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## Exploring the Factors affecting Work Life Balance – A Study on Select Women IT Professionals

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### Abstract

*In a country like India men are the breadwinners and women's role is generally restricted to look after domestic responsibilities. But now, the past scenario has been tremendously changing with the entry of women into paid economic activities with an intention to earn financial independence and to create their own identity in the society. Women plays different roles in different age groups as a sweet daughter, naughty and lovable sister, soft and humble wife, responsible daughter-in law, caring mother etc. On professional front she has to be dynamic, innovative, active, and energetic and focused towards career and organizational aspirations. Women sometimes feel difficulty in performing these two roles as the two are completely different and the anxiety of doing justification to one role may affect the other. The challenging demands, downsizing, advanced technology, demanding job pressures, focus on career advancement, pressure from boss and competition makes an employee spend more energy and time towards their office and career due to which women experience an imbalance in personal life. It is not an easy task to juggle with the pressing needs of both career and personal life. IT Sector experiences severe competition from the local and foreign markets. To overcome the competition and sustain in the market corporate companies are putting much pressure on its employees which is the major reason for work life imbalance. But as the human resources are the real assets for the entities, some strategies have to be adopted to achieve work life balance and enhance productivity. In the present study the researcher's tries to find out the opinions of select IT employees on the work life imbalance and offer some suggestions which help the women employees in attaining a happy and stress free work and family life.*

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**Keywords:** work life balance, work life imbalance, social support, role conflicts, pressing needs, flexi work hours & time management.

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## **Introduction:**

Work and family represent two of the most central roles of an adult life. Therefore, work-family relations have been identified as a priority area of research with direct links with both policies and practice (Gutek, Searle & Klepa, 1991; Grzywacz & Marks, 2000). The ability to balance work and family life is related with work and non-work demands, with the availability of resources to deal with this balance and with the flexibility of these two areas of life. Research, in recent years, has suggested that work-family relations may be moderated by factors associated to “family friendly” workplaces as well as strategies used by individuals to cope with work and non-work demands. The most frequently used concept to describe the interface between work and family is work-family conflict or negative spillover. In fact, work-family literature has been dominated by the role strain perspective. This perspective assumes that the demands from different and separate domains compete with each other in terms of time, physical energy, and psychological resources (Greenhaus & Beutell, 1985). In this line of reasoning, spillover literature often focus on negative work-to-family spillover, such as the transfer of bad moods, low energy and fatigue from the work environment to the family (work-to-family spillover) or, in turn, examines negative family-to-work spillover, where family problems interfere with work performance (Frone, Russel & Cooper, 1992; Frone, Yardley & Markel, 1997). However, spillover is not necessarily a negative phenomenon.

'Working women, even while holding very responsible posts, continue to be over-conscious of their duties and obligations at home towards their husband, children and family members' (Kapur, Promilla (1970), Kapur Promilla (1973), Mahajan, Amarjit

(1996), Srivastava, Vinita (1972), Joshi, Rama J (1973), Kaul, Beena (1973). Simultaneously she has a variety of roles at home as a daughter, sister, wife, mother, daughter-in-law and sister-in-law. Married women always have major responsibilities towards their spouse, children, in-laws and dependents. “A women employee finds it difficult to do justice to the two roles at the same time. An attempt to play one of the roles with perfection leads to an inadvertent sacrifice of the other” (Abdul Gani & Roshan Ara, 2010). She can't compromise any of her relationships. She gives equal preference to all the responsibilities. Most of the teachers responded that relationships are like glass if once broken cannot be assembled again. They face many challenges at work place. An issue or conflict at work place shows impact on her domestic responsibilities. “Employment pressures in the domain and care for the children, elderly and other dependents care in the family are often highly demanding and invariably incompatible with each other” (S.S. Rao, Aiswarya Ramasundaram, 2011).

