conclude that additional assistance offered by bank is the area where highest level of satisfaction was experienced by the borrowers, followed by terms of loan and staff support. The five specific points where customers were least satisfied are:

- (i) Awareness drives by banks.
- (ii) Personal attention by staff.
- (iii) New schemes intimation.
- (iv) Amount of repayment relaxation.
- (v) Information on available subsidies.

The top specific points of where borrowers were most satisfied are:

- (i) Discretion by bank towards size of MSMEs.
- (ii) Prompt response by staff.
- (iii) Relevant and appropriate information by staff.
- (iv) Timely information by staff.
- (v) Information on procedure of retaining of documents by staff.

#### 6.2.4 Relationship between Difficulty Score and Amount Sanctioned

The difficulty score for each respondent was calculated as the total of score allotted to each statement under a section. The scores allotted were as follows Very Low = 1, Low = 2, Moderate = 3, High = 4 and Very High = 5. Using correlation tool of SPSS, the relationship between difficulty score for each section and amount sanctioned was analysed.

Table 12  
Correlation Tests for Sanctioned Loan Amount and Difficulty Score

		Amount of loan sanctioned	Difficulty Score with application	Difficulty Score with pre-sanction	Difficulty Score with post-sanction	Difficulty Score with security	Difficulty Score with repayment
Amount of loan sanctioned	Pearson Correlation	1	.099	-.128	-.009	.203	.012
	Sig. (2-tailed)		.507	.392	.952	.170	.936
	N	47	47	47	47	47	47

The Pearson Correlation test gives us the conclusion that the correlation between difficulty scores and amount of loan sanctioned is not statistically significant.

#### 6.2.5 Relationship between Satisfaction Score and Amount Sanctioned

The satisfaction score for each respondent was calculated as the total of score allotted to each statement under a section. The scores allotted were as follows Very Low = 1, Low = 2, Moderate = 3, High = 4 and Very High = 5. Using correlation tool of SPSS, the relationship between satisfaction score and amount sanctioned was analysed.

**Table 13**  
**Correlation Tests for Loan Amount and Satisfaction Score**

		Amount of loan sanctioned	Satisfaction Score with loan terms	Satisfaction Score with staff support	Satisfaction Score with additional asst
Amount of loan sanctioned	Pearson	1	.061	.144	.129
	Correlation				
	Sig. (2-tailed)		.685	.333	.388
	N	47	47	47	47

The Pearson Correlation test gives us the conclusion that the correlation between satisfaction scores and amount of loan sanctioned is not statistically significant.

#### 6.2.6 Difficulty Level Experienced across Different Amount of Loans Availed

To study whether difficulty varies in accordance with the amounts of loan taken, the difficulty score as calculated in the previous sections were used. The difference between difficulty level across amount of loans availed was tested using ANOVA in SPSS. The hypothesis framed was as follows :

$H_0$  = Difficulty scores do not differ significantly across amounts of loan availed.

$H_1$  = Difficulty scores differ significantly across amounts of loan availed.

**Table 14**  
**Tests of Homogeneity**

	Levene Statistic	df1	df2	Sig.
Difficulty Score with application	2.805	3	42	.051
Difficulty Score with pre-sanction	2.324	3	42	.089
Difficulty Score with post-sanction	1.355	3	42	.270
Difficulty Score with security	1.896	3	42	.145
Difficulty Score with repayment	.839	3	42	.480

**Table 15**  
**Results of ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
Difficulty Score with application	Between Groups	265.825	4	66.456	.776	.547
	Within Groups	3596.388	42	85.628		
	Total	3862.213	46			
Difficulty Score with pre-sanction	Between Groups	58.416	4	14.604	.689	.604
	Within Groups	890.137	42	21.194		
	Total	948.553	46			
Difficulty Score with post-sanction	Between Groups	32.673	4	8.168	.464	.761
	Within Groups	738.731	42	17.589		
	Total		771.404	46		
Difficulty Score with security	Between Groups	130.727	4	32.682	1.62	.185
	Within Groups	842.380	42	20.057		
	Total	973.106	46			
Difficulty Score with repayment	Between Groups	7.425	4	1.856	.401	.807
	Within Groups	194.319	42	4.627		
	Total	201.745	46			

Since the p-values for all difficulty scores are more than 0.05, we cannot reject the null hypothesis. It can be concluded that difficulty scores do not differ significantly across amounts of loan availed. This indicates that the average difficulty scores do not vary significantly across various amounts of loan sanctioned.

#### 6.2.7 Satisfaction Level Experienced across Different Amount of Loans Availed

To study whether satisfaction varies in accordance with the amounts of loan taken, the satisfaction score as calculated in the previous sections were used. The difference between satisfaction level across amount of loans availed was tested using ANOVA in SPSS. The hypothesis framed was as follows:

$H_0$  = Satisfaction score do not differ significantly across amounts of loan availed.

$H_1$  = Satisfaction score differ significantly across amounts of loan availed.

**Table 16**  
**Tests of Homogeneity**

	Levene Statistic	df1	df2	Sig.
Satisfaction Score with loan terms	1.859	3	42	.151
Satisfaction Score with staff support	1.498	3	42	.229
Satisfaction Score with additional asst.	.425	3	42	.736

**Table 17**  
**Results of ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
Satisfaction Score with loan terms	Between Groups	46.516	4	11.629	.570	.686
	Within Groups	856.974	42	20.404		
	Total	903.489	46			
Satisfaction Score with staff support	Between Groups	516.770	4	129.192	2.022	.109
	Within Groups	2683.188	42	63.885		
	Total	3199.957	46			
Satisfaction Score with additional asst.	Between Groups	55.862	4	13.966	.710	.590
	Within Groups	826.691	42	19.683		
	Total	882.553	46			

In Table 16, the Levene's test of homogeneity shows no significance and therefore the assumption of equality of variance is fulfilled. In Table 17, the ANOVA results show that since the p-values for all satisfaction scores are more than 0.05, we cannot reject the null hypothesis. It can be concluded that satisfaction scores do not differ significantly across amounts of loan availed. This indicates that the average satisfaction scores do not vary significantly across various amounts of loan sanctioned.

#### 6.2.8 Non-Borrowers

Non-borrowers are those MSMEs which have never approached a bank for finance or got rejected after applying for a bank loan. The major reasons because of which MSMEs are not approaching the banks in spite of being unsatisfied with their current source of finance are mentioned in Table 21. It has been found that the leading reasons behind units not approaching the bank despite the need for institutional finance are lack of proper

collateral security, repayment burdens, perceived higher interest rates and documentation hassles.

**Table 18**  
**Business Nature of Non-borrowers**

Nature of Business	No. of Respondents
Manufacturing	20
Service	14
Total	34

**Table 19**  
**Reasons for not Borrowing from the Bank**

Reasons For Not Borrowing	No. of Respondents
Lack of assets to be provided as collateral security	16
Burden of repayment	12
High interest rate	12
Documentation required	9
No steady income	3
No awareness	2
Remote location, competitors, would not increase revenue	1
Time	1

## 7. Conclusion and Suggestion

From the study concluded we arrive at the following conclusions:

1. Registration status does have an influence over preference for bank loans. Satisfaction with sanctioned loan is not related with registration status (with DIC, KVIC or KVIB) or with the nature of business, i.e. whether it is a manufacturing or service unit. A study on the role of DICs in Thoothukudi District in Tamil Nadu has observed that business performances of sample SMEs' have significantly improved after approaching DIC for various kinds of assistances and their registration in DIC as a member (Sekar et al., 2013). However, in Kamrup district it has been observed that registration with DIC has not worked much to provide MSME borrowers a better borrowing experience in comparison to those who have not registered.
2. It was also seen that security requirement is the area where highest level of difficulty was experienced by the borrowers, followed by application procedure, pre-sanction,

post-sanction and repayment procedure. This result concurs with a study in Fiji by Reddy (2011), who also found that due to lack of adequate security MSMEs found difficulty in obtaining finance.

On the other hand, additional assistance by bank is the area where highest level of satisfaction was experienced by the borrowers, followed by terms of loan and staff support.

3. No statistically significant correlation was found between difficulty scores and amount of loan availed, or also between satisfaction scores and amount of loan availed. Average difficulty levels and average satisfaction levels were independent of loan amount. Past studies have shown that firms demanding smaller loan face more barriers as small firms with demand for smaller loans face higher transaction costs and face higher risk premiums since they are typically more opaque and have less collateral to offer (Beck and Kunt, 2006). The results of this study contradict the past findings.
4. From the analysis of non-borrowers, we found that the dominant reasons for not borrowing from banks are lack of assets as collateral security, burden of repayment, high interest rates and demands for security requirements. Out of total respondents 42% was non-borrowers. They were found to have either never approached a bank or were rejected for loan by bank.

From the study, it is evident that registration has not been able to assist the MSMEs in obtaining finance more easily. It implies that the Ministry of MSMEs have not been very effective in assisting the firms. Therefore, the DIC units need to be transformed in order to make them more effective. Also, since security requirement is found to be the most pressing impediment to both borrowers and non-borrowers, setting up of Bandhan and Mudra banks are good initiatives and it remains to be seen how far the MSMEs are benefitted from such steps by the government.

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## Growth and Market Structure in Post Reform Era : A Case of Indian General Insurance Sector

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### Abstract

Present paper calculates growth and analyzes market structure of Indian General Insurance sector in post reform era starting from 2002-03 to 2014-15. It analyses market structure by calculating competition among general insurance companies through structural measures of competition which includes Concentration Ratios ( $CR_k$ ) where  $K= 4, 5 \& 8$ , Herfindahl-Hirschman Index (HHI) and Entropy Index (EI). The paper also assesses growth in terms of Physical, Structural, Business and Profitability growth. The result shows that Indian general insurance companies are operating in a monopolistic competitive market. Further the results also reveal that the private players are growing more than public players over the study period. Thus can be concluded that, though enactment of reform in Indian general insurance sector has significantly changed the market scenario but it still has to go a long way to become perfectly competitive market.

**Keywords :** Growth, Market Structure, Herfindahl Hirschman Index, Entropy Index.

### Introduction

During the last two decades an enormous structural changes occurred in insurance markets around the world. All most all the developed as well as developing countries have opened up their insurance market. The Third Generation Insurance Directive in 1994 has remarkably changed the market environment of insurance in the European Union and enactment of financial system deregulation in 1996 has also changed the scenario of Japanese insurance market. In case of US Gramm-Leach-Bliley Financial Services Modernization Act of 1999 and many other deregulatory act in different countries have changed the insurance market all over the world (Weiss & Choi, 2008). In case of India also the General Insurance sector has grown up step by step and experience a 360-degree journey over a period of more than a hundred years. It started as an open competitive market with the establishment of Triton Insurance Company Ltd. by the British in the year 1850 in Calcutta and gets nationalized in the year 1972. By nationalizing the sector the government amalgamated 107 insurance companies and made four subsidiaries with a holding company.

Thus monopoly started in general insurance sector under the single shade of General Insurance Corporation with four subsidiaries i.e. National Insurance Company Ltd., New India Insurance Company Ltd., Oriental Insurance Company Ltd. and United India Company Ltd. (Sinha, 2005). In the year 1999 again the sector was opened up for private companies with the enactment of Insurance Regulation Act, 1999. The enactment of the Insurance Regulatory and Development Authority Act: 1999 brought greater freedom to the private sector and increased the number of domestic and foreign private companies by paralyzing the monopoly state of the sector. As a result after 2000, several changes have been seen in business environment, managing strategies, service quality and advance technology in the Sector (Sing & Kumar, 2009). In the year 2007 & 2008 the Detarification Act was enacted which has given Indian general insurance companies more freedom to charge their own premium and design their own product and also significantly impacted the premium rates and growth for commercial lines and health insurance. Finally the most waited Foreign Direct Investment bill (FDI) is amended by the government in the year 2015 and enhanced FDI to 49% from 26%. The aim of all this reform process was to create a competitive environment so that the players in the insurance sector can use their resources judiciously in order to enhance their growth, financial stability, customer satisfaction, fulfilling social needs, improving product offerings, transfer knowledge, advance technology, develop service quality as well as decreasing prices. So today, it became very significant to understand that after all these reforms whether Indian general insurance sector could achieve all those object of reform process and if achieved to what extent for the wellbeing of the sector as well as the country at large. In this backdrop, the purpose of present study is to find out the answer of a very pertinent question: what is the growth and degree of competition in Indian general insurance sector in post reform era? The research issue is relevant because the empirical evidence in this regard is very scanty in case of Indian general insurance sector. Further the research will also help the government or the authority to take necessary steps for further improvement of the sector. The remaining part of the paper is organized as follows:

Section 2 focuses on the review of existing literature related to the topic. Section 3 describes data and methodology. Section 4 provides growth of general insurance sector. Section 5 is devoted for analyzing market structure of the sector followed by concluding remarks in section 6.

### **Literature review**

Research studies across various economies have indicated a positive relationship between development of insurance sector and economic growth (Holsboer, 1999, Ward & Zurberg, 2000, Arena, 2008, Han, Li, Moshirian & Tian, 2010). Outreville (1990) established a link between an economy's financial development and insurance market development in case of developing economies of the world. Webb, Grace & Skipper (2002) carried out

another study with an aim to investigate the effects of insurance and banking sector on economic growth. They found that both the insurance and the banking sector affect economic growth of a country. Chau, Khin & Teng (2013), studied the short term and long term relationship between life and general insurance consumption with economic development measured by gross domestic product (GDP) in case of Malaysian. They concluded that total employment and life insurance premium had a positive impact and significant relationship in short term economic development, while lag of GDP, capital stock, total employment, and general insurance premium exhibit a positive and significant relationship in long term economic development in the Malaysian insurance market. Michael (2012), examined the short and long run relationships between GDP and insurance sector growth of Nigeria and found that insurance sector growth positively and significantly affects GDP. The long run relationship between the insurance growth and GDP was also confirmed. Hou & Lee (2012) investigated the impact of financial institutions and GDP in 12 Euro-countries. They found that, the life insurance and banking development are significant predictors of GDP. Horng (2012), studied the relationship among the insurance demand, financial development and GDP of Taiwan. The study established that there is an equilibrium relationship between the insurance demand, financial development and GDP. The study also reveals that in short run, GDP is Granger cause of insurance demand and financial development is Granger cause of GDP. They finally concluded that financial development promotes GDP and GDP further promotes the insurance demand. Akins & Apanisile (2014), examined the relationship between insurance and economic growth in sub-Saharan Africa over the period 1986-2011. They employed pooled OLS, fixed effect model and generalized method of moment panel model in the estimation and concluded that insurance has positive and significance impact on economic growth in sub-Saharan Africa.

Thus growth of insurance sector is crucial for the development of a countries economy. Further due to completion of reform process all over the world market structure of insurance industry has become pertinent topic among the researchers. Market structure was primarily analyzed by using structural approach only. Structural measure inferred the nature of competition in an industry from its structural characteristics, such as the number of firms in the market and their size distribution, concentration, market share etc. (White, 1982). The main approaches of structural measure includes the method like structure-conduct-performance (SCP) hypothesis (Bain, 1951), efficient structure (ES) hypothesis (Demsetz, 1973), Concentration ratio, Herfindahl Hirschman Index, Entropy Index, Hall Tideman Index, Comprehensive Industrial Concentration Index, Rosenbluth Index etc. (Bikker & Haaf, 2002).

Analysis of market structure was mostly carried out in case of banking sector both in abroad as well as in India by using different approaches of measuring competition (Bikker & Haaf, 2002, Rozas, 2007; shafar & Laura, 2009; Mensi & Jouari, 2011; Pawlowska, 2012; Ansari, 2013). Some of the studies used SCP and ES hypotheses but they found a

diverse result and could not indicate the superiority of one hypothesis than the other (Heggstad & Mingo, 1977, Brozen, 1982, Smirlock 1985, Jackson, 1992, Berger, 1999 and Evanoff & Fortier, 1998). In case of India, Sathye & Sathye (2004) conducted a study by using SCP approach for Indian banking sector. They used multiple regression model and calculated efficiency by applying non parametric method of DEA for time series cross-sectional data over a period from 1997 to 1998 with 2,700 unit of State Banks operating in seven-state. The result suggested that Indian banking market is competitive and efficient.

In case of insurance sector also some studies on market structure was done outside India. Mainly in United State they used SCP and ES hypothesis for analyzing market structure and found different results for different insurance lines (Carrol, 1993, Chidambaram, Pugel & Saunders, 1997, Bejtelsmit & Bouzouita, 1998, Choi & Weiss, 2005, Weiss & Choi, 2008).

There are a few studies in insurance sector where HHI, EI, Concentration ratio are used for measuring the degree of competition at different countries. Nissan (1996) analyzed the degree of concentration amongst the largest 200 property liability insurance company of US by using Theil's Entropy Index over a period between 1985 and 1993. The result revealed that the concentration in US property liability insurance is increased in accordance with substantial number of merger and acquisition. Again in the year 2000, Nissan and Caveny examined the concentration of US property liability insurance industry in terms of lines of insurance by using Herfindahl Hirschman Index between 1989 and 1995. They found a increasing trend in concentration for all most all the lines of insurance during the study period though the line of homeowners was found most concentrated line followed by private passenger auto physical damage and the line of commercial auto physical damage as least concentrated line. Sukpaiboonwat, Piputsitee, & Punyasavatsut, (2014) studied the market structure of life insurance and non-life insurance industry in Thailand by using Concentration Ratio and Herfindahl-Hirschman Index for measuring the degree of market concentration over a period 2006-2011. The paper also analyzed various data from all type of insurance premium, balance sheet and income statement to measure the concentration and competition trend. The results stated that the life insurance industry is more concentrated than the non-life insurance industry. In both segments of the insurance market, as well as in the overall insurance sector, they also observed a downward trend in market concentration.

Shukla (2010), analyzed the structure of Indian insurance industry in post liberalization period. The author carried out econometric analysis to select the best measure of concentration from a set of eight concentration ratios of the largest firms and HHI index. The study witnesses the domination of the public entities even after five years of liberalization. Further the finding has also shown that entry of large number of private players has changed the structure of the industry with a declining in concentration and increased in competition in the life insurance industry. Parekh and Banerjee (2010) also

found that in India insurance sector has significant impact on economic development. This sector is gradually increasing and its contribution in GDP is also increasing. Sastry (2012) used various concentration and inequality measures like HHI,  $CR_k$ , EI, Hall-Tideman Index, Bajo-Sales indices for over all insurance sector and found that concentration is slowly decreasing.

From the review of existing literature it is found that research studies across various economies even in India also indicates a positive relationship between development of insurance sector and economic growth. Most of the studies in analyzing market structure have been done in abroad in case of both banking as well as insurance sector. The structural approach has been extensively used in banking sector as well as life insurance sector but scanty applied in general insurance sector, and most of them are from abroad. Under structural approach they have mainly used SCP, ES, Concentration ratio, HHI and EI.

### **3. Data and Methodology**

#### **3.1 Data and Study Period**

The present study is based on secondary data collected from the individual annual reports of the general insurance companies, IRDA and Hand Book of Insurance Statics of India for a period of 13 years from 2002-03 to 2014-15.

#### **3.2 Population and Sample**

The population of the study is all the general insurance companies operating in India. As on 31-03-2015 there are 28 general Insurance companies doing business in India out of which six public sector and 22 private sector companies. Among the private sector 5 are exclusively doing health business and among public sector four are doing multi line operations and two are specialized insurance companies. The sample size of present study is 12, four public and eight are private general insurance companies. The sample companies are selected on the basis of date of establishment and lines of insurance dealings with i.e. all the companies dealing with multi line general insurance business and established before 1st April 2003 are included in the sample.

#### **3.3 Measures of Growth and market structure**

To analyze the Growth of general insurance sector in post reform era trend analysis of the data has been done for identifying the appropriate growth rate for the variables. For that first we have plotted the actual data and compared with the figures of different growth rates. On comparison, we find that exponential growth rate is appropriate for all the variables. Hence, we have computed the exponential growth rate of various pertinent variables i.e. Total asset, Fixed asset, cash and bank balance, investment, capital, current liabilities, Net premium income, investment income, commission and management

expenses, net claim incurred and Profit after tax etc. by dividing into four segment, Physical growth, Structural growth, Business growth and Profitability growth. Further, growth has been calculated as individual Company wise and sector wise i.e. for public sector as well as private sector. For analyzing market structure of Indian general insurance sector in post reform era mainly the structural approach is used for measuring competition. From structural approach the present paper has used  $CR_k$  ratios where  $K= 4, 5 \& 8$ , Herfindahl-Hirschman Index (HHI) and Entropy Index (EI) as most of the previous studies has used ((Nissan, 1996, Nissan and Caveny, 2001, Subir & Madheswaran (2006), Sneha(2010), Shastri (2012), Sharma & Bal, 2012; Sukpaiboonwat et al. 2014 & Mirzaei & Moore, 2014). The details of all the measures are explained below.

**Concentration Ratio :** The concentration ratio is the measure of the percentage of market share of  $k$  numbers of companies in an industry held by the largest firms within that industry. The concentration ratio is measured by :

$$CR_k = \sum_{i=1}^k S_i \quad \text{where } K=4, 5 \& 8 \text{ and } S_i \text{ is the market share of } i^{\text{th}} \text{ company.}$$

Concentration ratios range from 0 to 100 percent. While 0 indicates perfect competition or at the very least monopolistic competition 100 implies an extremely concentrated oligopoly or monopoly market.