A growing body of studies is focusing on the positive relationships between paid work and family life, challenging the assumption that these roles are irreconcilable. These studies suggest that work and family domains may enhance one another and lead to positive outcomes, especially if one domain provides resources such as social support and skills that can be used to address demands in the other domain (Sieber, 1974; Tompson & Werner, 1997). This process has been labelled as work-family facilitation (Frone, 2003). Work-family facilitation highlights the role of experiences, skills and opportunities driven or developed at workplace that enhance home life (Frone, 2003; Grzywacz & Marks, 2000; Voydanoff, 2004). Grzywacz & Marks' (2000) model of work family facilitation is

grounded on ecology theory (Bronfenbrenner, 2005), which states that facilitation occurs due to both contexts and individual characteristics. As far as context is concerned, Grzywacz & Butler (2005) found that work-family facilitation is enabled by environmental resources, more precisely by individual's work arrangements. Thus, family friendly policies and supervisor support at workplace can promote organizational resources such as time, flexibility and recognition of family needs, as well as psychological resources such as self-acceptance (Grzywacz & Butler, 2005). Therefore, in line with Hill (2005), both a general supportive organizational environment and supervisor support may increase the amount of resources available for positive spillover between work and family. Despite work-family research primary focus on contextual and environmental factors, individual differences in the way people balance work and family cannot be ignored (Parasuraman & Greenhaus, 2002). Namely, satisfaction with work performance is a key variable in the analysis of work and family relations. Work satisfaction commonly typified as an outcome of the spillover process. However, individuals who are satisfied with their professional role perceive it as meaningful for their self esteem and may, therefore, assign resources from this role to the family. Moreover, individuals satisfied with their professional role may feel positively energized and transfer more often their skills and humour in a positive way to the family role.

Family supportive organizational cultures have been associated with an increase in use of work-life balance practices. More over, employee perceptions that an organizational culture is family supportive are related to lower job stress and WFC and higher positive

spill over between work and home, as well as to higher job satisfaction and organizational commitment and lower turnover intentions. Indeed, in a study of organizations with more than 250 employees in Québec, Guérin et al. (1997) reported that the most important impact of work-life balance practices was an improvement in job satisfaction. Landauer (1997) has reported that in a survey conducted by IBM in 1992, employees in general rated work-balance practices as sixth out of 16 factors that encouraged retention compared to the highest performers who rated work-life balance practices as second. Lewis and Cooper (2005) observe, work-life balance policies are associated with offering employees the chance to work flexibly, and notions of flexible working were “originally considered within equal opportunities programmes”, with a particular focus on working mothers. Swan and Cooper (2005) and Worrall and Cooper (1999) observe that the best way of reducing sickness levels among working parents in managerial and professional roles would be to reduce working hours and to offer men and women more opportunities to work flexibly.

Women's wide integration in the labor market carried them more role overload, since they are expected to add their family responsibilities to their professional role. As a result, it is more difficult for them, than for men, to reconcile work and family life (Milkie & Peltola, 1999). A healthy balance between work and non-work life keeps an individual motivated and engaged. Hence, maintaining a balance between work and non-work life is crucial and matter of strategic concern to the employers as well as employees (Rupashree Baral & S. Bhargava, 2009).



### **Literature review:**

Work-life balance, in its broadest sense, is defined as a satisfactory level of involvement or 'fit' between the multiple roles in a person's life (Hudson, 2005). Work life balance not only affects the employee's personal life but also it affects the effective functioning of organizations. The support from family members, friends and organizations help employees to attain work life balance. The role of social support has consistently emerged in literature as an important factor that influences work-family balance in a positive way. Social support outside of work labeled by Marcinkus, Whelan-Berry, & Gordon (2007). 'Personal social support may come from an employee's spouse or partner, parents, siblings, children, extended family and friends'. Numerous studies have demonstrated that personal social support is positively associated with the work-family balance (Marcinkus, W.C., Whelan-Berry, K.S., & Gordon, J.R., 2007). The social support can be further conceptualized as emotional and instrumental support, (Wayne, Randel, & Stevens, 2006). Instrumental support refers to behaviors and attitudes of family members aimed at assisting day-to-day household activities, such as relieving the employee of household activities tasks or otherwise accommodating the employees work requirements (King, 1997). This allows the family members to focus his/her time and preserve energy for work; suggesting that it positively influences the individuals' functioning at work. Emotional support refers to the expression of feelings to enhance others' affect or behavior (Erickson, 1993). Emotional support contributes to positive affect that helps the individual in the work domain (Wayne et al., 2006).

The roles of work place support i.e., the support received from supervisors and co-

workers are another critical element of work-family balance (Voydanoff, 2002). Ezra & Deckman (1996) found that "organizational and supervisor understanding of family duties are positively related to satisfaction with the balance between work and family life. Work place support via an organizational approach involves the implementation of family friendly policies, which are associated with satisfaction with the work family balance."

It is observed that organizations where employees working with work-life balance policies and practices are better able to handle the work family issues. There is no one accepted definition of what constitutes a work-life balance practice, the term usually refers to one of the following: organizational support for dependent care, flexible work options, and family or personal leave (Estes & Michael, 2005). Hence the practices include flexible work hours (e.g., flextime, which permits workers to vary their start and finish times provided a certain number of hours is worked; compressed work week, in which employees work a full week's worth of hours in four days and take the fifth off), working from home (telework), sharing a full-time job between two employees (job sharing), family leave programs (e.g., parental leave, adoption leave, compassionate leave), onsite childcare, and financial and/or informational assistance with childcare and eldercare services. Work-life balance policies can assist employees achieving a balance between their work and personal commitments that is right for them (Susi, Jawaharrani, 2001).

Researchers have noted that organizational culture and supervisory support are key factors in accounting for the availability and effectiveness of work-life balance practices. "The Indian IT industry is becoming increasingly conscious of the work-life balance and have therefore devised several

initiatives that would help strike a balance in improving employee commitment, productivity and motivation,” said Rosita Rabindra, Executive Vice president and Head of HR, NIIT Technologies. She pointed out that work-life programs and policies are designed to create more flexible, responsive environments to support a productive workplace by maximizing employee work-life effectiveness. There is a significant body of evidence provided by major UK and world-wide employers such as IBM, GlaxoSmithKline, BT, Lloyds TSB and others, which show that work life balance policies and practices can bring clear benefits to their business (see The Business Case, DTI, 2001 and A Good Practice Guide, DFEE, 2000). There is a wealth of information that outlines the advantages of offering flexible and special leave arrangements to employees in terms of improving staff recruitment, reducing turn-over, absenteeism and the costs associated with all this as well as increasing employee satisfaction and productivity (Susi.S, Jawaharrani.K, 2001).

Therefore, both contextual and individual factors play a role in the work-family facilitation process. The employees experience imbalance in their work and life due to the role conflicts, employment pressures, multiple roles, domestic responsibilities, child care, nature and attitude of superior and family members, lack of social support, increased stress levels due to competition etc. This exploratory study aims to find out the opinions of Women IT employees on factors affecting work life balance. For analyzing the opinions of employees on work life imbalance, the following variables are taken in the study. They are quality of time spent, fulfilling responsibilities, lack of co-ordination, feeling of stress, economic problems, lack of social

support, demanding pressures, inability to attend social gathering and lack of time management.

#### **Objectives of the study:**

The basic objective of the present study is to identify the factors that contribute to work life imbalance. More specifically the objectives are

1. To identify the factors affecting work life balance.
2. To examine the correlation between different variables affecting work life balance
3. To evaluate the opinions on facilities that help in achieving work life balance.
4. To explore various practices that help in achieving a fair work life balance.

#### **Data and Methodology:**

The present research work is basically an empirical study and is based on primary data; certain information is collected from secondary sources also. The main source of primary data is the information collected from select respondents of IT sector. The secondary sources include data collected from the journals, magazines of related topic of research and the related websites. The study is based on a sample survey. For the purpose of survey, samples of various IT organizations have been selected based on convenience sampling technique. The final sample has come from the women employees of IT sector. About 120 samples have been identified for the purpose of survey. At the end of the survey only 100 questionnaires are usable with respect to all the items completed. Thus, finally a sample of 100 respondents has been used for the study. The researchers have collected data by making personal visits to all the respondents. At the first instance structured questionnaire has been handed over by making a request to the respondents to fill as per their convenience and the



questionnaire has been collected by the researcher personally. In addition personal discussions, discussions on phone and through mails were also held to gather some information like their opinions on factors affecting work life balance. The data collected had been analyzed by using factor analysis and inter-item correlation using principal component analysis and varimax rotation method. The different factors affecting work life balance are represented in the form of codes. They are (a) quality of time spent, (b) fulfilling responsibilities, (c) lack of co-ordination, (d) feeling of stress, (e) economic problems, (f) lack of social support, (g) demanding pressures, (h) inability to attend social gathering and (i) lack of time management. The results are presented with the help of simple tables. An attempt is also made to evaluate the opinions of employees on facilities that help in achieving work life balance. The researcher also suggested some practices to be followed by organizations to achieve work life balance. The data collected had been analyzed using ranks and scores given by the employees.