**HHI :** Herfindalh Hirachman Index (HHI) is computed by applying the following formula -

$$HHI = \sum_{i=1}^n S_i^2 \quad \text{where } S_i \text{ is the market share of firm } i.$$

The HHI ranges between  $1/n$  and 1, it reaches its lowest value (the reciprocal of the number of firms) when all the firms in a market are of equal size i.e. the market is purely competitive and reaches unity if the market is monopoly. So a decrease in the HHI indicates an increase in competition.

**Entropy Index :** The EI Index is similar to HHI index and it is defined as follows:

$$E = \sum S_i \text{Log} S_i \quad \text{where } s_i \text{ is the market share of } i^{\text{th}} \text{ company.}$$

The value of the entropy varies inversely to the degree of concentration. It approaches zero if the underlying market is monopoly and reaches its highest value when the market shares of all the firms are equal and market concentration is lowest i.e. competitive market environment.

#### 4. Growth of General Insurance Sector

Due to liberalization, privatization and globalization Indian insurance sector has grown enormously during a period of more than a decade. Since 2000 the market scenario

of Indian general insurance sector has changed drastically and becomes difficult for both public and private sector to maintaining their growth and market share. The detail growth analysis has been discussed below.

#### 4.1 Physical Growth of Indian General Insurance sector

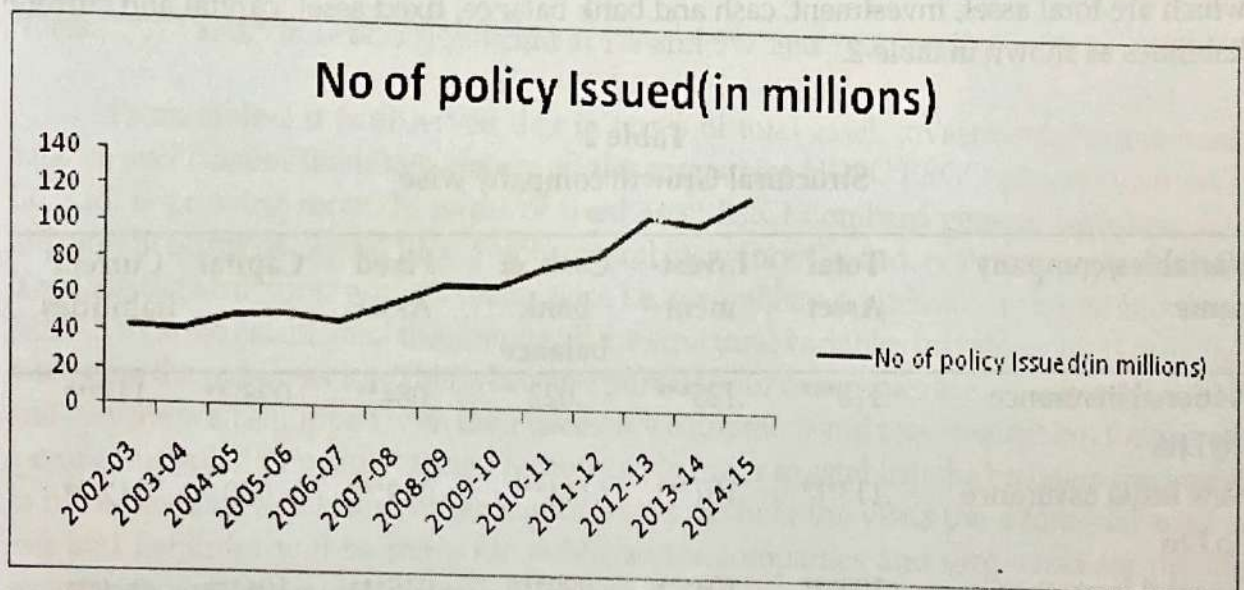
The potential of the insurance sector is universally assessed with reference to the two parameters, viz., insurance penetration and insurance density. These two are often used to determine the level of development i.e. the growth of the insurance sector in a country. Insurance density is the percentage of premium to total population while Insurance penetration is defined as the ratio of premium underwritten in a given year to the Gross Domestic Product (GDP). Therefore under physical growth along with penetration and density three more pertinent variable's growth i.e. Number of companies, Number of policy issued and Gross direct premium with in India has been presented in table -1.

**Table 1**  
**Physical Growth**

Year	Penetration (percentage)	Density (in US Dollar)	No of Companies (Numbers)	No of policy Issued (millions)	Gross Direct Premium (millions)
2002-03	0.67	3	14	43.6	138982.6
2003-04	0.62	3.5	15	41.7	155948.1
2004-05	0.64	4	15	49.8	174806
2005-06	0.61	4.4	15	51.1	203597.2
2006-07	0.6	5.2	16	46.7	249054.9
2007-08	0.6	6.2	18	57.3	278237.4
2008-09	0.6	6.2	21	67.1	303518.3
2009-10	0.6	6.7	23	67.5	346204.5
2010-11	0.7	8.7	24	79.3	425764.5
2011-12	0.7	10	24	85.7	528757.7
2012-13	0.78	10.5	27	1,07.02	629726.5
2013-14	0.80	11	28	1,02.45	706100.2
2014-15	0.7	11	28	118.28	776395.4

*Source : Hand book of Insurance Statistic and Annual reports of IRDA*

Table -1 illustrate that in the year 2002-03 density of general insurance sector was 3 and in the year 2014-15 it became 11 which is more than three times, can visualized the fact that overall performance of insurance sector has improved a lot after liberalization. In case of penetration in the year 2002-03 it was 0.67% and in 2014-15 it became 0.7%, indicates very less growth of penetration and during the period from 2006-07 to 2009-10 it was constant. Which further specify that spread of general insurance business in India is very poor and a large section of insurable populations are still inaccessible of insurance coverage. The phenomenon clearly reveals that there is a huge prospective of untouched market in general insurance sector of India. Out of one billion people only two million people were covered thus one can see the growth prospect of general insurance sector of India. Number of companies also increases during the study period of more than a decade, from 14 numbers in the financial year 2002-03 to 28 by the end of 31st march 2015. In case of number of policy issued and gross direct premium as shown in figure-1 and figure -2 the sector is growing but in case of number of policy issued the growth is not steady and in case of gross direct premium the sector is growing sharply. Thus overall physical growth indicates that the general insurance sector of India is growing well and there is a huge potential for future growth.



**Figure 1 : Trend of number of policy issued**

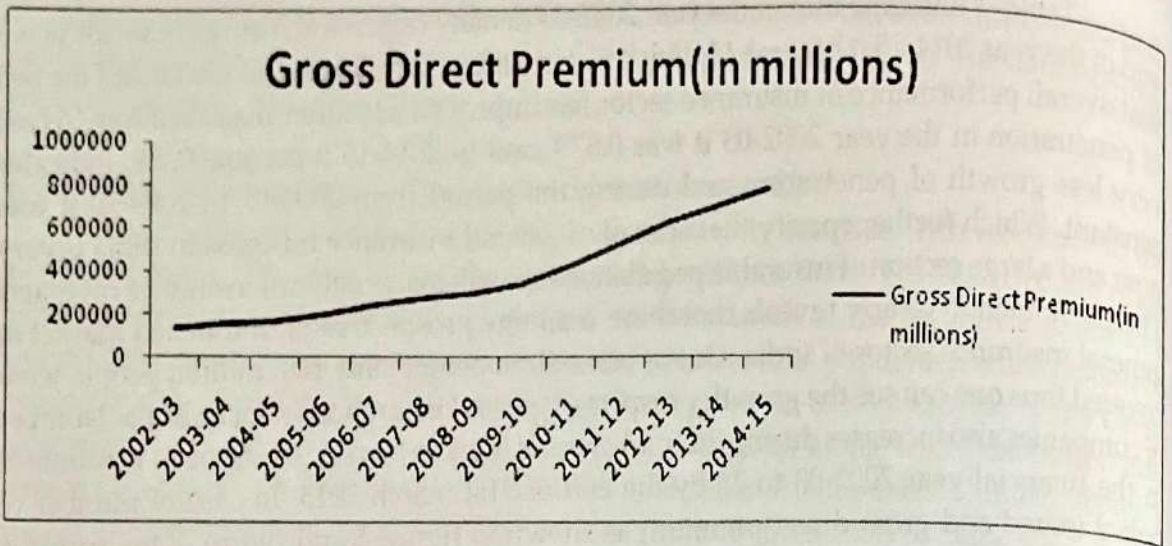


Figure 2 : Trend of gross direct premium income

4.2 Structural Growth of Indian General Insurance sector

Under structural growth six major structural variable's growth has been calculated which are total asset, investment, cash and bank balance, fixed asset, capital and current liabilities as shown in table-2.

Table 2  
Structural Growth company wise

Variables/company name	Total Asset	Investment	Cash & bank balance	Fixed Asset	Capital	Current liabilities
National insurance Co Ltd.	.110***	.125***	.022	.084**	.098***	.118***
New India assurance Co.Ltd	.113***	.107***	.144***	.049***	.050	.112***
Oriental Insurance Co.Ltd	.102***	.104***	.099***	.045***	.106***	.094***
United Insurance Co.Ltd	.098***	.105***	.079***	.051***	.091***	.093***
Bajaj Alliance general insurance Co. Ltd.	.277***	.277***	.304***	.249***	.240***	.322***

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Reliance general insurance Co. Ltd.	.316***	.314***	.192**	.248**	.273***	.403***
Royal sundaram general insurance Co. Ltd.	.231***	.246***	.052*	.069*	.139***	.283***
ICICI Lombard general insurance Co. Ltd.	.322***	.326***	.130**	.353***	.258***	.355***
TATA AIG general insurance Co. Ltd.	.234***	.248***	.144***	.143***	.168***	.274***
Cholamandalam general insurance Co. Ltd.	.285***	.277***	.129**	.205***	.151***	.394***
Iffco Tokio general insurance Co. Ltd.	.261***	.268***	.260***	.066***	790.168***	.320***
HDFC ERGO general insurance Co. Ltd.	.335***	.330	.370***	.307***	.227***	.456***

Notes: \*\*\*, \*\* and \* indicates significant at 1% and 5% and 10% level.

From table-2 it is observed that in terms of total asset, investment, cash & bank balance and current liabilities among all the companies HDFC ERGO general insurance Co. Ltd. is growing more. In terms of fixed asset ICICI Lombard general insurance Co. Ltd. and in terms of capital Iffco Tokio general insurance Co. Ltd. is showing good result. If we see the structural growth sector wise i.e. for public and private sector as shown in table - 3 it can be established that among all the structural variables private sector is growing more than the public sector. This is because public sector companies are already established and they are well equipped with their necessary equipment and requirement but for private sector companies they have started recently so in order to establish the business they need to have adequate assets and other requirements. So over the years the additional asset is less and liabilities will be more for public sector companies and vice versa for private sector companies. Among the public players the National Insurance Co Ltd. is growing more and among private players HDFC ERGO general insurance Co. Ltd. is growing more than other companies.

Table 3  
Structural Growth Sector Wise

Structural growth of Public and Private sector						
Variable	Total Asset	Investment	Cash & bank balance	Fixed Asset	Capital	Current liabilities
Public Sector	.107***	.110***	.108***	.058***	.090**	.105***
Private sector	.286***	.289***	.234***	.238***	.225***	.340***

Notes: \*\*\* and \*\* indicates significant at 1% and 5% level of confidence.

#### 4.3 Business Growth of Indian General Insurance sector

Business growth of Indian general insurance sector has been shown by calculating exponential growth rate of five pertinent variables which include claim incurred, investment income, management & commission expenses and premium income. Due to negative values of variables for some of the company present study could not calculate the exponential growth rate and is shown as not available (NA) in the table. The business growth of all the companies is shown in table- 4 and business growth sector wise is presented in table-5.

Table 4  
Business Growth Company Wise

Variables/company name	Claim incurred	Investment income	Management & Commission expenses	Premium Income
National insurance Co Ltd.	.126***	.134***	.12***	.135***
New India assurance Co.Ltd	.151***	.119***	.096***	.117***
Oriental Insurance Co. Ltd.	.112***	.090***	.113***	.111***
United Insurance Co. Ltd.	.129***	.070***	.123***	.142***
Bajaj Alliance general insurance Co. Ltd.	.274***	.315***	.250***	.059***
Reliance general insurance Co. Ltd.	.417***	.398***	NA	.392***
Royal sundaram general insurance Co. Ltd.Co. Ltd.	.302***	.290***	.210***	.218***
ICICI Lombard general insurance Co. Ltd.	.402***	.418***	NA	.343***

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TATA AIG general insurance Co. Ltd.	.258***	.282***	.200***	.221***
Cholamandalam general insurance Co. Ltd.	NA	.448***	.356***	.405***
Iffco Tokio general insurance Co. Ltd.	NA	.371***	.279***	.267***
HDFC ERGO general insurance Co. Ltd.	.311***	.508***	.266***	.381***

Notes: \*\*\*, \*\* and \* indicates significant at 1% and 5% and 10% level of confidence.

**Table 5**  
**Business Growth Sector Wise**

Variable	Claim incurred	Investment income	Management & Commission expenses	Premium Income
Public Sector	.131***	.107***	.111***	.126***
Private sector	.338***	.354***	.279***	.178***

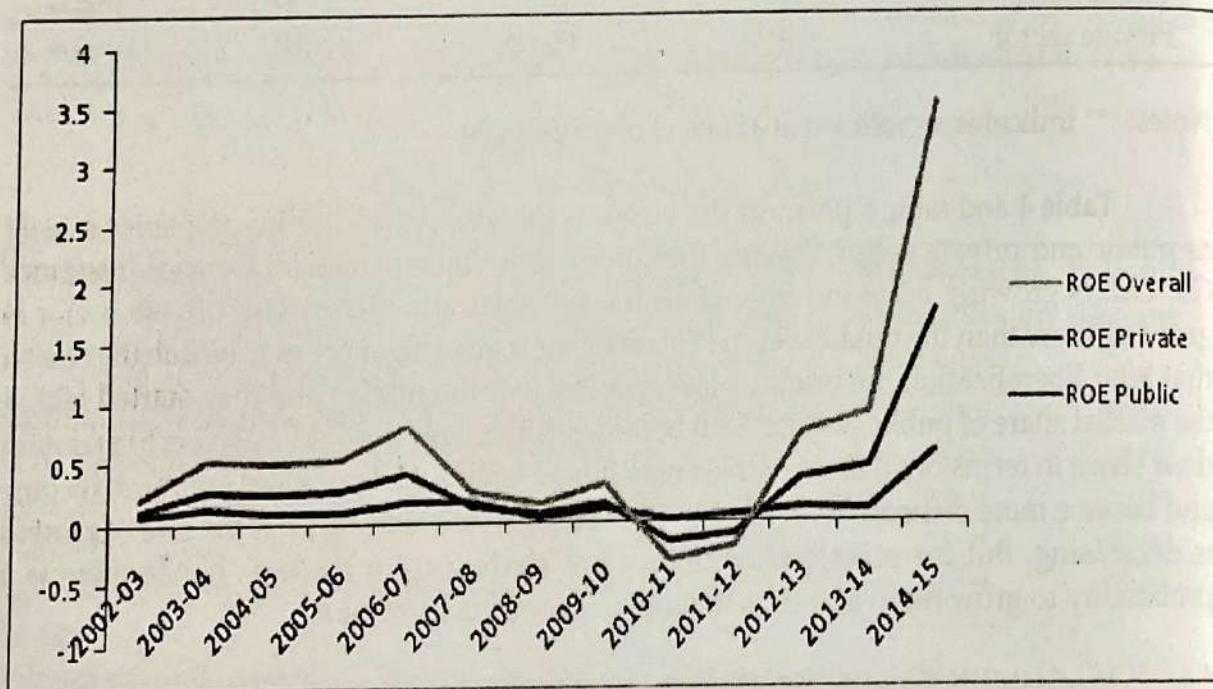
Notes: \*\*\* indicates significant at 1% level of confidence.

Table 4 and table 5 portrays the business growth of the sample companies as well as public and private sector. Among the companies, Cholamandalam General Insurance Co. Ltd. is growing more in terms of all the variables and sector wise private sector is growing more than the public sector. Private sector is growing more may be due the reason that after liberalization the private players enters into the market and they started taking the market share of public players. So it becomes difficult for the public players to maintain their share in terms of all the variables may it investment income or net premium income and became more difficult to increase it. May be the value increases but the rate of growth is decreasing. But for private players they are starting from the base hence there is a probability to grow more and thus the rate of growth is increasing.

#### 4.4 Profitability growth of Indian General Insurance Sector

In order to see the profitability growth of general insurance sector present paper tries to calculate growth rate of two important variables i.e. Return On Equity (ROE) and Return On Asset (ROA). But from the analysis of over the year data for each company it is observe that the value of the variables are fluctuating and consists of both positive and negative values hence no growth rate is appropriate for these variables rather the movement

of this variable through line diagram is more appropriate, shown in figure-3 and figure-4. A look into the figures 3 and 4, it is evident that there is no any steady movement of ROE and ROA over the years for overall sector as well as public and private sectors. The fluctuating movements of both ROE and ROA clearly demonstrate the instability of the earnings (in relative terms) of the Indian general insurance sector. During 2010-12, the profitability ratios were negative for both overall sector and private sector. However, since 2012 an increasing trend is noticed for both the sectors. In this respect, the average performance of public sector is relatively stable over the years, although the percentages of profit are less as compared to the private sectors during 2002-03 and 2014-15. Further, the figures also show three distinct stages for the overall sector: stage 1(2003-07) when the profitability is growing; stage 2 (2007-2012) when profitability is declining and stage 3 (2012-15) when profitability is again increasing. The sudden fall after 2007 is may be due to the regulatory change i.e. enactment of detariffing act. It further fallen because of the changes in business environment by global economic crisis in the year 2008 which started impacting from 2009 onwards. But the economy settle down worldwide and Indian economy also is growing well therefore from 2012 again a sudden rise can be seen in both the variables.



**Figure 3 : Trend of ROE of Indian general insurance sector**

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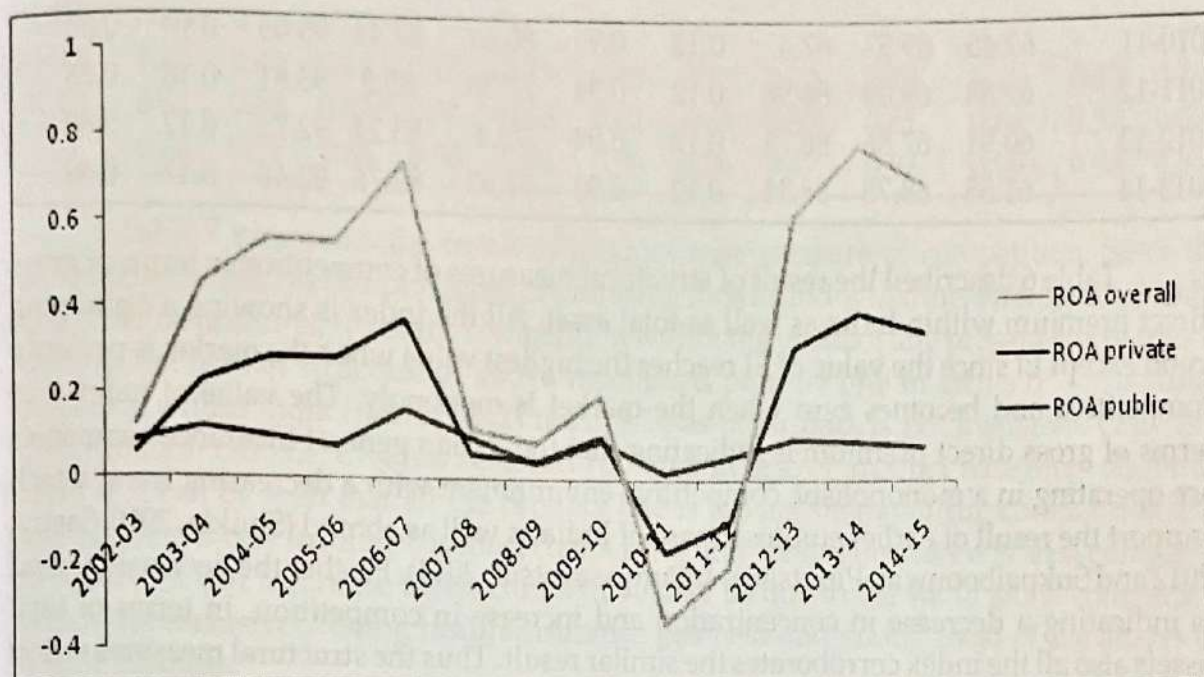


Figure 4 : Trend of ROA of Indian general insurance sector

### 5.1. Analysis of Market Structure of Indian General Insurance Sector

Market structure of Indian general insurance sector is analyzed on the basis of overall sector and product wise. Since all the sample companies are dealing with multiline insurance business so to see the competition within the product line, present study further calculates the competition of each product line.

Table 6  
Structural Measures of Overall Sector

Index Year	Gross direct premium					Total asset				
	CR4	CR5	CR8	HHI	EI	CR4	CR5	CR8	HHI	EI
2002-03	90.34	92.48	97.16	0.21	0.76	95.28	96.12	98.17	0.25	0.68
2003-04	85.52	88.58	95.97	0.19	0.82	94.86	96.01	98.21	0.25	0.69
2004-05	79.93	84.81	95.21	0.17	0.86	93.83	95.26	98.16	0.24	0.7
2005-06	73.66	79.91	94.88	0.15	0.9	92.82	95.06	98.37	0.24	0.71
2006-07	65.28	72.45	91.9	0.13	0.94	89.31	93.18	97.54	0.23	0.75
2007-08	60.44	68.98	87.85	0.12	0.97	87.23	91.41	97.38	0.22	0.77
2008-09	60.12	68.85	87.52	0.12	0.97	81.03	87.77	96.25	0.19	0.82
2009-10	61.93	69.38	86.19	0.12	0.96	82.52	88.68	96.18	0.2	0.81

2010-11	62.45	69.57	87.47	0.12	0.95	80.61	87.44	95.05	0.19	0.83
2011-12	62.38	69.09	86.98	0.12	0.94	77.38	85.3	93.81	0.18	0.86
2012-13	60.91	67.86	86.71	0.12	0.94	75.4	83.21	92.72	0.17	0.88
2013-14	61.55	68.75	88.11	0.12	0.93	74.93	82.76	92.48	0.17	0.88

Table 6 described the result of structural measures of competition in terms of gross direct premium within India as well as total asset. All the Index is showing a decreasing trend except EI since the value of EI reaches the highest value when the market is perfectly competitive and becomes zero when the market is monopoly. The value of indexes in terms of gross direct premium is indicating that the Indian general insurance companies are operating in a monopolistic competitive environment with a decreasing trend which support the result of earlier studies in case of India as well as abroad (Shukla, 2010, Sastry, 2012 and Sukpaiboonwat, Piputsitee, & Punyasavatsut, 2014). Further the decreasing trend is indicating a decrease in concentration and increase in competition. In terms of total assets also all the index corroborates the similar result. Thus the structural measures reflect a monopolistic competition and less concentration in Indian general insurance market.

**Table 7**  
**Product Wise Structural Measures of General Insurance Sector in Terms of Gross Direct Premium Income Within India**

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Index	-03	-04	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14
<b>Marine Insurance</b>												
HHI	0.23	0.20	0.17	0.17	0.15	0.15	0.14	0.15	0.15	0.15	0.15	0.17
CR4	0.93	0.86	0.80	0.78	0.70	0.70	0.68	0.73	0.73	0.72	0.72	0.76
EI	0.71	0.79	0.85	0.86	0.90	0.90	0.92	0.90	0.90	0.92	0.91	0.85
<b>Fire insurance</b>												
HHI	0.19	0.16	0.15	0.14	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14
CR4	0.85	0.77	0.72	0.66	0.62	0.61	0.64	0.68	0.70	0.70	0.69	0.68
EI	0.80	0.87	0.90	0.93	0.95	0.95	0.96	0.94	0.93	0.93	0.95	0.92
<b>Motor insurance</b>												
HHI	-	-	-	0.16	0.13	0.12	0.11	0.11	0.11	0.11	0.11	0.12
CR4	-	-	-	0.76	0.65	0.57	0.55	0.54	0.54	0.55	0.54	0.56
EI	-	-	-	0.88	0.94	0.97	0.99	1.00	1.01	1.02	1.02	0.99
<b>Health insurance</b>												
HHI	-	-	-	0.17	0.16	0.15	0.14	0.14	0.15	0.15	0.15	0.16
CR4	-	-	-	0.78	0.65	0.63	0.64	0.70	0.71	0.71	0.71	0.75
EI	-	-	-	0.84	0.88	0.91	0.92	0.92	0.90	0.90	0.91	0.86

Other insurance

HHI	0.21	0.20	0.18	0.15	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.13
CR4	0.92	0.88	0.82	0.71	0.66	0.62	0.63	0.63	0.61	0.61	0.57	0.58
EI	0.74	0.77	0.84	0.90	0.94	0.96	0.96	0.97	0.97	0.96	0.98	0.94

Table 7 represents the result of product wise measure of competition. Since the sample companies has five categories of product which includes Marine, Fire, Motor, Health and other insurance so to see the competition within the product line present study tries to analyze the market structure of above mentioned product line in terms of gross direct premium within India from 2002-03 to 2013-14 as other data is not available. Only one concentration ratio i.e. CR4 has been incorporated in case of product wise analysis. From table -7 it can be seen that all the product line is having monopolistic competition and among them motor insurance is most competitive and Health insurance is least compared to others. Health insurance is less competitive may be due to the stand alone companies, which are exclusively doing health insurance business and taking most of the shares of health business.

## 6. Conclusion

Present paper analyze the growth and market structure of Indian general insurance sector in post reform era by calculating exponential growth rate of various pertinent variables under four categories which includes physical, structural, business and profitability growth over a period of 13 years from 2002-03 to 2014-15. For analyzing market structure present paper uses structural measures which includes  $CR_k$  where  $K=4, 5 \& 8$ , HHI & EI. The results of the study found that private sector is growing more in all the four categories than public sector but in case of profitability public sector's growth is more stable than private sector. This is may be because private sector companies have started from the base and public sector companies are well established as a result growth rate of private sector become more than public sector. In case of profitability public sector has already captured the market and private sector is new born baby in the market and since private sector just started doing business so they incurred more expenses in terms of fixed asset than public sector during the study period. Therefore profitability of public sector is more stable than private sector. Further the result also illustrate that there is a monopolistic competition with decreasing trend in general insurance sector which supports the findings of earlier studies(Sukla, 2010 and Sastry, 2012) and among the product lines motor insurance is more competitive and health insurance is least competitive than other product lines. A similar result is also found in case of other developing countries like Turkey and Bulgaria (Kassman & turglut, 2008, and Todorove, 2016). Thus structural index indicates the success of competition promoting processes i.e the reform processes, which allows a greater and better choice for customers as well as insurer. It also ascertains strong evidence of change

in market structure in Indian general insurance market and can be concluded that during a period of more than a decade of opening up of this sector and enactment of all other reforms, has significantly changed the market scenario of the sector and as a result the sector has entered into monopolistic competitive phase by ending monopoly state. Since the structural measures show decreasing trend both in case of overall sector as well as product lines, more competition can be expected in future. Thus the government or the authority can take necessary steps to enhance the competition in the sector. The study also suggests that further research can be undertaken considering some other variables in more details and using non structural measures of competition to assess the growth and market structure of Indian general insurance sector.

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## Capital Structure Determinants of the Indian Manufacturing Sector: An Empirical Study

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### Abstract

This study examines the determinants of capital structure for 1415 listed Indian manufacturing firms over a period of nine years from 2005-2013. Specifically, the study investigates the predictions of important capital structure theories in determining firms' level of total debt (TD), long-term debt (LTD) and short-term debt (STD). In order to fulfil its purposes, the study uses the panel fixed effect regression model based on the Hausman test for endogeneity. The study finds support for both trade-off and pecking order theory but not for market timing theory. Size is positively related to leverage ratios consistent with the arguments of trade-off theory. Tangibility is positively related to the level of TD and LTD but not to STD. This suggests lesser importance of collateral for STD. The relationship between profitability and debt ratios are negative which confirm the predictions of pecking order theory. The coefficients for NDTs are positive which contradicts the arguments of trade-off theory but consistent with the findings of Chakraborty, (2013) for Indian firms. Growth does not have impact on overall debt level but positively influence the level of LTD (pecking order argument) and negatively influence the level of STD (trade-off argument). M/B ratio positively affects the debt ratios which are not in line with the market timing argument. Rather, it supports the arguments of simple pecking order theory that firms with higher growth options maintain more debt. Finally, uniqueness has negative coefficients which suggest lower debt levels for firms dealing with unique and specialized products.

*Keywords : Capital Structure, Leverage, Long-term debt, Short-term debt, Fixed effect regression*

JEL Classification : G30; G32

### 1. Introduction

Capital Structure is one of the most extensively studied topics in the field of modern corporate finance. The growing number of works on capital structure is justified on the

ground that it is one of the most critical financial decisions faced by financial managers. The choice of right capital structure is important as it affects the overall costs of capital and ultimately the value of the firm. The financial manager has to compare the costs and benefits of different sources of finance which mainly include debt and equity, and decide their (sources of finance) mix in such a way that the overall costs of capital is minimum and the value of the firm is maximum. Although sounds simple, even after more than five decades of active research since the seminal work of Modigliani and Miller, (1958), the capital structure decision of firms' is still a puzzle for the researchers (Myers, 1977).

Financial managers' need to consider some complicated questions while deciding their capital structure. Some of the common questions include: firstly, should the firm be financed by only equity or a combination of debt and equity? Secondly, if the decision is combination of debt and equity, what should be the mix, what factors should be considered to decide the mix and what will be the consequences? Thirdly, should the financing needs be met from internally generated funds or to go to the external market for the same? Fourthly, what is their future growth prospect and how the same is going to be affected by the present debt-equity choice? Fifthly, what is their position in the equity market and how maximum benefit can be reaped from the market by their debt-equity choice? There are many more considerations like this and therefore, financial managers need to assess their financial positions carefully to arrive into a particular decision. The past few decades have seen a number of studies investigating the factors that determine firms' capital structure decisions. However, most of the prior studies are confined to advanced countries like US and UK and the studies examining the determinants of capital structure in emerging economies in general and India in particular are very limited. The present study aims to fulfill this gap by undertaking a study in Indian manufacturing sector.

The rest of the paper is organized as follows. Section 2 provides brief literature review and formulates hypothesis. The methodological framework is discussed in section 3 followed by section 4 which provides the empirical analysis. Finally, section 5 summarizes the conclusions of the study.

## **2. Review of Literature**

This section reviews three important theories of capital structure and discuss the possible impact of some of the important determinants of capital structure based on theoretical justifications.

### **2.1 Capital Structure Theories**

#### **2.1.1 The Trade-off Theory**

The trade-off theory states that the capital structure is determined by establishing a trade-off between the benefits and costs of debt. The benefits of debt mainly include the

tax advantage of interest on debt (Modigliani & Miller, 1963), mitigating owner-manager agency conflicts (Jensen & Meckling, 1976) and mitigating agency costs of free cash flow (Jensen, 1986). On the other hand, the costs of debt include the financial distress and bankruptcy costs (Karus & Litzenberger, 1973), shareholder-debtholder agency conflicts (Jensen & Meckling, 1976) and the loss of future investment opportunities with positive NPV (Myers, 1977). Therefore, the optimal capital structure is the trade-off point where the marginal benefit of adding additional debts equals to their marginal cost (Karus & Litzenberger, 1973; Jensen & Meckling, 1976; Myers, 1977; Jensen, 1986).

### **2.1.2 The Pecking Order Theory :**

The pecking order theory of capital structure is based on the information asymmetry between insiders and outsiders (Myers, 1984; Myers & Majluf, 1984). It states that due to information asymmetry, access to capital market by firms give adverse signal to outsiders. As a result, external financing becomes costly and induces firms to follow a hierarchy in their financing i.e. to prefer internal financing to external financing and when it comes to external financing, to prefer debt financing to equity financing due to less adverse selection costs associated with debt. According to this theory, firms financing decisions are not driven by the optimum or target capital structure which is in direct contrast to trade-off theory.

### **2.1.3. The Market Timing Theory :**

The third important theory of capital structure is the market timing theory. Like pecking order theory, it also challenges the trade-off theory arguing that firms' financing decisions are not influenced by optimum or target capital structure. According to this theory, firms' financing decision is influenced by their current positions in the capital market. Firms issue equity when they perceive them to be overvalued and repurchase when they perceive them to be undervalued and these market timings have a persistent effect on capital structure. It argues firms' capital structure as the cumulative outcome of their past attempts to time the market (Baker & Wurgler, 2002).

## **2.2. Determinants of Capital Structure: Possible Linkage**

### **2.2.1. Size and Capital Structure :**

The larger firms are financially stable and are generally more diversified than the smaller firms, which reduces their financial distress and bankruptcy risk. Moreover, they enjoy better reputation and access in the market which ultimately reduces their costs of borrowings. Therefore, the trade-off theory predicts a positive relationship between size and leverage ratios. The pecking order theory on the other hand predicts inverse relationship between the two. It argues that the large firms face less information asymmetry and adverse

selection costs in accessing the equity market. Moreover, they are more profitable and have more retained earnings to meet their financing requirements.

### **2.2.2. Tangibility and Capital Structure :**

Firms' capital structure is also influenced by their nature of assets. Higher the proportion of tangible assets i.e. property, plant and equipment in the total assets, higher is the security for creditors in case of default. In addition, tangible assets can be used as collateral for raising finance through debt. Therefore, the trade-off theory predicts a positive relationship between tangibility and debt level. On the contrary, firms with higher proportion of tangible assets face lesser information asymmetry and adverse selection problems. Therefore, the pecking order theory predicts a negative relationship between the two.

### **2.2.3 Profitability and Capital Structure :**

Firms with higher profitability are expected to have better ability to meet their debt related responsibilities and are less prone to bankruptcy. Moreover, they have higher taxable income to shield. Therefore, trade-off theory predicts positive relationship between profitability and leverage. However, firms with higher profitability will also have higher level of retained earnings to meet their financing requirements. Therefore, pecking order theory predicts negative relationship between profitability and leverage.

### **2.2.4 Non-debt tax shields (NDTS) and Capital Structure :**

The most visible benefit of debt in the capital structure is the tax saved on interest paid by firms. Therefore, firms with higher taxable income generally prefer debt to reap the tax benefit. DeAngelo & Masulis (1980) argues that NDTS (like tax benefits from depreciation and amortization expenses) serve as a substitute for debt tax shield. Further, they do not suffer from debt related costs. Therefore, the trade-off theory expects a negative relationship between NDTS and leverage.

### **2.2.5 Growth and Capital Structure :**

Maintaining financial flexibility to finance future growth opportunities is one of the most important considerations for debt-equity choice for financial managers (Graham & Harvey, 2001). Firms with debt overhang find it difficult to finance their positive NPV projects in future. Therefore, firms with favorable growth opportunities ex-ante preserve debt capacity to avoid ex-post underinvestment problem (Myers, 1977; DeAngelo & DeAngelo, 2007). Moreover, firms with higher growth opportunities suffer less from agency costs of free cash flow (Jensen, 1986). Considering these arguments, trade-off theory expects an inverse relationship between leverage and growth opportunities. On the contrary, firms with higher growth opportunities would be in more need of fund to meet their financing requirement. Therefore, the simple version of pecking order theory predicts a direct

relationship between the two. However, in its complex version, it predicts an inverse relationship as firms may try to maintain low risk debt capacity in order to avoid new equity offerings to finance future investment proposals.

### **2.2.6 M/B Ratio and Capital Structure:**

M/B ratio indicates the extent of equity mispricing in the market. A higher M/B ratio denotes better market price of equity and vice versa. Therefore, if capital structure is driven by market timing theory, there should be inverse relationship between M/B ratio and leverage ratios as firms will try to time the equity market by issuing equity when the market price is high and by repurchasing equity when the market price is low. Moreover, a higher M/B ratio also indicates higher growth opportunities which again suggest its negative relationship with leverage ratio as per trade-off and modified pecking order arguments. However, it may exhibit positive relationship as per the simple version of pecking order theory as firms with higher growth prospects will need more funds to meet their financing requirements.

### **2.2.7 Uniqueness and Capital Structure :**

Titman & Wessels (1988) argue that firms' capital structure is influenced by their nature of business. Firms dealing with unique and specialized products generally maintain a lower level of debt. This is because these firms have more specialized labor that do not have a favorable labor market if the firm goes into bankruptcy or liquidation. Moreover, the specialized equipment used by these firms does not find a readily available resell market which reduces their collateral value. Therefore, they are expected to maintain ex-ante lower leverage to avoid the ex-post higher cost of liquidation.

## **3. Methodological Framework**

### **3.1 Measures of Leverage :**

Different measures of leverage have been suggested in the literature but the most relevant measure depends upon the objective of the study. There are two important issues that a researcher faces with regard to measurement of leverage - first, whether to use book leverage or market leverage and second, which particular ratio to be used. There are strong arguments in the literature in favor of both book and market value measure of leverage. The proponents of book value measure argue that the changes in market value of debt neither affect its tax benefit nor the repayment liability towards its holders in the event of bankruptcy (Banerjee et al., 2000). Moreover the performance history of firms is better reflected by book leverage because it is directly related to past changes in balance sheet figures of assets and liabilities and is not affected by the dramatic fluctuations in market values (Jalilvand & Harris, 1984; Loof, 2004). On the other hand, supporters of market value measure of leverage criticize book value measure as being backward looking. They argue that the market value measure is future oriented which reflects the expected future

cash flows from both tangible and intangible assets of the firm (Loof, 2004). Moreover, market value ultimately determines the real value of a firm because being historical in nature, a firm may show negative book value of equity even if they have positive market values (Banerjee et. al., 2000). Following prior studies (Jalilvand & Harris, 1984; Shyam-sunder & Myers, 1999; Qian et. al., 2009), this study uses the book value measure of leverage as the market value of debt is not available. With regard to definition of leverage, following Rajan & Zingales (1995), the authors have used the ratio of debt (total debt, long-term debt or short-term debt) to capital employed, where capital employed is the sum of total debt and total equity. Leverage ratio defined in this way better reflects the past financing decisions of firms and also takes care of agency problems of debt (Rajan & Zingales, 1995).

### 3.2 Empirical Model :

The study uses a panel data fixed effect (FE) regression model in order to test the hypotheses. The panel data models are useful because of more information, more variability, less collinearity, more degrees of freedom and more efficiency (Gujarati et al., 2012). Further, the panel data models allow accounting for the impact of cross-sectional heterogeneity on the dependent variable. Specifically, the study uses the following regression model :

$$LEV_{it} = \beta_1 (Size_{it}) + \beta_2 (Tangibility_{it}) + \beta_3 (Profitability_{it}) + \beta_4 (NDTS_{it}) + \beta_5 (Growth_{it}) + \beta_6 (M/B\ Ratio_{it}) + \beta_7 (Uniqueness_{it}) + \alpha_i + v_t + \epsilon_{it}$$

where, LEV is the respective leverage ratio i.e. TD, LTD or STD. The variables in the right hand side of the equation are the determinants mentioned above which are expected to have influence on firms' leverage ratios. The descriptions of variables are provided in Table-1.  $\alpha_i$  and  $v_t$  account for the unobserved firm specific and year specific fixed effects respectively. The study uses Hausman test to choose between the random effect and FE models under the null hypothesis that the former is appropriate. The study adjusts the standard errors for heteroskedasticity by using the procedure of White (1980).

**Table 1**  
**Description of Variables**

Variables	Definition
TD	Total debt ratio measured as ratio of total debt to capital employed (CE)
LTD	Long-term debt ratio measured as ratio of long-term debt to CE
STD	Short-term debt ratio measured as ratio of short-term debt to CE
Size	Size of firms measured as natural logarithm of total assets
Tangibility	Tangibility of assets measured as ratio of PPE to total assets
Profitability	Profitability of firms measured as ratio of EBIT to total assets
NDTS	Non-debt tax shields measured as ratio of depreciation to net sales

Growth	Growth of firm measured as percentage change in Net Sales from previous to current year
M/B Ratio	Proxy for equity market valuation measured as ratio of market value to book value of assets
UNIQ	Uniqueness of firms measured as ratio of selling expenses to net sales

### 3.3 Data Description and Descriptive Statistics :

The initial sample consists of all listed Indian manufacturing firms available in 'CapitalinePlus' database over the period of 2005-2013. The study excludes firms for which data are not available for the entire study period. Following prior studies, it also excludes firms with non-positive total assets and net sales (Byoun, 2008) and firms with missing data of required variables (Ozkan, 2001; Shyam-sunder and Myers, 1999). The final dataset includes 12735 firm-year observations with a balanced panel of 1415 firms over the period of 9 years.

**Table 2**  
**Descriptive Statistics of Variables Used**

Variable	Mean	Median	Std. Dev.	Min	Max
TD	0.46	0.44	0.39	0.00	2.49
LTD	0.22	0.16	0.25	0.00	1.40
STD	0.24	0.21	0.22	0.00	1.29
Size	4.90	4.81	1.82	0.90	9.91
Tangibility	0.34	0.32	0.19	0.00	0.95
Profitability	0.09	0.09	0.09	-0.20	0.43
NDTS	0.04	0.03	0.05	0.00	0.48
Growth	0.17	0.11	0.31	-0.38	2.19
M/B Ratio	1.24	0.96	0.98	0.05	7.06
Uniqueness	2.27	1.64	2.44	0.17	20.86

Table 2 reports the descriptive statistics which includes the mean, median, standard deviation, minimum and maximum values of dependent and independent variables. Following prior studies like Flannery and Rangan (2006) and Byoun (2008), all the variables are winsorised at the 1st and 99th percentiles to avoid the influence of extreme observations, except the debt ratios which are winsorised only at 99th percentiles as they include many

zero values. Table-3 reports the correlation matrix of independent variables which shows that the correlations between the independent variables are not alarming. Moreover, the VIF values are much lesser than 10 for all the variables, which indicates that the multicollinearity is not a serious threat to the results (Gujarati et al., 2012).