### Results & Discussions:

Table 1 depicts Inter-Item Correlation Matrix of factors affecting work life balance and the results are presented in the form of table.

**Table 1 - Correlation of factors affecting Work Life Balance**

Factors	a	b	c	d	e	f	g	H	I
Correlation a	1.000	-.326	-.101	.084	.238	.083	-.042	.034	.266
b	-.216	1.000	.030	.474	.201	-.601	.585	-.081	.351
c	-.493	.430	1.000	.331	.099	.765	.091	-.023	.040
d	.030	.430	.273	1.000	.276	.296	.391	.159	.399
e	.474	.331	.273	.542	1.000	-.386	.525	-.505	.197
f	.501	.099	.576	.542	.027	1.000	.381	-.410	.517
g	.789	.556	.026	.585	.653	-.588	1.000	-.267	.226
h	-.601	.765	.296	-.386	.027	1.000	.245	1.000	.167
I	.148	.544	.452	4.10	.407	-.329	.293	-.291	1.000

*Source: Questionnaire*

The different factors affecting work life balance are (a) quality of time spent, (b) fulfilling responsibilities, (c) lack of co-ordination, (d) feeling of stress, (e) economic problems, (f) lack of social support, (g) demanding pressures, (h) inability to attend social gathering and (i) lack of time management.

### Quality of time spent:

Quality time is the real time that people spend on different activities of life with real interest. Home and work are the two different worlds for working women (Abdul Gani & Roshen ara, 2010). Life became so mechanical that people don't have adequate time to spend with their family members as they spend their maximum time in organizations. Women play a vital role in the family. Previously women are reserved for the house hold activities. But these days the trend is changing, crossing all traditional barriers and prejudices women today work in large numbers may be manufacturing, service and consumer industries, defence may be blue-collar or white-collar (B.Usha and K.T.Geetha, 2010). The factor quality of time spent is positively correlated with 'lack of time management'. The supply of time is very limited, while the demand for it is limitless. According to North (2004), Time management is the organization of tasks or events by first estimating how much time a task will take to be completed, when it must be completed, and then adjusting events that would interfere with its completion so that completion is reached in the appropriate amount of time. An employee who is able to manage their time in the major priorities of their preference, they can lead a happy life. An employee who is unable to manage their time may fail in integrating work and personal life.

### **Fulfilling responsibilities:**

In Indian society men may be the head of the family but still women have more responsibilities that are ought to be fulfilled. Responsibilities of women include taking care of children & elders at home, cooking, educate children and inculcate good manners in them, managing maids, keep home clean and hygienic, help her husband and children by keeping their clothes ready, shop for household goods, attend functions and gatherings in time, frequent visits to school to know about child academic progress, etc., All the above are the responsibilities that a woman have at her home apart from these she has to fulfill responsibilities at office like be in time to office, meet the targets, 24\*7 should work(work in shifts), balance work and home, etc.,. The factor fulfilling responsibilities has a positive correlation with 'demanding pressures'. As the women take on the role of working professional in addition to their traditional role of the homemaker, they are under great pressure to balance their work and personal lives (Reimara Valk, Vasanthi Srinivasan, 2011). Mainly women in the field of IT, generally come across hardships regarding meeting deadlines of the projects allotted and with the shift work hours. As they need to work till late nights, they face pressure from their in-laws and spouse. They may not concentrate on work as their mind always thinks about their kids at home. Hence interference of professional work in fulfilling family responsibilities leads to work life imbalance.

### **Lack of co-ordination:**

Co-ordination of working women with their family members and office colleagues plays a crucial role in maintaining healthy work-life balance. "There are contradictory role expectations from working women while they are at work and at home. On professional front

women is expected to be sweet, soft, sensitive, adaptable, gentle, unassertive and domesticated" (Misra, 1998). In her personal life she have to be a faithful wife, a sacrificing mother, obedient and respectful daughter in-law and an efficient and highly placed career woman. To balance these contradictory expectations she has to get coordination from her family members and co-workers. The factor lack of co-ordination has a positive correlation with 'lack of social support'. Most of the women as a part of discussion revealed that they fail to get co-ordination from her spouse and in-laws when they get an opportunity to work in other states or foreign nations. Few women lamented that they face discrimination from opposite gender and fail to receive coordination from their boss and colleagues. Even though women are equally contributing with men they are denied to reach higher positions. Hence glass ceiling effect is also a constraint in work life balance.