**Table 3**  
**Correlation Matrix of Independent Variables.**

Variables	Size	Tangibility	Profitability	NDTS	Growth	M/B Ratio	Uniqueness	VIF
Size	1							1.24
Tangibility	-0.03*	1						1.24
Profitability	0.18*	-0.10*	1					1.24
NDTS	-0.06*	0.40*	-0.20*	1				1.26
Growth	0.12*	-0.14*	0.24*	-0.15*	1			1.13
M/B Ratio	0.23*	-0.10*	0.27*	0.02**	0.07*	1		1.31
Uniqueness	-0.16*	-0.14*	0.23*	-0.06*	0.02**	0.32*	1	1.25

Note : \*, \* and \*\*\* denote coefficients are significant at 1%, 5% and 10% level respectively.

#### 4. Empirical Analysis

This section analyses the empirical results obtained from FE regression models which are presented in table 4, 5 and 6 for TD, LTD and STD respectively. The models in general show a good fit as the adjusted R<sup>2</sup> values vary between 0.66 to 0.77, which are reasonably high. The p-values corresponding to independent variables show that most of the variables are significant with expected signs. The Wald tests 1 and 2 show that the impact of firm characteristics and time dummies are jointly significant in all the cases at 1% level of significance. Finally, the significant chi-square values for Hausman test in all the models indicate that the FE model is appropriate.

The constants are significant in all the cases with positive sign. This implies that keeping other things constant, firms in Indian manufacturing sector maintain an average TD level of 30%. The results however show that firms maintain a lower level of LTD (9%) in comparison to STD (21%) which possibly indicate the intension of firms to avoid long term commitments associated with the LTD.

The coefficients of size are positively significant in all the cases. These findings are in line with the argument of trade-off theory that larger firms are generally more diversified, have lower information asymmetry and bankruptcy risk which permits them to maintain a higher level of debt than the smaller firms. The smaller economic and statistical significance of size for STD than LTD implies that firms rely more on the latter than the former as they

grow larger (Bhaduri, 2002; Titman and Wessels, 1988). The positive coefficients for size are also consistent with the findings of many prior studies like Rajan & Zingales (1995); Fama & French (2002); Frank & Goyal, (2003); Korajczyk & Levy (2003); Drobetz & Wanzenried (2006); Flannery & Rangan (2006); Manos et. al. (2007); Byoun (2008); Quin et. al. (2009); Dang et. al. (2012). However, these findings are against the arguments of pecking order theory that due to higher internally generated funds and lesser adverse selection costs of equity issuance, larger firms are expected to maintain lower level of debts.

The coefficient estimates of tangibility are positively significant in case of TD and LTD, whereas statistically insignificant in case of STD. These results indicate that nature of assets have significant influence on the overall debt (TD) level through the LTD. The positive coefficients confirm the arguments of trade-off theory that firms with the higher proportion of tangible assets in total assets face lower costs of debt as there is higher security for the lenders in case of default. Moreover, its statistical insignificant coefficients for STD indicate that tangibility of assets or collateral to be more specific is not an important consideration for STD. The positive coefficients for tangibility confirm the findings of prior empirical works like Rajan & Zingales (1995); Frank & Goyal (2003); Korajczyk & Levy (2003); Drobetz & Wanzenried (2006); Flannery & Rangan (2006); Byoun (2008); Quin et al. (2009); Chakraborty (2010); Dang et. al. (2012); Mukherjee & Mahakud (2012); Handoo & Sharma (2014).

The coefficients of profitability are highly significant with negative sign. The negative coefficients of profitability are in line with the arguments of pecking order theory and are consistent with the findings of Rajan & Zingales (1995); Ozkan (2001); Fama & French (2002); Frank & Goyal (2003); Korajczyk & Levy (2003); Drobetz & Wanzenried (2006); Flannery & Rangan (2006); Manos et. al. (2007); Byoun (2008); Quin et. al. (2009); Chakraborty (2010); Mukherjee & Mahakud (2010); Dang et. al. (2012); Mukherjee & Mahakud (2012); Ganguli (2013); Handoo & Sharma (2014). The external funds (both debt and equity) are subjected to adverse selection costs due to information asymmetry between insiders and outsiders. Therefore, firms generally prefer internally generated funds to external funds to meet their financing needs. As a result, firms with higher profitability maintain lower level of debts.

The coefficients of NDTs exhibit significantly positive relationship with leverage ratios. The positive coefficients of NDTs are in contrast to the arguments of trade-off theory that firms with higher NDTs generally maintain lower level of debts as the former substitutes the latter in minimizing the tax liability (DeAngelo and Masulis, 1980). However, these results are similar to the findings of Bradley et. al. (1984), Chakraborty (2010) and Chakraborty, (2013). The positive coefficients for NDTs are possibly the impact of tangibility

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of assets as higher level of depreciation also indicates higher tangibility (Bradley et. al., 1984).

**Table 4**  
Results of FE Regression model for TD

Variables	Coefficients	Standard Error	t-statistics	P- Value
Constant	0.30	0.05	5.56	(0.00)*
Size	0.03	0.01	3.11	(0.00)*
Tangibility	0.20	0.04	4.82	(0.00)*
Profitability	-0.40	0.07	-5.75	(0.00)*
NDTS	0.51	0.13	3.77	(0.00)*
Growth	-0.01	0.01	-0.87	(0.38)
M/B Ratio	0.14	0.02	8.83	(0.00)*
Uniqueness	-0.07	0.01	-6.94	(0.00)*
Year 2006	-0.03	0.01	-5.76	(0.00)*
Year 2007	-0.04	0.01	-4.94	(0.00)*
Year 2008	-0.06	0.01	-5.75	(0.00)*
Year 2009	-0.06	0.01	-5.02	(0.00)*
Year 2010	-0.09	0.01	-7.01	(0.00)*
Year 2011	-0.09	0.01	-6.48	(0.00)*
Year 2012	-0.09	0.02	-5.76	(0.00)*
Year 2013	-0.09	0.02	-5.34	(0.00)*
Adjusted R2		0.77		
Wald Test (1)		(20.21)*		
Wald Test (2)		(9.51)*		
Hausman Test		(370.54)*		

Note : It reports the coefficients, standard errors, t-statistics and p-values. Figures under parentheses for Wald Test and Hausman Test are F-statistics and Chi-square statistics respectively. \*, \* and \*\*\* denote coefficients are significant at 1%, 5% and 10% level respectively.

**Table 5**  
Results of FE Regression model for LTD.

Variables	Coefficients	Standard Error	t-statistics	P- Value
Constant	0.09	0.04	2.34	(0.02)**

Size	0.02	0.01	2.88	(0.00)*
Tangibility	0.21	0.03	7.44	(0.00)*
Profitability	-0.22	0.04	-5.34	(0.00)*
NDTS	0.17	0.09	1.96	(0.05)***
Growth	0.02	0.01	2.50	(0.01)**
M/B Ratio	0.07	0.01	8.37	(0.00)*
Uniqueness	-0.04	0.01	-6.50	(0.00)*
Year 2006	-0.01	0.00	-2.81	(0.00)*
Year 2007	-0.01	0.01	-1.90	(0.06)***
Year 2008	-0.02	0.01	-3.47	(0.00)*
Year 2009	-0.02	0.01	-2.76	(0.00)*
Year 2010	-0.04	0.01	-4.05	(0.00)*
Year 2011	-0.11	0.01	-10.18	(0.00)*
Year 2012	-0.11	0.01	-10.08	(0.00)*
Year 2013	-0.12	0.01	-9.84	(0.00)*
Adjusted R2			0.68	
Wald Test (1)			(38.51)*	
Wald Test (2)			(32.76)*	
Hausman Test			(272.27)*	

Note : It reports the coefficients, standard errors, t-statistics and p-values. Figures under parentheses for Wald Test and Hausman Test are F-statistics and Chi-square statistics respectively. \*, \* and \*\*\* denote coefficients are significant at 1%, 5% and 10% level respectively.

**Table 6**  
Results of FE Regression model for STD.

Variables	Coefficients	Standard Error	t-statistics	P- Value
Constant	0.21	0.03	6.54	(0.00)*
Size	0.01	0.01	1.85	(0.07)***
Tangibility	-0.03	0.03	-0.97	(0.33)
Profitability	-0.17	0.04	-4.15	(0.00)*
NDTS	0.24	0.10	2.33	(0.02)**
Growth	-0.02	0.01	-4.47	(0.00)*
M/B Ratio	0.06	0.01	6.92	(0.00)*
Uniqueness	-0.03	0.00	-6.33	(0.00)*
Year 2006	-0.02	0.00	-4.58	(0.00)*
Year 2007	-0.03	0.01	-5.06	(0.00)*

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Year 2008	-0.03	0.01	-4.76	(0.00)*
Year 2009	-0.03	0.01	-4.37	(0.00)*
Year 2010	-0.05	0.01	-6.08	(0.00)*
Year 2011	0.00	0.01	0.43	(0.67)
Year 2012	0.02	0.01	1.49	(0.14)
Year 2013	0.02	0.01	1.64	(0.10)
Adjusted R2			0.66	
Wald Test (1)			(29.52)*	
Wald Test (2)			(32.43)*	
Hausman Test			(180.38)*	

Note : It reports the coefficients, standard errors, t-statistics and p-values. Figures under parentheses for Wald Test and Hausman Test are F-statistics and Chi-square statistics respectively. \*, \* and \*\*\* denote coefficients are significant at 1%, 5% and 10% level respectively.

The relationship between growth and leverage ratio is not same for TD, LTD and STD. The coefficient of growth for TD is insignificant which implies that growth does not have significant influence on the overall debt level which is against both trade-off and pecking order arguments. The coefficient is positively significant in case of LTD which is in line with arguments of pecking order theory that firms with higher growth options need more funds and therefore maintain high leverage and also consistent with the finding of prior studies like Titman & Wessels, (1998);Bhaduri, (2002) and Handoo & Sharma, (2014). On the contrary, the coefficient is negatively significant in case of STD which implies that firms with higher growth opportunities substitute STD with LTD possibly to avoid the higher flotation costs, greater opportunity costs of management time and, higher reinvestment and liquidity risk associated with STD (Diamond, 1991; Easterwood & Kadapakkam, 1994; Barclay & Smith, 1995).

The M/B ratio is positively related to debt ratios and is highly significant in all the cases. These positive relationships are in contrast to the argument of market timing theory that firms with favorable pricing in the equity market generally maintain lower level of debts as they capitalize the market opportunities by issuing equity shares. Moreover, these results are also against the arguments of trade-off and modified pecking order theory and many prior empirical evidence that firms with favorable growth opportunities preserve debt capacity to avoid under investment problem in future (Myers, 1977; Rajan & Zingales, 1995; Ozkan, 2001; Frank & Goyal, 2003; Korajczyk & Levy, 2003; DeAngelo & DeAngelo, 2007; Byoun, 2008; Mukherjee & Mahakud, 2010; Dang et. al., 2012; Mukherjee & Mahakud, 2012). However, these results are consistent with the arguments of simple pecking order

theory that firms with higher growth opportunities need more funds and therefore raise more debt to meet their financing requirements.

Finally, the coefficient estimates of uniqueness are negatively significant in all the cases. The negative coefficients of uniqueness support the argument of Titman & Wessels (1988) that stakeholders of firms dealing with unique and specialized products suffer most from financial distress and bankruptcy risks. Therefore, they maintain ex-ante lower leverage to avoid the ex-post higher cost of liquidation. The result is also consistent with the findings of Bhaduri (2002) and Chakraborty (2010) for Indian firms.

## 5. Conclusions

This paper is an attempt to investigate the determinants of capital structure of firms pertaining to Indian manufacturing sector and to revalidate the findings of prior empirical works. More specifically, the study examines the predictions of important capital structure theories in determining firms' level of TD, LTD and STD. It uses data of 1415 listed Indian firms over a period of nine years from 2005-2013. The panel data FE regression model has been used by taking TD, LTD and STD as dependent variables in order to fulfill the purposes on the basis of Hausman test of endogeneity. Overall, the models are showing better fit with significant coefficients for explanatory variables, high adjusted R<sup>2</sup> values ranging between 0.66 to 0.77, significant results for Wald tests and Hausman tests.

Most of the findings from the study are in consistent with the arguments of trade-off theory and pecking order theory but do not support the predictions of market timing theory. Size is positively related to leverage ratios which imply that larger firms maintain more debt than the smaller firms. Tangibility is positively related to TD and LTD which suggest that firms with more tangible assets have more LTD and as a result higher TD. This suggests lower costs of debt for these firms' due to the availability of more collateral and lesser default risk. However, tangibility does not have significant influence on STD which suggests collateral is not an important factor to raise STD. The coefficient of profitability is negative which means firms with higher profitability maintain lesser debt as they use internally generated funds to meet their financing requirements. This is consistent with the arguments of pecking order theory. NDTs has positive coefficients which rejects the trade-off argument that firms with higher NDTs maintain lesser debt but confirms the findings of Bradley et. al. (1984), Chakraborty (2010) and Chakraborty, (2013). Growth does not have influence on the overall debt level. However, firms with higher growth opportunities use more of LTD and less of STD possibly to avoid higher reinvestment and liquidity risk associated with the latter. The positive coefficients of M/B ratio do not support the argument of market timing theory that firms with better equity market valuations rely more on equity and less on debt. However, as higher M/B ratio also indicates higher growth opportunities, its positive coefficients supports the simple

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pecking order argument that firms with higher growth opportunities use more debt to finance their projects. Finally, uniqueness has negative coefficients which confirms that firms dealing with unique and specialized products maintain lower level of debts.

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## Globalization and its Impact on Indian Consumerism

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### Abstract

Globalization is a phenomenon, which is in heated discussion around the globe between advocates and opponents of it. Those who support the process stated that there are several gains such as, jobs creation, transformation of work culture, technological transfer and thus increasing the wealth in many nations. But, there are many others who doubt that there is much gain for developing countries. The process of free global trade favors those in positions of power. There are widespread concerns regarding the impact of globalization on poor economies and the environment, as this concept becomes increasingly interdependent and interconnected. In this context, is it believable that trade among nations will really be fair? Europe and the United States are yet to open their markets to agricultural products from developing countries, despite the fact that those two countries have been advocating free trade. This appears to be a demonstration of western paternalism rather than true partnership.

The impact of globalization on the growth and income distribution, investment flow, generation of more employment, declining job security for workers and last but not the least on consumers by way of quality of products/services is questionable one. Globalization of any economy provides consumers all over the world with an extensive range of products and services that were not easily available before. However, rights must always be protected and strongly asserted in this new market or it will pay a high price. To help consumers, face the challenges arising from globalization, governments should provide a strategic, structured legal framework, develop and implement consumer policies. While a few developing countries have enacted consumer protection legislation and national consumer policies but many countries are still without any structured consumer protection mechanism. Therefore, it is imperative that consumers form groups as a means of educating and protecting themselves, for demanding their respective governments towards consumer protection legislation through beneficial policies for the host countries.

### Introduction

The term Globalization is a buzzword, which is being heatedly discussed all over the globe between advocates and opponents of it. Those who support globalization contend

that there are gains such as employment creation, wide market for goods and services and increasing wealth to the public in many nations. But there are many people who oppose the concept and doubt that it is fruitful only for developed countries. The process of globalization as free global trade favors those in position of power<sup>1</sup>. There are widespread concerns regarding the impact of globalization on poor economies, as this concept becomes increasingly interdependent and interconnected. In this context, is it believable that trade between and among nations will really be fair?

Globalization is the driving force for change as it race into the next century and likely to continue changing the global socio-economic environment for all people, including Caribbean consumers<sup>2</sup>. In the light of this, consumers must be organized in order to be in a position to influence international and regional commercial agreements shaping the current version of globalization. On the positive side of the globalization of the economy, it provides consumers all over the world with an extensive range of products and services that were not easily available earlier. However, our rights must always be protected and strongly asserted in this new market otherwise it will pay a high price. To help consumers, it is needed to face the challenges arising out of globalization and governments should provide the legal framework and develop and implement consumer policies<sup>3</sup>. Therefore, it is imperative that consumers form groups as a means of educating and protecting themselves, for making demands on their respective governments for consumer protection legislation and policies.

### **Conceptual Framework**

The globalization is manifested in the growth of world trade as a proportion of output. It is a process of interaction and integration among the customers, business organizations and governments of different countries through international trade, investment and transfer of technology. It is not a new phenomenon, since olden days trading was taken place across the nations. The technological developments during the past few decades have increased the cross-border trade, investment and migration and therefore the world has entered a qualitatively new phase in its economic development. In this context, Thomas Friedman commented that today globalization is "farther, faster, cheaper, and deeper". This current wave of globalization has been driven by policies that have opened economies domestically and internationally. At the same time, the governments have also negotiated dramatic reductions in barriers to international trade and have established international agreements to promote trade in goods, services, and investment. Taking advantage of the new opportunities in international markets, corporations have started their ventures outside the country<sup>4</sup>.

Some people argued that globalization allows poor countries and their citizens to develop economically and raise their standards of living, while opponents of globalization claimed that the creation of an unfettered international free market has benefited

multinational companies in the developed nations at the expense of local enterprises, cultures and common people. Therefore, resistance taken place against the globalization both at a popular and governmental level as people and governments try to manage the flow of capital, labor, goods and ideas that constitute the current wave of globalization. To find the right balance between benefits and costs associated with globalization, citizens of all nations need to understand how globalization works and the policy choices facing them and their societies<sup>5</sup>.

The impact of globalization is likely to have on the long-term possibilities of economic growth in developing countries. The economists viewed that the growth process of globalization takes off when the elite understand the opportunities of applying world-class technologies within their country. Thus, globalization is tending to make the technologies and the knowledge for this process to occur more readily available. The globalization is much less of a reality in the field of economic front.

### **Globalization - Boon or Hazard**

In the year 1998, the Bharathiya Janatha Party had led the NDA's electoral campaign with a 'swadeshi' propaganda thrust and many of the NDA's voters had truly believed that unlike the previous regimes, the BJP-led government would not succumb to international pressures - particularly US Multinationals and protect the nation's economic and security interests<sup>6</sup>. The Finance ministers closely associated with neo-liberal economic programs - like Manmohan Singh and Chidambaram were defeated in the polls and there was an expectation that there would be a noticeable shift in direction. But the long-time critics of the BJP had already warned that the BJP was insincere in its commitment to 'swadeshi' and its turnaround in the Enron case was more likely to serve as a model for its future actions. Although neo-liberal forces were kept somewhat at bay in the BJP-led NDA's first term, a more comfortable majority in the second round has given the promoters of neo-liberalism in the coalition more confidence that they can get away with unpopular policies without much concern about political stability.

After that the every successive administration in the last decade has eventually succumbed to the pressures of globalization and suggests that regardless of how different political formations package their policies in advance of the elections and there is a powerful and very vocal lobby for globalization in India. This is because for some sections of Indian society and the Indian Diaspora, globalization has come as something of a bonanza. Another outcome of globalization has been a huge increase in salaries of senior managers, accountants, lawyers and public-relations personnel working for MNCs or their local competitors. For the IT-literate, job opportunities have been plentiful, and there are also opportunities to live and earn in abroad. For the English-speaking upper middle-classes, this has come as a boon. With greater access to disposable income, the seduction of consumerism becomes hard to resist, and the demand for unrestricted globalization inevitably follows the attraction for new and ever more advanced consumer goods<sup>7</sup>. This

new and more prosperous class of Indian consumers associates (associate) India's progress with the availability of the latest automobile models and consumer goods. The local availability of imported European cosmetics and fashions, imported drinks and confectioneries - these have all become important to those who have sufficient disposable income to purchase such items.

Globalization has other champions too. Importers have a strong financial interest in a globalized economy, but so do exporters dependent on imported parts and machinery. Industrialists with interests in ports, shipping, international warehousing and other aspects of international trade and commerce may also see globalization as beneficial to their sectors of the economy. Indian industrialists who have so far failed to invest in research and development are losing the battle for market share and also becoming amenable to globalization in the fond hope of partnering with MNC that will enable them to stabilize or expand their sinking business ventures. But the greatest danger posed by unrestricted globalization is that it may exacerbate the problems of nagging poverty and uneven development, and create grave infra-structural mismatches. It is already evident that the Indian economy has become more dependent on imports, which has brought with it constant pressure on the value of the Rupee, leading to recursive bouts of high inflation<sup>8</sup>. On the whole, in spite of having merits and drawbacks of globalization, one cannot avoid the globalization phenomena due to the unique and specialized features of some economies on whom the need countries have to depend to reap the benefits of it.

### **Globalization and Technology**

Take the argument that globalization brings in new technology. On a selective basis, globalization indeed brings in new technology and opposition to globalization is not tantamount to becoming technologically isolated from the rest of the world. But today, almost no advocate of globalization is calling for selectivity<sup>9</sup>. For instance, Coca-Cola and Pepsi were welcomed into the country even though they offered a little in terms of new technology. The cosmetic manufacturers and manufacturers of designer label clothes have also brought in a little new technology of any consequence. The same can be said of advertising companies and manufacturers of consumer non-durable goods like soap, detergent, toothpaste, cereals, etc.

On the other hand, some people offer a counter-argument for unrestricted globalization arguing that only if India liberalizes unconditionally; will it be able to attract high technology and capital investment in the areas it really wants? But the experiences of the last decade believe such claims. While it is true that INTEL, AMD and CISCO have all invested in India, the sum total of their investments has been minuscule in relation to their other investments abroad. Further, rather than bringing in new technology to India, they are actually sucking out technology from India. All their investment has been on divisions that either to develop software on demand, or to provide research assistance to their US

counterparts. None of them has set-up any manufacturing plants in India or signed any technology transfer agreements with any Indian company.

The advocates of globalization have often made the claim that globalization rather than destroying Indian industry, would instead accelerate the growth of new industry and cause India's economy to grow faster. But a detailed analysis of Foreign Direct Investment (FDI) in the last few years indicates that a sizeable portion of this investment has not gone into the creation of new productive capacities<sup>10</sup>. Much of the investment has simply gone into takeovers of existing Indian enterprises or towards speculative investments in the Indian stock market. If we consider the basic trade theories, viz., absolute advantage, theory, comparative advantage theory and others, which supported the international trade, the participated nations should not step-back due to the several criticisms on globalization.

### **'Efficiency' is in whose interest - the MNC or the Indian Consumer**

Another oft-repeated argument in favor of globalization is that multinational companies are more "efficient". It would seem that the MNCs were more "efficient" - twice as much as the Indian companies. But if half or more of the MNCs profits were repatriated to their foreign parent or to foreign shareholders, the relative benefit to India would be nil<sup>11</sup>. Further, if the MNC is actually "efficient" and is able to drive its more "inefficient" Indian competitors out of business, it could then raise prices over and beyond what the "inefficient" Indian companies charge to their consumers<sup>12</sup>. This occurred not only in soft-drinks business, but also spread itself to pharmaceutical sector. Others have argued that the presence of multinationals would end corrupt practices that hurt the 'efficiency' of India's public sector companies. The power sector is one such area where there is a clamor for speedy privatization. There is also an assertion that globalization allows India to allocate scarce capital more efficiently because the Indian government could concentrate on areas that need special attention<sup>13</sup>. But a few seem to note that in this decade of globalization, the government has been steadily reducing its ability to be found vital social needs or infra structural needs.

### **Skewed Development : By-product of Indiscriminate Liberalization and Globalization**

Critics of indiscriminate liberalization had warned that one of the biggest dangers of a totally liberalized economy would be the anarchic development of select geographical areas and the neglect of industrially unpopular areas. This has been reinforced in a report by Tushar Mohanti for the Economic Times Research Bureau<sup>14</sup>. The report pointed out that of all the industrial entrepreneurs' memorandum filed since the new economic policy came into being in June 1991 but only 10% have been implemented so far. In the case of implemented projects, only 10 per cent of the employment commitments were actually realized.

## *Globalization and its Impact on Indian Consumerism*

Another aspect of non-selective globalization is that a few select sectors - viz., consumer goods, automobiles, and software have attracted almost 90 per cent of all foreign investment. There has been very little investment in the production of advanced electronics, computer or telecom hardware, aircrafts, advanced industrial materials, capital goods, modern tools and equipment and robotics<sup>15</sup>. These are the areas, where India is completely depended on imports and is likely to fall further behind, rather than steer production in areas of cutting-edge technology, state governments have been falling over each other in giving MNCs more concessions to produce more of what India is already producing.

### **Globalization and Privatization**

One of the most dangerous aspects of unqualified and unrestricted globalization is the privatization of key publicly held companies to MNCs at prices lower than what it would take to set-up a new company in that field. The predatory domination of the world's oil supply by a few western mega-monopolies is too well-known. Yet, in the recent past, the BJP-led government sold off shares in Gas Authority of India Ltd (GAIL) at a scandalously low price. Given the history of the BJP's previous sweetheart deals with ENRON, this giveaway is hardly surprising. But it sets an ominous precedent for the future. Will the euphoria that a section of the Indian population feels vis-a-vis liberalization and globalization blind them to such loot of vital and strategic assets? The benefits of unfair trade and colonial loot went as much to Britain's allies such as the US, Australia and Canada, and even to rival imperial powers such as Germany and Japan. Although the Indian situation today is not comparable to the situation in 1756 or 1858, the desire of the MNCs to gobble up strategic Indian assets is real and should not be dismissed lightly.

It is no accident that economic policy "experts" in these nations are the most aggressive champions of privatization and globalization. Selling off strategically vital companies could not only introduce monopoly pricing pressures on Indian consumers, it could also seriously jeopardize India's national sovereignty. As it is, much of India's defense needs are procured from abroad. By privatizing oil and gas companies and other vital infrastructure related companies - India's vital interests will be even more controlled by the foreign interests that could impinge on the ability of India to take the best decisions vis-a-vis protecting its sovereign rights and interests.

Apparently an important lesson from India's history has been lost on the present ruling coalition. Before the First World War, Gandhi too had believed that appeasing the British would bring India gains. He campaigned heavily in favor of the British war effort, but after the war, the British rather than make any new concessions towards independence tightened its colonial control. Gandhi's exercise in "partnership" ended-up as a futile exercise in self-delusion and the Freedom Movement lost precious and valuable years in the bargain<sup>16</sup>.

While no one is arguing for India to remain aloof from the process of technological up-gradation and modernization - it is unlikely that political and economic appeasement

in the guise of globalization will do the trick for India. Unless India adopts a stance of hard bargaining and selectivity in the manner it globalizes, globalization will take place on the terms of the world's most powerful nations - and is unlikely to bring widespread benefits for the Indian people. It is therefore, high time that the mantra of unrestrained globalization be questioned and challenged. The tall claims made by its advocates need to be carefully scrutinized without the prevailing neo-liberal bias<sup>17</sup>. The many failures, economic distortions and pitfalls of globalization need to be clearly exposed. Above all, India's economic policies need to be restructured to give an impetus to the local development of key technologies that play a crucial role in the modern economy and satisfy the most pressing needs of the vast majority of the Indian people.

### **Conclusion**

Globalization becomes inevitable as it yields immense job opportunities and changes consumer lifestyle by making it more convenient, comfortable and luxurious. But the same globalization is resulting in filling only some pockets of the country. The rural and poor are gaining less through its process because of lack of social concern by the multinational companies. The fruits of globalization are not received equally by all communities of any nation. Further, MNCs pose a big challenge to the domestic industries, which are weak in terms of resources such as investment, technology, etc. This would yield another problem to the country and therefore, without a proper mechanism and frame work, the governments of under developed and developing countries should not be attracted towards the globalization process. The policies and regulations, required in terms of quality systems, infrastructure, etc. should be properly framed by the concerned to minimize the ill effects and maximize the benefits of the same.

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## Professionalism and Employee Outcome : A Study in a State of Northeast India

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### Abstract

Globalization is a phenomenon, which is in heated discussion around the globe. This study determines the level of professionalism as well as employee outcome in the Department of Rural Development, Arunachal Pradesh. It also ascertains an association between employee professionalism, public service motivation, commitment and job satisfaction. A survey was conducted for 42 officials from two districts of Arunachal Pradesh, one being high performer and the other being low performer in terms of the developmental outcomes. It was found out that the employees of both the districts scored only moderate level of professionalism as well as employee outcome. A positive association could also be established between employee professionalism, public service motivation and commitment. However, job satisfaction was found out to be negatively associated with employee professionalism.

**Keywords :** Professionalism, public service motivation, commitment, job satisfaction

### Introduction

Professionalism get reflected in the public service employees' behavior at work, their constant effort to improve, reinforce and update knowledge and refine the skills that are necessary for carrying out tasks and enhancing their output and productivity (Ssonko, 2010). Professionalism consists of the attitudes and behavior one possesses toward one's profession (Boyt et al., 2001). Public service professionalism is no longer just another job or occupation, it is a challenging call for involving a commitment towards serving the public, advancing its interests and avoiding temptations to put oneself first before ones public duties, obligations and responsibilities (Caiden, 2000). Thus this study concentrates on employee professionalism and how it can influence the employee outcome of an organization, because both academics and practitioners in management have placed

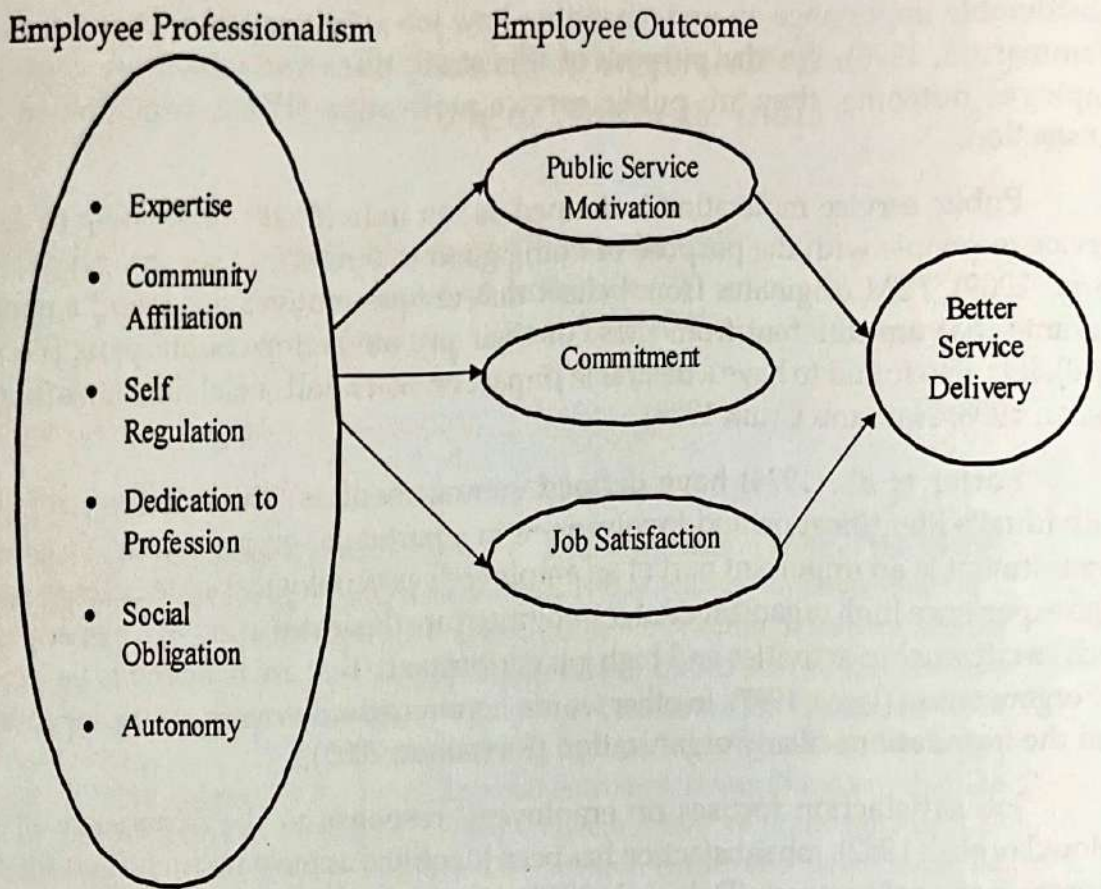
considerable importance on understanding how job activities affect employee outcomes (Yammarino, 1996). For the purpose of this study three variables were considered as employee outcome, they are public service motivation (PSM), commitment and job satisfaction.

Public service motivation is defined as "an individual's orientation to delivering service to people with the purpose of doing good to others and society" (Hondegheem & Perry, 2009). PSM originates from beliefs that unique motives are found among public servants that are different from those of their private sector counterparts (Perry et al., 2010). It is also found to have a desirable impact on work and social outcomes (Brewer and Selden 1998; Naff and Crum 1999).

Porter et al. (1974) have defined commitment as "the relative strength of an individual's identification and involvement in a particular organization". Organizational commitment is an important part of an employee's psychological state because employees who experience high organizational commitment are theorized to engage in many behaviors such as citizenship activities and high job performance that are believed to be beneficial to the organization (Jaros, 1997). In other words, committed employees are the salient resources and the foundations of any organization (Kassahun, 2005).

Job satisfaction focuses on employees' response to the experience of their job (Mowday et al. 1982). Job satisfaction has been identified as most frequently studied variable in organizational research (Dali et al., 2013). Van Scooter (2000), states that job satisfaction is a very attractive topic for a lot of researchers. This is because job satisfaction has a lot of implications in the performance of an organization.

This paper also explores the relationship between employee professionalism and employee outcome. It is reported that professionalism is positively associated with organizational commitment (Norris, 1984; Sejjaaka, 2014). The association between professionalism and job satisfaction has not been established properly due to the variations in the results regarding their association. Study of Schroeder and Imdieke (1997) found that professionalism and job satisfaction is related negatively and another study found that professionalism does not have significant effect on job satisfaction (Kalbers and Fogarty, 1995). However, different research results were found in studies of Boyt et al., (2001) and Shafer et al., (2002) that professionalism has great affect on job satisfaction.



**Figure 1 : Conceptual Framework**

Figure 1 above presents the conceptual framework for this study. It provides an outline for the design of the study with regards to the relationship between various variables. Thus it can be seen from the figure that increase in Employee Professionalism would lead to increase in Public Service Motivation, Commitment and Job Satisfaction which will in-turn lead to better service delivery by the employees.

The present research study is carried out in Arunachal Pradesh, which is called the land of rising sun and is a hilly tract situated on the north-eastern tip of India, comprising roughly of 83,743 sq. km. of area. It is the homeland of more than 25 major tribes and numerous allied ethnic groups. Two districts were considered for the study based on the performance report of the Department of Rural Development, Arunachal Pradesh. The districts considered were West Kameng district, which was amongst the top performing districts and East Kameng district which was amongst the least performing district. It is also worth mentioning that these two districts were created out of the erstwhile Kameng district. This fact makes it an interesting comparison that a researcher would like to take up. The Kameng district was bifurcated between East Kameng and West Kameng on 1st June 1980. West Kameng district has an area of 7,422 sq km. and comprises of five major

tribes : Monpa, Miji (Sajolang), Sherdukpen, Aka (Hrusso), and Bugun (Khowa). East Kameng district with its Headquarter at Seppa has an area of 4134 sq km. The principal tribes of the district are Nyishi, Puroik (Sulung), Aka and Khowa.

**Table 1**  
**Comparison of the Two Districts of Arunachal Pradesh**

Districts	Parameters of Comparison		
	Number of SSI Units	Total number of employment in the district	Total Investment (Rs in Lakhs).
West Kameng	55	70	105.00
East Kameng	06	30	12.50

*Source : State Gazetteer of Arunachal Pradesh, 2010*

Thus this study compares employee professionalism in the department of Rural Development of these two districts keeping in mind that they were once a part of the same district. From table 1 we can see the difference in the performance of the district may it be in terms of the number of SSI units, total number of employment in the district or total investment. It is clear that the picture of the West Kameng district is much better than that of East Kameng district. Therefore, it would be interesting to find out whether professionalism of the employees has any role to play in the performance of the district. Hence, this study will try to find out the level of employee professionalism for both the districts and also determine which employee outcome variables play an important role in determining professionalism.

### **Importance of the Study**

Professionalism is not only seen as a prerequisite for effectiveness of the civil service (Gebrekidan 2011), but it is also considered as the required attribute for a successful system (Alagh 2013). Although there are abundant studies that have tested professionalism and employee outcome separately, only few have analyzed the relationship between these two phenomena. While the literature on professionalism and employee outcome on private sector is growing, research on public sector is a relatively less studied phenomenon and almost negligible in Arunachal Pradesh. The study will help to determine the level of professionalism and employee outcome of the selected districts which will help in understanding the specific variables that need to be given more importance for better performance of the department. The study also finds out the association between

professionalism and employee outcome which will contribute to enhancing the knowledge base regarding association between the two variables.

### **Objectives of the Study**

- 1) To compare the level of professionalism and employee outcome of the employees in two districts of Arunachal Pradesh.
- 2) To find out the relationship between professionalism and employee outcome.

### **Methodology of the Study**

This paper is descriptive in nature. In order to fulfill the objectives, primary data was collected using questionnaire and secondary data was collected through various sources like Government Official publications, websites, books and journals etc. First of all, on the basis of the performance report, 2012-2013 of the Department of Rural Development, Arunachal Pradesh, two districts were selected based on the performance i.e one being high performing and the other low performing. The two districts of Arunachal Pradesh that were considered for the study were West Kameng district as it was amongst the top performing districts and East Kameng district, that was amongst the least performing districts. After selecting the districts, census method was applied in order to survey the employees of the Department of Rural Development, Arunachal Pradesh. Officials represent the Group A and Group B categories of the employees working in the Department of Rural Development, Government of Arunachal Pradesh. The sample size of the respondents was 42 officials from the Department of Rural Development, Arunachal Pradesh.

Halls Professionalism Scale (modified by Snizek) was used to measure the level of Professionalism which is a widely used scale to measure professionalism (Blezek, 1987; Shafer, Park and Liao, 2002; Mat and Zabidi, 2010; Lasswell, 2010). Besides the five original dimensions of Hall's Professionalism one more dimension "Expertise" has been included in the scale as it is an important attribute for professionalism (Howell and Dorfman, 1986; Kolsaker, 2014). Thus Professionalism in this study was measured through six dimensions viz. (a) Expertise (b) Professional Community Affiliation (c) Social Obligation (d) Belief in Self Regulation (e) Professional Dedication and (f) Autonomy.

Employee Outcome in this study was determined by using three variables viz. (a) Motivation (b) Commitment and (c) Job Satisfaction. The first component of employee outcome for this study is Motivation. It is mainly concerned with Public service motivation (PSM) which was measured using a 14-item PSM scale which was developed by Kim, where PSM is measured in four dimensions which are (1) Attraction to Policy (2) Dedication to Public Interest (3) Compassion and (4) Self- Sacrifice. The next variable for employee outcome is Commitment which was measured using the three component model used by Lee et al. as it has cross-cultural implications. It comprises of 15-items scale based on three components, which are (1) Affective Commitment (2) Continuous Commitment and (3)

Normative Commitment. The third variable of the study which is Job Satisfaction was measured using the Job Descriptive Index developed by Smith, Kendal and Hustin (1969) which consist of six dimensions viz. (1) Work (2) Pay (3) Opportunity (4) Supervisor (5) Co-worker and (6) Job itself (Stanton et al., 2001). The statements in the questionnaire which were negative in nature were scored in reversed order accordingly i.e. 1 for strongly agree, 2 for agree, 3 for neither agree nor disagree, 4 for disagree and 5 stands for strongly disagree.

In order to determine the employee professionalism score and employee outcome score average mean for each respondent was calculated and then the overall mean for the entire sample was computed. The score interpretation for the same is provided below:

**Table 2**  
**Score Interpretation**

Mean	Level
< 3	Low
3 - 3.99	Moderate
4 - 5	High

*Source : Kraetschmer et al. 2004*

## Findings and Discussion

Table 3 presents the demographic profile of the respondents.

**Table 3**  
**Demographic Profile**

Variable	Sub- Variable	Frequency	Percent
Age	31-40 yrs	18	43
	41-50 yrs	22	52
	51-60 yrs	2	5
Qualification	Graduate	33	79
	Masters	2	5
	Professional Course	7	16
Group	Group A	23	55
	Group B	19	45
Tenure	Less than 5 years	6	14
	More than 5 years	36	86

Type of Appointment	Permanent	33	79
	Deputation	9	21

*Source : Primary data*

It can be seen from the demographic profile that most of the respondents belonged to the age group of 41-50 years of age (52%) followed by 31-40 years of age (43%) and 51-60 years of age (5%). In terms of qualification, significant percentage of the respondents were graduate (79%) followed by 16 percentage of the respondents who undertook some professional course and only 5 percentage of the respondents were post graduate. Majority of the respondents belonged to Group A category (55%) of the employment and 45 percentage of them belonged to Group B category. Maximum of the employees had tenure of more than 5 years in the department (86%) and only 14 percentages of them had worked for less than 5 years in the department. As far as type of appointment is concerned 79 percent of the respondents were permanent employees and 21 percent of them were on deputation.

**Table 4**  
**Demographic profile of the two districts**

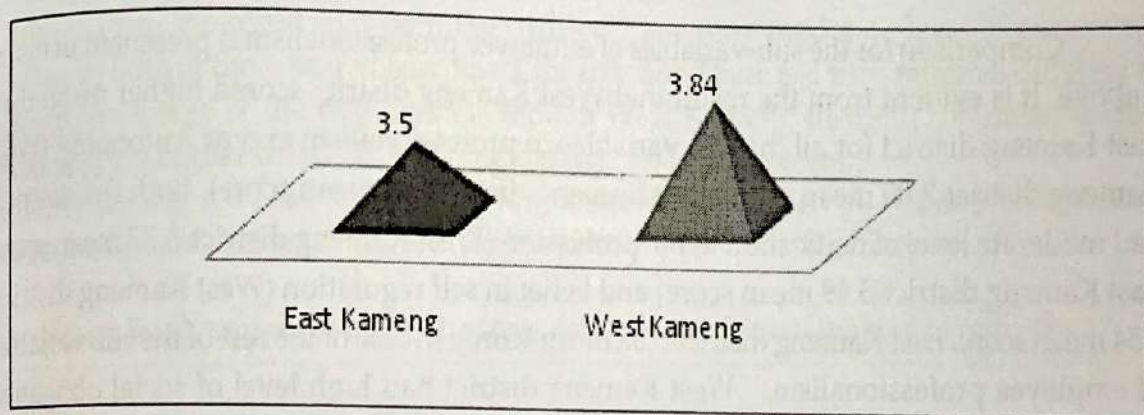
Variable	Sub-Variable	East Kameng District		West Kameng District	
		Frequency	Percent	Frequency	Percent
Age	31-40 yrs	12	52.2	6	31.6
	41-50 yrs	11	47.8	11	57.9
	51-60 yrs	-	-	2	10.5
Qualification	Graduate	19	82.6	14	73.7
	Masters	-	-	2	10.5
	Professional Course	4	17.4	3	15.8
Group	Group A	13	56.5	10	52.6
	Group B	10	43.5	9	47.4
Tenure	Less than 5 years	3	13.0	3	15.8
	More than 5 years	20	87.0	16	84.2
Type of Appointment	Permanent	13	78.3	15	78.9
	Deputation	5	21.7	4	21.1

*Source : Primary Data*

The above table presents the comparison of demographic variable of the two districts. It can be seen that majority of the employees of East Kameng district belonged to 31-40 years category (52%) whereas majority of the employees from West Kameng district belonged to 41-50 years of age category (58%). Majority of the employees from both the districts were graduate (East Kameng - 82%, West Kameng - 74%). In case of the Group of employees both East Kameng (Group A - 56 %, Group B - 43%) and West Kameng (Group A - 53%, Group B - 47%) district have almost equal division of percentages for employees. Majority of the employees of both the districts (East Kameng - 87%, West Kameng - 84%) had tenure of more than five years in the Department of Rural development, Arunachal Pradesh. As far as the type of appointment is concerned majority of the employees from both the districts (East Kameng - 78.3%, West Kameng - 78.9%) were permanent and rest of them were on deputation (East Kameng - 21.7%, West Kameng - 21.1%).

The first objective of this study which was to compare the level of employee professionalism and employee outcome of the two selected districts was fulfilled by finding out the professionalism as well as employee outcome score for both the districts.

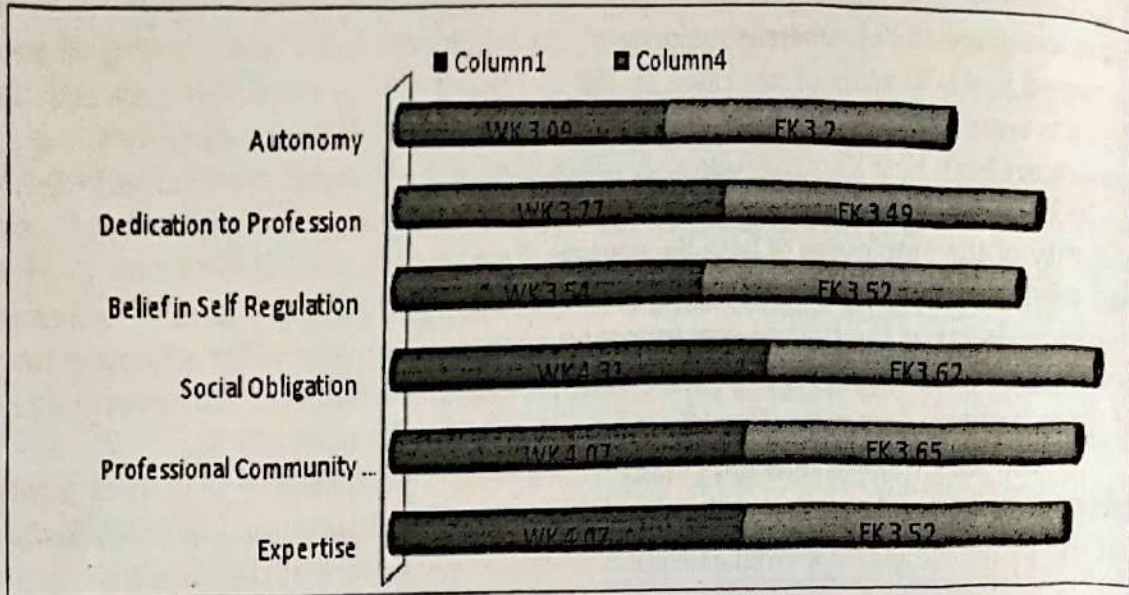
**Figure 2 : Comparison of Employee Professionalism Score**



*Source : Primary data*

Figure 2 above presents the employee professionalism score for both the districts. It is clear from the result that the better performing district which is West Kameng district scored higher (3.84 mean score) as compared to East Kameng district (3.5 mean score). It indicates that the employees of West Kameng district have higher level of employee professionalism as compared to East Kameng district. However both the districts have moderate level of professionalism since both of the districts scored less than 4 mean score. For further comparison of employee professionalism between the two districts, an effort was made to break down the sub variables of employee professionalism and find out the variations amongst the districts.

Figure 3 : Comparisons of Sub-Variables of Professionalism



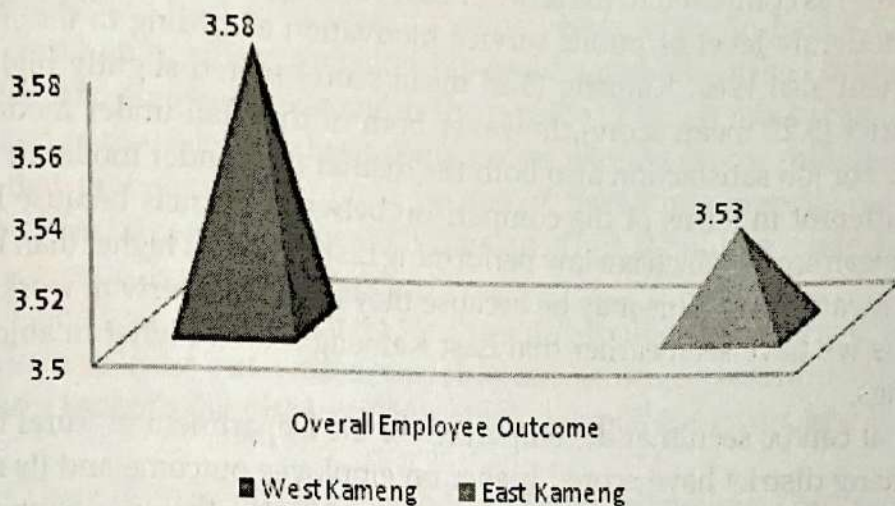
Source : Primary data

Comparison for the sub-variables of employee professionalism is presented in figure 3 above. It is evident from the result that West Kameng district scored higher mean than East Kameng district for all the sub-variables of professionalism except Autonomy (West Kameng district-3.09 mean score, East Kameng district-3.2 mean score). Both the districts had moderate level of dedication to the profession (West Kameng district-3.77 mean score, East Kameng district-3.49 mean score) and belief in self regulation (West Kameng district-3.54 mean score, East Kameng district-3.52 mean score). In case of the rest of the sub variables of employee professionalism, West Kameng district had high level of social obligation (4.31 mean score), professional community affiliation (4.07 mean score) and expertise (4.07 mean score) whereas East Kameng fall only in the moderate level of the score interpretation (social obligation - 3.62 mean score, professional community affiliation - 3.65 mean score, expertise - 3.52 mean score).

Thus in case of employee professionalism, the better performing district which is West Kameng district had brighter result than East Kameng district. Hence we can also conclude that higher level of employee professionalism leads to better performance of the district.

Comparison of the two districts was also carried out in terms of employee outcome which consists of public service motivation, commitment and job satisfaction.

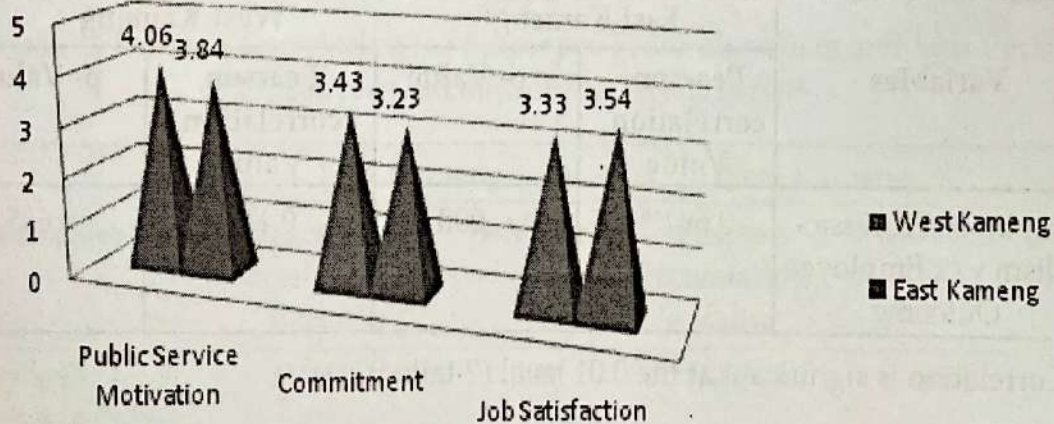
Figure 4 : Comparison of mean scores of Employee Outcome



Source: Primary data

Figure 4 presents the result for the overall employee outcome of the two districts. It is evident from the result that both the districts have only moderate level of employee outcome as both of them scored less than 4 mean score. There is a very minimal difference between the scores of the two districts though West Kameng district (3.58 mean score) scored slightly higher than East Kameng district (3.53 mean score). Further comparison was also carried out for the sub variables of employee outcome (public service motivation, commitment and job satisfaction) for both the districts.

Figure 5 : Comparison of mean scores for sub-variables of employee outcome



Source: Primary data

Comparison of the sub-variables of employee outcome between the two districts is presented in figure 5 above. West Kameng district scored high for public service motivation (4.06 mean score) as compared to the score of East Kameng district (3.84 mean score) which falls under moderate level of public service motivation according to the interpretation. For commitment also West Kameng (3.43 mean score) scored slightly higher than East Kameng district (3.23 mean score), however both of them fall under moderate level of commitment. For job satisfaction also both the district falls under moderate level but the scenario is different in terms of the comparison between districts because East Kameng district (3.54 mean score) which is a low performing district scored higher than West Kameng district (3.33 mean score). This may be because they have the liberty to work according to their desire as we have seen earlier that East Kameng scored higher in autonomy in the earlier findings.

Thus, it can be seen that the employees of the Department of Rural Development of West Kameng district have scored higher on employee outcome and its sub-variables except for job satisfaction where East Kameng scored higher than its counterpart district. Second objective of the study which was to find out the relationship between employee professionalism and employee outcome in the two districts was fulfilled by performing Pearson Correlation for employee professionalism and employee outcome. Thus null hypotheses for each district were formulated:

$H1_a$  = There is no significant relationship between employee professionalism and employee outcome in East Kameng district.

$H1_b$  = There is no significant relationship between employee professionalism and employee outcome in West Kameng district.

**Table 5**  
**Correlation for Employee Professionalism and Employee Outcome**

Variables	East Kameng		West Kameng	
	Pearson correlation Value	p- Value	Pearson correlation Value	p- Value
Employee Professionalism v/s Employee Outcome	0.692**	.000	0.110	0.655

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

Table 5 presents the correlation result which was performed between employee professionalism and employee outcome for the two districts. It can be seen from the result

that correlation is significant at 0.01 p-value for East Kameng district and thus the null hypothesis for the same is rejected. It is also seen that there is a moderate positive correlation ( $r = 0.692$ ) between the two variables. Thus it indicates that increase in employee professionalism would lead to increase in employee outcome in East Kameng district. Whereas for West Kameng district relationship could not be established between employee professionalism and employee outcome as the p-value (0.655) is more than the significant level of 0.05 and so the null hypothesis could not be rejected for the said district. Thus we can assume that professionalism might be one of the factors responsible for the poor performance of East Kameng district and thus an effort should be made to increase the employee professionalism of the district.

Correlation was also performed for the sub-variables of employee outcome with professionalism to find out which variable has stronger relation with employee professionalism for both the districts. Thus six null hypotheses were also formulated for the same.

H2<sub>a</sub> = There is no significant relationship between employee professionalism and PSM in East Kameng district.

H2<sub>b</sub> = There is no significant relationship between employee professionalism and PSM in West Kameng district.

H3<sub>a</sub> = There is no significant relationship between employee professionalism and commitment in East Kameng district.

H3<sub>b</sub> = There is no significant relationship between employee professionalism and commitment in West Kameng district.

H4<sub>a</sub> = There is no significant relationship between employee professionalism and job satisfaction in East Kameng district.

H4<sub>b</sub> = There is no significant relationship between employee professionalism and job satisfaction in West Kameng district.

**Table 6**  
**Comparison of Pearson Correlation for Employee Professionalism and Sub Variables of Employee Outcome of the Two Districts**

Variables	East Kameng		West Kameng	
	Pearson correlation Value	p- Value	Pearson correlation Value	p- Value
Employee Professionalism v/s Public Service Motivation	.904**	.000	.460*	.048

Employee Professionalism v/s Commitment	.575**	.004	.522*	.022
Employee Professionalism v/s Job Satisfaction	-.483*	.019	-.430	.066

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

\*. Correlation is significant at the 0.05 level (2-tailed).

From table 6 which presents the results of the Pearson correlations performed, it can be seen that all the null hypotheses except one are rejected as the correlations are significant at 0.01 and 0.05 level. For professionalism and public service motivation there is a positive correlation for both the districts and so both the hypothesis regarding employee professionalism and public service motivation are rejected. The result for East Kameng shows that there is a strong positive correlation between employee professionalism and public service motivation ( $r = 0.904$ ,  $p\text{-value} = 0.000$ ) which is also the highest amongst all the correlation test for the three sub-variables of employee outcome, as compared to the moderate positive correlation for West Kameng district ( $r = .460$ ,  $p\text{-value} = 0.048$ ). Hence it can be seen that employee professionalism can play a very important role for East Kameng district as it will encourage public service motivation which is a vital attribute for any government employee.

Next is professionalism and commitment which had a positive moderate correlation for both the districts (East Kameng  $r = 0.575$ ,  $p\text{-value} = 0.004$ , West Kameng  $r = 0.522$ ,  $p\text{-value} = 0.022$ ) which supports the research of Norris (1984) and Seijaaka (2014) where it is reported that professionalism is positively associated with organizational commitment and thus the two null hypotheses regarding these two variables are rejected. Thus we can see that commitment of the employees in both the districts can be enhanced with the help of employee professionalism.

Lastly employee professionalism and job satisfaction had a negative moderate correlation for East Kameng district ( $r = -0.483$ ,  $p\text{-value} = 0.019$ ) which supports the study of Schroeder and Imdieke (1997) and Dali (2013) where they have found that professionalism and job satisfaction is related negatively. On the other hand no relationship could be established between these two variables for West Kameng district ( $r = -0.430$ ,  $p\text{-value} = 0.066$ ) which is in consistency with Kalbers and Fogarty (1995) who had found out that professionalism does not have significant effect on job satisfaction. Thus the null hypothesis for East Kameng district regarding employee professionalism and job satisfaction is rejected however the null hypothesis for West Kameng district could not be rejected.

Therefore it can be concluded that for the employees of the two selected districts of the Department of Rural Development, Arunachal Pradesh, professionalism can play a vital role in enhancing the level of public service motivation as well as commitment of the employees which can further help in improving the performance of both the districts. The analyses above were on the basis of the response of the employees of the two districts of the Department of Rural Development, Arunachal Pradesh. It mostly showed the positive side of the coin but it is also important to know the opinion of the stakeholders regarding professionalism of the employees that might give a hint to the ground reality. Thus a few common questions were asked to the officials, the people's representatives and the common people concerning employee professionalism.

**Table 7**  
**Descriptive Analysis for the Stakeholder's Responses of the Two Districts**

		East Kameng					West Kameng				
		SD	D	NAD	A	SA	SD	D	NAD	A	SA
Regularity of visit to village	Officials	0	0	6	17	0	0	0	8	2	9
	People's Representatives	3	11	0	10	0	1	3	0	11	0
	Common People	106	69	0	0	5	92	38	0	6	0
Conduct regular monitoring of schemes	Officials	0	0	4	9	10	0	0	0	16	3
	People's Representatives	0	11	0	12	1	5	0	3	5	2
	Common People	20	77	5	71	7	13	51	7	59	6
Biasness in implementation of schemes	Officials	18	5	0	0	0	8	11	0	0	0
	People's Representatives	4	2	3	13	2	2	3	6	4	0
	Common People	13	30	22	95	20	0	43	13	70	10

Source : Primary Data, (SD = Strongly Disagree, D = Disagree, NAD = Neither Agree Nor Disagree, A = Agree, SA = Strongly Agree)

Table 7 presents us with the descriptive analysis for the responses of different stakeholders. Response to the regularity of visit of the officials to the village reveals that majority of the Officials from both the districts agree that they visit the village regularly which contrast with the response of the common people because majority of the common people do not agree that they visit the village regularly. In East Kameng district 97 percent of the respondents do not agree that the officials visit the village regularly and in West

Kameng district 95 percent of them do not agree to the same. Similarly in case of the conduct of regular monitoring of the scheme it can be seen that there is a variation in the opinion of the stakeholders for both the districts. Majority of the officials agree that they monitor the schemes regularly but in East Kameng district majority (54%) of them and 47 percent of the common people from West Kameng district do not agree with the same, however there are almost equal division of positive and negative responses in case of the people's representatives. Lastly in case of the biasness in the implementation of the schemes is concerned, it can be seen that all of the officials have disagreed to the query but majority of the common people (East Kameng - 64%, West Kameng - 59%) believe that there are some biasness in the implementation of the schemes. As far as the people's representatives are concerned in East Kameng 62 percent of them agreed that there is some biasness in the implementation of the scheme, however in West Kameng district there were equal division for agree and disagree regarding the issue.

To check whether there is any significant difference in the responses of the three categories of respondents' six more null hypotheses were formulated and ANOVA test was conducted for the same.

H5<sub>a</sub> = There is no significant difference in the opinion of the respondents across three groups regarding visit of the officials to the village in East Kameng district.

H5<sub>b</sub> = There is no significant difference in the opinion of the respondents across three groups regarding visit of the officials to the village in West Kameng district.

H6<sub>a</sub> = There is no significant difference in the opinion of the respondents across three groups regarding conduct of regular monitoring of schemes in East Kameng district.

H6<sub>b</sub> = There is no significant difference in the opinion of the respondents across three groups regarding conduct of regular monitoring of schemes in West Kameng district.

H7<sub>a</sub> = There is no significant difference in the opinion of the respondents across three groups regarding biasness in the implementation schemes in East Kameng district.

H7<sub>b</sub> = There is no significant difference in the opinion of the respondents across three groups regarding biasness in the implementation schemes in West Kameng district.

**Table 8**

**Result of ANOVA for Comparison of Responses for Three Categories of Respondents Between the Two Districts**

	Regularity of visit to village		Conduct regular monitoring of schemes		Biasness in implementation of schemes	
	EK	WK	EK	WK	EK	WK
Officials (Mean Score)	3.74	4.05	4.26	4.16	1.22	1.58
People Representatives (Mean Score)	2.71	3.40	3.12	2.93	3.29	2.80

Common People (Mean Score)	1.49	1.41	2.82	2.96	3.44	3.35
F-value	97.745	126.834	16.499	9.242	42.928	28.681
ANOVA p-value	.000	.000	.000	.000	.000	.000

Source : Primary data, (EK - East Kameng, WK - West Kameng)

Table 8 above presents us with the result of ANOVA test between three categories of respondents for two districts. It is evident from the result that all the null hypotheses formulated for ANOVA has been rejected as all the tests are significant at 0.01 level. Thus it is proved that there is a significant difference in the response of the three categories regarding various issues regarding professionalism.

### Conclusion

Employee professionalism is regarded as one of the most important entity for an organization because a well performing public service is based on its professionalism (Yi-Armstrong, 2000). Therefore, we require employees who exhibit professionalism in their day-to-day activity. From the first part of the analysis it was found out that the employees of both the districts have moderate level of professionalism and they also secured good scores for the sub-variables of the employee outcome. But when we look at the second part of the analysis, it is visible that the common people of both the districts had a contrast opinion regarding professionalism issues of the employees of the Rural Development department. They had the opinion that the employees do not carry out their responsibilities satisfactorily. A positive association between employee professionalism and employee outcome is also revealed in this study. Hence, a need for enhancing professionalism of the employee to increase the employee outcome of the department has been immensely felt.

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## Mutual Fund Investment Scenario of North East India

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### Abstract

Mutual fund worldwide plays important role in mobilizing household savings. There exist barriers in the sale of mutual fund products and the absence of full knowledge for capital market and equity on the part of investors in the north east states of India. The objective of the study is to find out the challenges and opportunities of mutual fund as a base of investment avenue in north east states of India. The research is exploratory in nature and critically examines the working of mutual fund system in the economically backward and industrially underdeveloped states of north east India. Based on a sample of 240 investors, the study also examines the preferences and behavioural aspects of mutual fund investors of north east states of India. Findings of the study suggest that mutual fund industry is growing steadily in the north east states of India, nevertheless mutual fund houses operating in the north east India are not able to convert the household savings which remains unexploited for so many years into gainful mutual fund investment. In addition, the female sector has not been fully tapped in most of north east states. Even the higher income group of this segment remains almost untouched. The findings of the study also include the behavioural aspects of the mutual fund investors of the north east states of India. The study has significant implications for academicians, mutual fund houses, brokers, regulators and investors and provides avenues for further research.

**Keywords :** *Mutual Fund Investment Scenario of North East India*

### Introduction

Mutual funds are back after witnessing wealth erosion for nearly three years. The year 2014 has been a revival year for equity mutual fund investors of India. There has been a relatively slow growth for Indian mutual fund industry in the period 2010-13 with compound annual growth rate (CAGR) of approximately 3.2 per cent. According to The Association of Mutual Funds in India (AMFI), average assets under management (AUM) stood at INR 8,140 billion as of September 2013 however, it has increased to INR 8,800 billion in December 2013. A report by Crisil states that tenure-wise analysis of AUM across

investor types and categories for the half year ended September 2014 showed that 64 per cent of retail AUM stayed in equity mutual funds for more than two years, higher than 62 percent seen in the preceding six months. The Indian mutual fund industry, offers Indian and global investors, an avenue to invest safely and securely, at a reduced cost, in a diverse range of securities, across a wide range of industries and sectors. Mutual fund worldwide plays important role in mobilizing household savings. Small investors in north east region of India are typically uncertain and unaware about timing and merits of investing in mutual funds. Has the mutual fund industry as it works in this part of India ignored all these facts? It is high time to examine and re-examine the philosophy of the mutual fund industry in the context of the states of north east India.

### **Need for the Study**

Mutual fund investment in the north east states of India shows a high degree of disparity in the composition and trend of investment in between the states in the region. It is true that certain amount of variation cannot be avoided, but the degree of variation in this context is so big at times and it arouses interest to study the investment behaviour of the investors in the region. In spite of the favourable conditions prevailing in the Indian stock market, growing economy, concessions and exemption granted to the north east states, slew of measures taken up by Security Exchange Board of India (SEBI) and the government of India for encouraging savings and investment in mutual funds, no remarkable increase is seen.

In addition, despite the present impressive growth of the mutual fund industry, the industry has not achieved its rightful position in the terms of options confronting an investor. Other alternatives such as real estate, gold, deposits and other household saving have reduced the industry flows. The investor mix has not changed significantly which provide an opportunity for the industry to tap more into the broad-basing of savings and surpluses across the demographic and regions. The big challenge for mutual fund industry is to reach and spread further to the semi-urban and rural areas of the country. All these factors gave a lead to conduct the study to throw light on the mutual fund investment scenario in the states of the north east India and to understand the investing behaviour of the investors of the region.

### **Research Objectives**

The research attempts at examining and analyzing the working of mutual fund system in the economically backward and industrially underdeveloped states of north east India. The basic aim of the study is to find out the challenges and opportunities of mutual fund as a base of investment avenue and also examines the preferences and behavioural aspects of mutual fund investors of north east states of India.

## **Research Methodology**

The research is an exploratory research. To serve the objectives of the study, both secondary and primary data were extensively used. Pre-tested questionnaire carefully drawn up with open-ended and multiple choice questions was developed, direct personal interviews with selected investors and brokers were incorporated in the course of study. Every attempt was made to get clarification of all enquiries from the respondents and to obtain unbiased report. The study covered 240 investors who had been carefully selected from the seven states of north east India - Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The sampled investors consisted of retail investors, households and High Net-worth Individuals (HNIs). The study is supplemented by a small survey of the brokers and agents operating in the region under study. The data collected have been carefully analysed so as to arrive at significant conclusion having practical implications for mutual fund houses, brokers, regulators and policy makers, investors, researchers and academicians.

## **Review of Literature**

Mutual fund and its growth is an important phenomenon of the present day financial market. USA is the pace-setter for the mutual fund industries worldwide. The first mutual fund in the USA, Massachusetts Investors' Trust, was set up in 1924. Discussion on the history of mutual fund industry and its working in this part of India remains incomplete over the years although the origin of the industry dates back the year 1963 in India. This is the year in which the Unit Trust of India (UTI) introduced the concept of mutual fund in the country. The first scheme launched by UTI was Unit Scheme 1964 which was not even heard of till the early half of 1990s in the rural areas of north east states of India. One of the reasons for it may be that people of the region were not conscious about the mutual fund investment till the year 1986. It was only from the period when the public sector funds like State Bank of India followed by Canara Bank (Dec,1987), Punjab National Bank (Aug.,1989), Indian bank (Nov., 1989), LIC (1989), GIC (1990), Bank of India (Oct.,1992) entered into the industry that a little progress was made in the field in the region. A little more progress was visible with the entry of private players in 1993, the first being the erstwhile Kothari Pioneer (now merged with Franklin Templeton). But these private players, as seen from the various reports, could not effectively enter into the vast market of this part of India due to many reasons. Lack of good communication system, unsatisfactory law and order situation, political instability, want of financial literacy, industrial backwardness, too much dependence on return assured schemes like I PF, NSC, etc. have been considered to be prominent.

During the 1970s and 80s, mutual funds have been studied in great detail. Most of these studies have been concerned with measuring mutual fund performance, with management's ability to "time" the market, or with management's ability to select under-

priced securities. Studies in these categories include those by Treynor and Mazuy (1966). Jensen (1968). Kon and Jen (1979). Henriksson and Merton (1981), Chang and Lewellen (1984), and Jagannathan and Korajczyk (1986), to name a few. Fabozzi and Francis (1979). Alexander and Stover (1980) and Milter and Gressis (1980) also have made attempts to find out whether the portfolio managers might, however, achieve differential return performance by engaging in successful "micro" market-timing activities as well as careful, "micro" security selection effort. These studies have generally concluded that mutual fund managers can not consistently time the market or select under-priced securities. This has led to the conclusion that long-term individual mutual fund performance can best be described as random.

Mutual fund as an avenue of investment, its implications and the various behavioural aspects of the investors are rigorously researched upon by many. Ippolito (1992) studied reactions of investors towards portfolio manager's performance and showed a strong positive and statistically significant relationship between past performance and current fund growth. Investors are attracted by good performance of the funds and schemes. Goetzman and Peles (1997) gave a psychological explanation for investor behaviour. They collected data from two groups of mutual fund investors -educated and casual and the responses from the two groups showed that overtly optimistic perception of past performance may explain investor's aversion to switching from poor performance. Incorporating manager's option to disconnect past and future performance in explaining empirical performance -flow asymmetry, Lynch and Musto (1997) argue that to investors flows are less sensitive to lower returns as past return contain less information about future performance of funds.

Mutual fund investment in India, including management and working of different schemes has been reviewed by earlier writers like Khan (2001), Jatana and Boqire (2007) a host of writers in their books and articles published from time to time. However, their studies have still to cover the changes which are taking place in the industry vis-a-vis the potentiality of mutual fund investment in the north and eastern states of India in general and the north east states of India in particular.

Various aspects of mutual fund investment touching upon regulations of mutual funds, investor's behaviour, perceptions trends and growth were studied by researchers like Shankar (1990), Sarkar (1991), Agarwal (1992), Sarma C.Lall (1991), Barua k. Samir et.al. (1991), Bamzai (2001), Atmaramani (1995, 1996), Srinivasan (1999). These studies indicate that mutual fund as an investment avenue is attracting investors tremendously.

Jambodekar V Madhusudan (1996) found that open-ended scheme is most favoured among other things and that this scheme and income scheme are preferred over closed-ended and growth schemes. Safety of principal amount and investor services are the main deciding factors for investing in mutual funds and news papers are used as the main source of information.

Behavioural aspects of the investors of the north east region of India in direction of equity and mutual fund investment was studied by Sikidar and Singh (1996) and they found that mutual funds are preferred by the salaried and self-employed individuals for the tax benefits. UTI and SBI schemes were preferred in that region over any other fund. Shanmugham (2000) found that individual investors depend on economical, sociological and psychological factors for investment decisions.

The study and findings of Manjesh and Reddy (2005) on the pros and cons of money market mutual funds and that of Sondhi and Jain (2005) on the performance of equity mutual fund classified as private sector and public sector undertakings have no special applicability with mutual fund investment in NE region. Further, the studies and findings of Badla and Garg (2007), Singh and Jha (2009) on awareness and acceptability of mutual fund and Badrinath and Gubelini (2011) were simply general attempts to analyse mutual fund working for the country as a whole. Nowhere, there has been special mention of mutual fund performances of north east region. In the light of the various studies discussed above, the present study is an attempt to fill the research gap that exists in the field of mutual fund study in the north east states of India.

## **Analysis**

From table 1 it is evident that 22 mutual fund schemes have penetration in the north east states and 20% of the sampled investors invest their savings in SBI mutual fund across the states. The entry of HDFC mutual fund has been greatly felt in Guwahati, the capital city of Assam. Out of the remaining mutual fund schemes, Bajaj Allianz, Birla Sun Life, ICICI Prudential have high varying degrees of penetration in different states. In some states like Manipur and Nagaland, Bajaj Allianz, Reliance and ICICI are quite new whereas they are not so new in the case of other states. Others like Birla Sunlife, ICICI Prudentials have bases in the capital cities of the north east states.

Table 1 shows that SBI, HDFC and UTI have higher per cent of the sampled investors than the other schemes in operation in north east states. Perhaps their value added services provided by their banks like SBI, HDFC have helped them in attracting investors. UTI being the first and foremost mutual fund reaching this part of India has its own advantage of securing more business. The other mutual fund schemes including Reliance and Birla Sun life are also not lagging much behind. ICICI Prudential mutual fund, instead of having a good coverage in other parts of the country cannot make headway in this field in this area. With the coming of more ICICI bank branches in the north east region a deeper penetration of ICICI Prudential mutual fund is expected sooner than later. Same may be true with Axis mutual fund. If the expansion of Axis Bank continues as it is today, Axis mutual fund will accelerate its progress. The analysis was based on only 22 mutual fund houses and their schemes.

**Table 1**  
Mutual Fund Schemes and Number of Investors (Sample of 240)

Name of Scheme/ Fund House	Number of respondents							Total	PC of Total
	Assam	AP	Mani- pur	Mizo- ram	Megh- alaya	Naga- land	Trip- ura		
SBI MF	4	7	25	7	2	4	1	50	20%
HDFC MF	20	1	15	-	3	-	3	42	16.8%
UTI MF	-	8	19	6	-	-	-	33	13.2%
BIRLA SUN LIFE MF	3	2	16	-	-	4	-	25	10%
RELIANCE MF	3	4	7	-	1	3	3	21	8.4%
AXIS MF	2	-	9	-	-	3	4	18	7.2%
ICICI MF	-	-	10	6	-	-	-	16	6.4%
KOTAK MAHINDRA MF	7	1	2	-	-	-	-	10	4%
BAJAJ ALLIANZE MF	-	1	2	5	-	-	-	8	3.2%
DYNAMIC MF	-	1	3	-	-	-	-	4	1.6%
BOB MF	-	-	-	-	4	-	-	4	1.6%
DSP BLACK ROCK MF	1	-	-	-	-	1	2	4	1.6%
LIC NOMURA MF	-	1	1	-	-	1	-	3	1.2%
FRANKLIN TEMP- LETON MF	2	-	1	-	-	-	-	3	1.2%
FIDELITY MF	-	-	2	-	-	-	-	2	0.8%
FAIR WEALTH MF	-	-	1	-	-	-	-	1	0.4%
MIRAE ASSET MF	-	-	1	-	-	-	-	1	0.4%
AVIVA MF	-	-	1	-	-	-	-	1	0.4%
UBI MF	-	-	-	-	-	1	-	1	0.4%
MOTILAL OSWAL MF	-	-	-	-	-	-	1	1	0.4%
SUNDARAM BNP	-	-	-	-	-	-	1	1	0.4%
PARIBAS	-	-	-	-	-	-	-	-	-
TATA AIG	-	-	1	-	-	-	-	1	0.4%
TOTAL	42	26	116	24	10	17	15	250*	100%

\*Exceeds 250 as investors invest in more than one Scheme/Fund

Table 2 evidences that most of the investors under study regard print media (30.8%) and friends and relatives (35.8%) to be important sources of information for investment in mutual funds. It was found that in most of rural and semi-urban areas friends and relatives have directly or indirectly influenced the investors about mutual fund investment. Electronic media and internet were respectively used mainly by 16.7% and 22.1% of the respondents. 8.3% of the respondents relied on information provided by others which comprises mainly brokers and agents of mutual fund institutions.

**Table 2**  
**Source of Information**

Sl.No.	Sources of information	No.of responses	Percentage of valid cases
1.	Print media	74	30.8%
2.	Electronic Media	40	16.7%
3.	Friends and Relatives	86	35.8%
4.	Internet	53	22.1%
5.	Others	20	8.3%
	Total	273*	113.8%

*\*exceeds 240 due to multiple responses*

Principal aims for investing in mutual fund by the investors under study are depicted by table 2. North east people, realising that their incomes were insufficient for meeting future expenses, wanted assurance for growth and regular income (57.1%) after a certain period of time. Here, the most convenient vehicle would be mutual fund on open-ended schemes which give both growth and regular income. Of course, tax planning (16.3%) as principal aim of investment cannot be ignored especially for the government and semi-government employees. 12.9% of the respondents considered high degree of liquidity as the principal aim for investment in mutual fund and fixed/regular income and windfall gain with 12.5% each were least preferred.

**Table 3**  
**Principal Aim of Investment**

Sl.No.	Principal aim of investment	No.of responses	P.c. of cases
1.	Growth and regular income	137	57.1%
2.	Windfall gain	30	12.5%
3.	Tax planning	39	16.3%
4.	Fixed/regular Income	30	12.5%
5.	High degree of liquidity	31	12.9%
	Total	267*	111.3%

*\*exceeds 240 due to multiple responses*

Further analysis, on growth and regular income which accounted the highest percentage (table 3), highlighted the different aspects of the types of growth and income preferred by the investors under study. From table 4, it is evident that the investor's preference of growth, income and balanced/hybrid with 50.4% is more than 2 ½ times the other preferences. It means that while investing in mutual fund the first preference is one leading with 'growth' as goal. Mutual fund houses have to study carefully this piece of information for their own benefit and benefit of the investors in this part of the country. The approach of brokers and agents has to be streamlined and remodelled to capture a sizable market.

**Table 4**  
**Mutual Fund Preferences**

Sl.No.	Principal aim of investment	No.of responses	P.c. of valid cases
1.	Growth, Income and balanced/hybrid	121	50.4%
2.	Income, growth and balanced/hybrid	50	20.8%
3.	Growth, balanced/hybrid and income	47	19.6%
4.	Income, balanced/hybrid and growth	22	9.2%
Total		240	100.0%

Analysing factors for choosing mutual fund scheme or schemes (table 5), it was found that 44.2% of the investor look at the performances of the mutual fund schemes for investment. Aims and objects of the fund schemes accounted for 20% while 18.3% look at the sector whether public or private. Reputation of the fund house and minimum investible amount were considered by 17.9% and 17.1% respectively.

**Table 5**  
**Factor for Choosing Mutual Fund Scheme**

Sl.No.	Factors	No.of responses	P.c. of valid cases
1.	Sector(Govt./Private)	44	18.3%
2.	Minimum Investible Amount	41	17.1%
3.	Aim and object of the fund	48	20.0%
4.	Performance of MF	106	44.2%
5.	Name of the fund house	43	17.9%
Total		282*	117.5%

\*exceeds 240 due to multiple responses

From the table 6, it is found that 49.4% of the respondents considered valuable performance indicator to be net asset value (NAV) while investing in mutual fund. Also average return stands second in term of percentage in the list of mutual performance indicator with 28.5%, about 23.0% of the investor take the market price to be valuable.

**Table 6**  
**Mutual Fund Performance Indicator**

Sl.No.	MF performance indicator	No.of responses	P.c. of cases
1.	Market price	55	23.0%
2.	NAV	118	49.4%
3.	Cost or book value	12	5.0%
4.	Average return	68	28.5%
	Total	253*	105.9%

*\*exceeds 240 due to multiple responses*

The modal age group of all mutual fund investment in different schemes excepting UTI mutual fund was 25-35 years of age (Table 7 & 8). This age group happens to be the group with high propensity to save and invest in schemes having the element of risk i.e., equity. They also form major portion of youth who are just employed or self employed in the changing economic scenario of the north east India. With the investors growing older it seems that their risk appetite has reduced and in the age group of 55-65 a very few investors opt for mutual fund. The modal age group of UTI mutual fund was 35-45. This may be because of the fact that UTI mutual fund is the oldest mutual fund house and people of a little advanced age have more confidence in it.

**Table 7**  
**Age Group Distribution of Investors**

Age group	Responses	
	N	Percent
25-35	130	54.17%
35-45	77	32.08%
45-55	25	10.42%
55-65	8	3.33%
Total	240	100.0%

Table 8  
Age Group Distribution Scheme-wise/Fund-wise

Sl. No.	Age group of investors	SBI MF	HDF C MF	UTI MF	Birla Sun Life MF	Reliance MF	Axis MF	ICI CI MF	Others	Total
1.	25-35	31	31	08	15	15	17	07	06	130
2.	35-45	23	12	16	10	06	02	06	02	77
3.	45-55	08	02	08	01	02	01	02	01	25
4.	55-65	01	01	03	00	02	00	01	00	08
5.	65 and above	00	00	00	00	00	00	00	00	00
Total		63	46	35	26	25	20	16	09	240

Mutual fund, being an avenue for investment for small savers, can target the potential rural investors. From the table 9, it is inferred that the study shows one interesting picture. A single agency, as given in table 9, cannot work effectively single handed. The activities of co-operative societies, clubs and similar organisations and Panchayati Raj Institutions which are supposed to be torch bearers in the rural areas of north east region have not been felt to the extent they ought in so far as they relate to providing financial literacy on mutual fund to the rural population. The reason may be that these institutions in north east regions are not so close with public. The involvement of rural folk which constitutes more than 90% of the population in these organisations/institutions has not reached the desired level. More often than not members of these institutions themselves have very poor knowledge of mutual fund investment. Added to this factor a sizeable population in the hill areas of the region, co-operative societies and similar institutions are organised and run by people residing in urban areas. As a result their existence and their influence cannot bring financial inclusion of household savings in mutual fund Industry. Hence, for convincing the rural population the right agency cannot be singled out. Only a combination of all agencies working together can bring the desired result.

Table 9  
Agency to Convince Rural Population

Sl. No.	Right agency to convince rural population	No.of responses	Pc of cases
1.	Co-operative societies	45	18.8%
2.	Clubs and similar organisation	37	15.4%

3.	Panchayati Raj	22	9.2%
4	All the above	142	59.2%
Total		246*	102.5%

\*exceeds 240 due to multiple responses

### Findings from brokers and agents opinion

To gain a better understanding of the challenges face by mutual fund houses in increasing penetration in the region under study bankers and brokers were interviewed and were asked the causes for holding mutual fund back on increasing their presence in rural India. Brokers were asked to give their views on a variety of issues awareness, financial literacy, adequate information, regulation, distributional channels, infrastructural facilities etc. The respondents were asked to score on a five-point Likert scale, scores ranging from a "strongly agree" to "strongly disagree".

Brokers /agents of mutual fund companies were of the view that investors of the region under study was not fully aware of the working or mechanism of mutual fund industry and the products. Majority of the respondents (86.9%) with mean score above 4 on the five-point scale, agreed that majority of the investors in the north east states of India have little knowledge about mutual fund and the schemes under it. The respondents (87.2%, mean score above 4) felt that investors were not adequately informed about mutual funds. Undoubtedly, lack of awareness and inadequate information is one big factor for low degree of penetration by mutual fund companies in the region. Lack of financial literacy of the people of the north east states of India particularly the rural population of the region is understood as a big hindrance for expansion of mutual fund both in numbers of investors and volume of investment. This is evidenced by 76.7% of the respondents with mean score above 3 in the five point scale agreeing to this fact.

56.7% of the respondents agreed that agents dealing with mutual funds also deal with other investment products and this may be another cause of hindrance for pushing mutual fund products to the investors. Majority of the investors under study belonged to the upper income group of above Rs. 3,00,000 per annum and they belonged to high salaried group and business persons and as such they were more interested in those product with income tax rebates. Mutual fund products with tax exemptions would be welcomed by the investors.

Majority of the respondents agreed that penetration of mutual funds in the rural areas of the region under study can be increased by following aggressive selling strategy, increasing financial literacy to enable the rural folks better understand the complex nature of investment in mutual fund schemes. Distribution through the self help groups among female population, local bodies like clubs and Panchyati Raj could be encouraged. The

brokers and agents have a very important role to play in increasing penetration of mutual fund in the states under study and the respondents also agreed that preference of the investors towards mutual funds is basically due to the presence of brokers and agents in the regions.

**Table 10**  
**Opinions of the Brokers/Agents**

Sl. No.	Statements	Opinion Scale					Mean score
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
1.	Investors are not fully aware of mutual fund and its products	-	-	3.3%	73.3%	23.3%	4.25
2.	Investors are not adequately informed about mutual fund and its working.	-	-	13.3%	63.3%	23.3%	4.10
3.	Lack of customer information is an obstacle for mutual fund penetration	-	-	33.3%	53.3%	13.3%	3.80
4.	Lack of financial literacy is a hindrance for mutual fund penetration	-	-	23.3%	60.0%	16.7%	3.93
5.	Agents selling mutual fund products along with other non-mutual fund products cannot push mutual fund.	-	-	43.3%	56.7%	-	3.57
6.	Inadequate incentive or commission cannot motivate agents to achieve target sales of mutual funds	-	3.3%	33.3%	50.0	13.3%	3.73
7.	Aggressive sale of product can increase penetration	6.7%	6.7%	36.7%	43.7%	6.7%	3.37
8.	Providing financial literacy can increase demand for mutual fund products.	-	-	13.3%	73.3%	13.3%	4.00
9.	Distribution through self-help groups and local bodies like Panchayati Raj can help rural penetration of mutual funds	-	10.00%	43.7%	36.7%	10.00%	3.47

10	Availability of more numbers of brokers and agents are primarily responsible for changing preference of rural and semi-urban people towards mutual funds	-	-	3.3%	80.00%	16.7%	4.13
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### **Conclusion and Suggestions**

There is no doubt that there exist barriers in the sale of mutual fund products and the absence of full knowledge for capital market and equity on the part of investors in the north east states of India, nevertheless the mutual fund industry has been growing slowly but steadily. Assam was at the top of the list in the percent of growth followed by Tripura, Arunachal Pradesh and Manipur. A change from the debt schemes to equity oriented schemes had also been noticed from the years 2007. Majority of north east investors felt that mutual fund industry has good future in these states. The only drawback is that mutual fund houses are not able to convert the household savings which remains unexploited for so many years into gainful mutual fund investment. Added to this, female sector has not been fully tapped in most of north east states. Even the higher income group of this segment remains almost untouched. To increase the retail participation in mutual funds investors need to be made aware about mutual fund complexity, they need to look beyond the traditional investment avenues.

Most of the investors have faith on Government based fund houses like SBI, UTI. By opening more service centre and better after sale service by the private company more investors can be attracted. As most of the people get to know about the mutual fund through friends and relatives, the existing customers should be given better knowledge and give information about new schemes coming up from time to time. This would help in reaching rural folks about the fund. Good inter-personal relationship has to be created with the existing customers. Fund houses can organize seminars and workshops to create awareness to the potential investors.

While choosing the scheme investors look for the past performance of the fund house so good track record should be kept as far as possible with the management of expertise fund managers. Different schemes which give good regular return with growth can be given more emphasized. More Tax savings schemes can be introduced specially for the government employees and tax savers. Making mutual fund more tax-efficient and investor friendly can attract more investors and penetration can be increased. Age group 25-35 can be the right target for the mutual fund.

Distributors should be given proper training on scientific lines on financial literacy and their knowledge updated by providing orientation and short term training course from time to time. From such training they should be able to create confidence in themselves

and in the minds of north east investors. Fund houses can appoint more financial advisors to identify the diversified needs of investors in choosing the right scheme for the right investor. Regulators and policy makers make relook at the commission policy for the agents as it is viewed as one of the motivating factors for the agents to work better. As most of the agents of mutual fund also sell other non mutual fund products, the distribution network needs to be strengthened and new and innovative incentive schemes need to be adopted.

The present study is an exploratory and preliminary investigation into the investment scenario of mutual funds in the north east India and provides areas for further research. Performance of the different fund houses operating in the north east India could be studied. Relationships between demographic and social development factors such as financial inclusion, literacy, bank penetration, occupation and mutual fund penetration which were not covered by the present study could be good avenues for future research. The present exploratory study could also be further examined as descriptive or conclusive research by taking due care with the sampling method and sample size. The state of Sikkim which was not included in the study could also be incorporated for a better representation of the north east region of India.

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## Factors Influencing the Buying Behaviour of Two-Wheelers by College Youth in Aizawl: An Exploratory Study

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### Abstract

Automobile industry is one of the major industries in the global market and is considered to be the key driver of growing economy due to its leading product and process technologies in the manufacturing sector. In India, automotive is one of the largest industries which shows remarkable growth over the years and has drastically contributed to the overall industrial development of the country. Two-wheelers segment is one of the most important components of automobile industry witnessing an unprecedented growth and currently India is the second largest producer of two-wheelers in the world. The paper tries to identify the most important factors influencing the college youth buying behavior of two-wheelers in Aizawl. A questionnaire survey method was employed as the basic research method in this study. Data were collected from primary as well as secondary sources. Primary data were collected by using structured questionnaires which were directly distributed to the respondents and collected from them at the time of their convenience. The main results of the study specified that popularity of the brand plays an important role in buying the two-wheelers. Youth prefers to buy two-wheelers whose brand is well known by others.

### Introduction

Automobile industry is one of the major industries in the global market and is considered to be the key driver of growing economy due to its leading product and process technologies in the manufacturing sector. In India, automotive is one of the largest industries which shows remarkable growth over the years and has drastically contributed to the overall industrial development of the country. Two-wheelers segment is one of the most important components of automobile industry witnessing an unprecedented growth and currently India is the second largest producer of two-wheelers in the world. In the last few years, the country has observed a magnificent growth following China and Japan in terms of production and sales respectively. Consistency in growth of Two-wheelers market in India is due to foreign collaborations especially with the Japanese firms.

## *Factors Influencing the Buying Behaviour of Two- Wheelers by College Youth in Aizawl: An Exploratory Study*

Two-wheelers markets in India comprises of three main types of vehicle viz. motor cycles, scooters and mopeds. Apart from this, firms have started manufacturing new categories such as 'Step Thrus' and 'Scooterettes' by combining two or more two-wheelers segment. Among the three existing segment, major growth trends have been experienced in motorcycle segment over the last four to five years. Increase in demand for this particular segment is considered due to its resistance and balance even on bad road condition having transportation problems in rural areas.

Numerous players existed in the Indian Two-wheelers market such as Bajaj Auto, Hero MotoCorp formerly known as Hero Honda, Yamaha Motors, TVS Motors, Suzuki Motors, Royal Enfield, Honda Motors, Kinetic, LML India, Mahindra Two-wheelers, Hyosung, Ducati, KTM, Electrotherm and MontoMotors. However, the Two-wheelers market in India is a fast growing market due to its technological advancements in product manufacturing and emphasis on design innovation.

According to the report which was published by Society of India Automobile Manufacturer (SIAM), sales numbers for Q1 FY 2014-15 reveal that the domestic Indian two-wheeler industry has grown by a healthy 13.70 percent compared to 2013-2014, selling a total of 3,968,967 units. The top four players in the market are Hero MotoCorp, Honda Motorcycle & Scooter India (HMSI), Bajaj Auto and TVS Motor Company. Hero's market share for Q1 FY2014-15 stands at 42.29 percent as against 43.77 percent a year ago. Standing out was HMSI, which primarily ate into the market shares of industry leader Hero MotoCorp and also Bajaj Auto. Honda registered domestic sales of 953,501 units during Q1, up by an impressive 34.15 percent over 710,774 units sold during Q1 of the last fiscal. With this, HMSI's market share has jumped up by 3.66 percentage points to 24.02 percent (Q1 FY2013-14: 20.36 percent).

Particularly in Aizawl, the capital city of Mizoram, the two-wheelers market is flourished with different brands through their respective authorized dealers such as Khaia& sons For Hero Motocorp, Hauva Honda for Honda Motorcycle and Scooter India, Tlau TVS for Tvs Company, Thansanga& Sons for Yamaha, Zamliana two-wheelers for Mahindra two-wheelers, LawmaEnfield for Royal Enfield, Standard Motor works for Bajaj Automobiles and KTM, Highland for Hyosung and CK Cars for Vespa. Apart from the sales of each dealer, the growth of Two-wheelers market may be influence by the second-hand market such as RC Bike Bazaar and LBS Bike Bazaar.

### **Conceptual Framework**

The concept of the present study has been taken from Kathiravanaet al.(2010), Chadha (2011), Laldinliana (2012). Kathiravanaet al. (2010) has dicussed about the effects of fuel efficiency, style and design, brand image, price, power and pick up, durability, maintenance cost, resale value, add on features and environment friendly on buying behavior of two-wheelers. The data obtained were analyzed using factor analysis to find

out the key components in the study. Chadha (2011) has discussed fuel efficiency, brand name and safety as factors influencing buying behaviour of consumers of two-wheelers. Laldinliana (2012) has discussed the effects of durability, word of mouth, after sales service, promotion, appearance and word of mouth on buying behaviour of two-wheelers. Following the past researchers and including own derived variables, the current study has considered the impact of price, color, celebrity, mileage, power, body design, brand image, road shows and sales promotions on buying behaviour of two-wheelers; followed by factor analysis to identify the key factors preferred by the customers on buying two-wheelers.

### **Review of Literature**

A review of previous studies has revealed that numerous studies have focused on the consumer buying behavior. The buying behavior of a consumer can be influenced by both the product and the consumer characteristics (Zhu and Zhang, 2009). Dhananjay Data (2010) in his study found that there are many factors on which the consumer buying behavior depends and all of these factors namely advertisement, word of mouth, references from family, friends, own experience, features, price, etc. motivates the consumers to buy two-wheelers. In the same way Kathiravana et al. (2010) had considered 10 important attribute such as fuel efficiency, style and design, brand image, price, power and pickup durability, maintenance cost, resale value, add on features and environment friendly to analyze the consumer evaluation of product attributes of two-wheelers. Subsequently Chadha(2011) found that fuel efficiency, brand name and safety are the three most important factors influencing the buying behavior of consumers on two-wheelers. Laldinliana(2012) in his study observed that promotion was considered to be the most important factor for buying two-wheelers which was followed by durability, after sales service, appearance and word of mouth respectively in descending order. Devaki and Balakrishnan(2013) observed that Hero Honda users gave more importance to factors like price which is followed by mileage, stylish look and brand image. Women, in particular, their two-wheelers purchases were driven by different factors such as preference, attitude, decision making and satisfaction (Murugan and Shanty, 2014). Furthermore, women preferences were strongly affected by a variable such as product performance whereas their attitudes were constructed by promotional schemes and utilitarian benefits, decision makings were based on personal factors and product characteristics while product aspects and value added benefits provides satisfaction for the women two-wheelers consumers in India.

## **Objectives of the Study**

The paper tries to identify the most important factors influencing the college youth buying behavior of two-wheelers in Aizawl.

## **Research Design**

**a. Population of the study :** The students of all the selected five colleges in Aizawl which represents the college youth from different zones of the city that is north, south, east, west and central zones, who owns as well as drives a two-wheelers for going to college were selected as the population of the study.

**b. Sample of the study :** 50 college youth who owns as well as drives two-wheelers from each of the selected college (total 250) were included in the sample of the study.

**c. Sampling design :** To get the desired sample stratified random sampling was used under which study area was first divided into five zones North, South, East, West and Central. A college representing each zone of the city i.e., North, South, East, West and Central were selected randomly. In this way, Aizawl North College from North Aizawl, Govt. Aizawl College from South Aizawl, Pachhunga University College from East Aizawl, Govt. Aizawl West College from West Aizawl and Hrangbana College representing Central Aizawl were selected. Further, 50 youths from each college were selected based on simple random samplings, giving a sample size of 250.

**d. Data collection :** Data were collected from primary sources as well as secondary sources. The study used customer survey as a tool of collecting primary data. A comprehensive questionnaire was designed and administered to the college youths and they were mostly contacted at the college based on their convenience. Data were collected during February-June 2014. Five point interval Likert scale ranging from '1= Strongly Disagree' to '5= Strongly Agree' were used to scale the questions because this scaling technique is suitable for self-administered survey method (Hair, Bush and Ortinau, 2004). In addition to primary data, the secondary data are gathered from books, journals, reports, governmental organizations, magazines, websites and business houses.

## **Results and Discussion**

### **a. Demographic Profile of the Respondents**

Table 1 describes the demographic characteristics of the respondents. A total sample of 250 was considered for the study and out of that 77.6 percent of the respondents were male, 76 percent of the respondents belongs to the age group of 20-24 years and 70.8 percent were living in the family having a total income of Rupees 1-3 lakh per annum.

**Table 1**  
**Demographic Profile of the Respondents**

Demographic variables		Number of Respondents	Percentage
Gender	Male	194	77.6
	Female	56	22.4
	<b>TOTAL</b>	<b>250</b>	<b>100</b>
Age	15-19 years	53	21.2
	20-24 years	190	76.0
	25-29 years	7	2.8
	Above 30 years	0	0
	<b>TOTAL</b>	<b>250</b>	<b>100</b>
Family Income	1-3 lakh	177	70.8
	3-5 lakh	48	19.2
	5-8 lakh	12	4.8
	8- 10 lakh	8	3.2
	Above 10lakh	5	2.0
	<b>TOTAL</b>	<b>250</b>	<b>100</b>

*Source : Field Survey*

**Mean, Standard Deviation and Reliability Value**

Table 2 analyse the different factors for buying two-wheelers along with their mean, standard deviation and reliability. The reliability of the variables was measured using Cronbach's Alpha. The purpose of the reliability measure is to test the internal consistency of the items within the variable. The variables yield a reliability of 0.69 which is still considered acceptable marking that Cronbach (1951) stated that a value higher than 0.5 was acceptable level for good internal consistency even though Nunnally(1978) state that the values for Cronbach's alpha of 0.7 or higher is satisfactory.

**Table 2**  
**Mean, Standard Deviation and Reliability Value**

Sl. No.	Statement	Mean	Std. Deviation	Cronbach's Alpha
1	I make the buying decision based on the price of two-wheelers advertised.	3.53	.917	0.69

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2	I choose the color of my two-wheelers from the advertisement I have seen from different media.	3.36	1.057
3	Ads done by my favorite celebrity endorsed me to buy this particular brand of two wheelers.	2.76	1.005
4	I prefer to buy two-wheelers whose brand is popular among the youths in Aizawl.	3.29	1.057
5	I buy two-wheelers based on advertisement made on mileage.	3.10	.868
6	I make the buying decision based on the power CC of two-wheelers advertised.	3.57	.975
7	Ads that clearly depict the body design of two-wheelers persuade me to own the same one.	3.69	.849
8	Brand image which is built by ads influence me to go for this particular brand of two-wheelers.	3.50	.885
9	Road shows performed by a particular brand of two-wheelers gave me a desire to own the same one.	3.17	.985
10	Sales promotional program such as racing, sponsorship of various programs makes me think that the brand is a famous one.	3.64	.817

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### **Factor Analysis**

The factor analysis is a statistical mechanism used for the reduction of a set of observable variables in terms of a small number of latent factors. The basic purpose of this analysis is to structure factors of variables which are independent of each other. Principal component analysis was employed for extracting the factors. The inter-operability of factors can be improved through rotation of the matrices. Orthogonal rotation varimax was run considering all the factors to be independent from all other factors. To ensure the suitability of data for factor analysis, both the KMO (Kaiser-Meyer-Olkin) and Bartlett's Test of Sphericity were employed. The KMO measure the sampling adequacy of the data and its statistics varies between 0 and 1. A value close to 1 indicates the patterns of correlation are relatively compact and hence the data is appropriate for factor analysis and good for testing. The value of KMO was found to be 0.724 which is greater than 0.5 marking the words of Cortina J. M (1993) that the value between 5 and 7 are mediocre and hence the sample is adequate and fit for testing. Bartlett's Test of Sphericity was also conducted to check the overall significance of matrices and it was found to be highly significant with  $p < 0.00$ .

**Table 3**  
**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.724	
Bartlett's Test of Sphericity	Approx. Chi-Square	328.025
	Df	45
	Sig.	0.000

The following Table 4 explains the initial and extracted communalities. Principal component analysis works on the initial assumption that all variations are common i.e. the communalities are all 1 before the extraction. The common variance in the data is presented in the extraction row where the structure meaning 62 % of the variance associated with statement 1 is common or shared variance. Likewise for each of the variables, the amount of variance can be explained by the retained factors which are represented by the communalities after the extraction.

**Table 4**  
**Communalities**

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Initial	1	1	1	1	1	1	1	1	1	1
Extraction	0.62	0.54	0.62	0.61	0.33	0.38	0.56	0.61	0.41	0.44

**Extraction Method : Principal Component Analysis**

Subsequently Table 5 summarize the total variance explained and lists the eigen values associated with each factor before the extraction, after extraction and after rotation. The initial eigen values comes out with three different columns where the first column gives the values for all the factors in decreasing order, the second column explains percentage of variance which is followed by cumulative variance in the third column i.e. factor 1 explains 27.029 percent of variance. Then the second part of the table Extraction Sum of Squared Loadings shows that 3 factors with eigen value greater than 1 are extracted indicating there are three useful factors which explain 51.646 percent of the variance. Similarly, the eigen values after rotation are displayed in the third part of the table Rotation Sum of Squared Loading. Rotation has the effect of optimizing the factor structure and it equalizes the relative importance of these three factors. Before rotation, factor 1 accounted considerably more variance (2.703) than after rotation (1.761) while the other factors 2 and 3 have increased eigen values after the rotation (1.258 and 1.204 before rotation increased to 1.745 and 1.658 after rotation).

**Table 5**  
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.703	27.029	27.03	2.703	27.03	27.029	1.761	17.61	17.614
2	1.258	12.575	39.6	1.258	12.58	39.604	1.745	17.45	35.065
3	1.204	12.042	51.65	1.204	12.04	51.646	1.658	16.58	51.646
4	0.953	9.526	61.17						
5	0.795	7.949	69.12						
6	0.752	7.518	76.64						
7	0.711	7.107	83.75						
8	0.619	6.193	89.94						
9	0.572	5.72	95.66						
10	0.434	4.343	100						

Extraction Method : *Principal Component Analysis*

The following Table 6 displayed the component matrix before rotation. Loadings of each variable into each factor are displayed in the matrix with suppressing all loading less than 0.40 from the table to make the interpretations of factors easier.

**Table 6**  
Component Matrix

	Component		
	1	2	3
S8	.658		
S6	.588		
S7	.567	.460	

S9	.530		
S4	.523	-.513	
S5	.488		
S3	.528	-.568	
S10		.519	
S1	.400		.683
S2	.503		.523

**Extraction Method :** *Principal Component Analysis, 3 components extracted*

Subsequently Table 7 explains the rotated component matrix which is the final step in the analysis. In this matrix, all factors loadings less than 0.40 are not displayed. Rotation solves the problem of variables with high loadings on more than one factor in the matrix which is observed in the previous component matrix.

**Table 7**  
**Rotated Component Matrix**

Statement	Component		
	Popularity	Brand Choice	Product Attributes
Ads done by my favorite celebrity endorsed me to buy this particular brand of two-wheelers.	.769		
I prefer to buy two-wheelers whose brand is popular among the youths in Aizawl.	.778		
Road shows performed by a particular brand gave me a desire to own the same one.	.591		
Ads that clearly depict the body design of two-wheelers persuade me to own the same one.		.729	
Brand image which is built by ads influence me to go for this particular brand of two-wheelers.		.702	
Sales promotional programs such as racing, sponsorship of various programs make me think that the brand is a famous one.		.660	
I make the buying decision based on the price of two-wheelers advertised.			.791
I choose the color of my two-wheelers from the advertisement I have seen from different modes.			.712

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I buy two-wheelers based on advertisement made on mileage.	.499
I make the buying decision based on the power CC of two-wheelers advertised.	.454

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**Extraction Method :** *Principal Component Analysis*

**Rotation Method :** *Varimax with Kaiser Normalization, Rotation converged in 5 iterations*

From the above Table 7, it can be observed that the factor analysis of 10 statements suggest that three factors were chosen on the basis of eigen value of more than 1. The first factor can be called popularity as the highest loading relates to celebrity endorsement, popularity and road shows. The second factor brand choice exhibit loadings for three variables such as body design, brand image and sales promotion. According to Chadha (2011) brand name is the second most important factors influencing the brand preferences, thus the finding supports the extant literature. The third factor is known as product attributes which is exhibited by the factor loadings of price, color, mileage and power cc. The findings also support the extant literature (chadha,2011; Patole, 2013; Yuvaraju&Rao, 2014). Hence among the college youth, popularity has been considered to be the most important factors influencing their buying behavior for two-wheelers because the youth are following latest trends and used their ride as a fashion statement. Brand choice and product attributes are also found to have influences upon the college youth buying behavior for two-wheelers.

### **Conclusion**

Basically this study tried to analyse the important factors which may influences the buying of two-wheelers in order to increase our current knowledge of the consumer behavior. The knowledge of consumer behavior helps the marketers to understand how a consumer perceive, reacts and responds to the specific products and how they were influenced by the environment that lead them to make the buying decision. Today, India stands as a nation with a population of 1.21 billion (Census: 2011). Out of which the youth population comprises of two-third of the total population of the country. Youth are found to be highly influenced by the latest trend in the market. Two-wheelers have become a necessity in a part of their life and it is being used as fashion statement by the youth. The main results of the study specified that Popularity of the brand plays an important role in buying the two-wheelers. Youth prefers to buy two-wheelers whose brand is well known by others. Popularity of the brands are expected to be formed by celebrity endorse advertisement and road shows where the brands are exposed to the target customers. However, brand choice and product attributes should also be look into it by the manufacturers since all of these factors play a significant role in influencing the buying behavior of two-wheelers users among the college youth in Aizawl.

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# Guidelines for Authors

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