### **Feeling of stress:**

Stress is a major problem because of which people become ill physically and mentally, many relationships break and organizations loose competent work force. Right from the time of birth till the last breathe drawn, an individual is invariably expose to various stressful situations. Stress is a cursing factor which suffers a majority of software employees and especially women. When a housewife enters into gainful employment outside home she not only finds a change in her role and status within the family and outside it, but she also finds herself under increasing pressure to reconcile the dual burden of the two roles at her home and her workplace because each is a fulltime job (Abdul Gani & Roshan Ara, 2010). The factor feeling of stress has a positive correlation with 'fulfilling responsibilities'. Stress is observed when one has too many responsibilities to

perform. As women are expected to fulfil all the responsibilities at home and also at work they get too stressed in balancing both work and life.

### **Economic problems:**

Traditionally a woman's role is at home and her moment is restricted to home activities only. But with the economic necessities, women are forced to come out of their home, seeking employment opportunities (B.Usha & K.T.Geetha, 2010). These days the cost of living is increasing to such an extent that both the couples have to work to have financial soundness. Women working in software companies face the problem of being paid less than the male employees who are at the same cadre and perform similar operations. Today the scenario has a bit changed but still the economic problems faced by women have not vanished from the society. Even today women give their earnings to their husbands and take the amount that they need to spend on personal or family needs from them. Even though women are economical in planning their budget, the decisions regarding the financial issues or investments, women are given less preference. Financial independence for women in India is still a question mark. The factor economic problems have a positive correlation with 'feeling of stress'. Many respondents revealed that due to intensive stress employees may not concentrate on economic issues perfectly. Few women explored that they feel stress because their partners spend more expenditure on unnecessary things. Because of stress women employees are facing health problems like thyroid, skin diseases, psychological disturbances, infertility, premature deliveries or miscarriage, diabetic, cardiac diseases, asthma, obesity, accelerated aging, etc., All these health problems need proper attention and timely medication which

involves peace of money and financial adequacy. Hence employees due to stress fail to balance work and family life.

### **Lack of social support:**

Lack of social support is one of the things that hinders in all round development of women in India. Social support is the perception and actuality that one is cared for, has assistance available from other people, and that one is part of a supportive social network. These supportive resources can be emotional (e.g., nurturance), tangible (e.g., financial assistance), informational (e.g., advice), or companionship (e.g., sense of belonging) and intangible (e.g. personal advice). Social support can be measured as the perception that one has assistance available, the actual received assistance, or the degree to which a person is integrated in a social network. Support can come from many sources, such as family, friends, pets, organizations, co-workers, etc ([http://en.wikipedia.org/wiki/Social\\_support](http://en.wikipedia.org/wiki/Social_support)). The factor lack of support has a positive correlation with 'lack of co-ordination'. Women working in software companies face the problem of disapproval from society as the working hours and working culture are quite different. The support from spouse, children, in-laws, parents, friends etc are very essential to perform responsibilities in personal life perfectly. Simultaneously the support from peers, superior, subordinate and the management enable one to achieve positive results in organization. But due to mechanical life style, attitude mismatch, pollution, westernization, irregular food habits, failure to spend quality time and inability to manage unusual situations people fail to co-ordinate with others and lose physical and moral support from close intimates. Hence women without social support fail to integrate work and personal life.

### **Demanding Pressures:**

The cumulative demands of work and family make them feel pressure and lead to distortions. It is said that workplace has become the single greatest source of stress. The reactions of individuals will vary according to the nature of the pressures and the extent to which the person is directly or indirectly involved. Problems outside of work can also contribute to pressure on employees. Employee will be under pressure when they had got lot to do with in short time or employer's decision on their position like dismissal, transfer etc. The factor demanding pressures has positive correlation with "quality of time spent". Pressures they are facing at the work place are the basic reason for most of the respondents in not spending quality time. Respondents stated that due to pressures, they are less concentrated on the work as well as their personal life. An employee spending quality time in personal life and work can solve their pressures efficiently. Hence the failure of employees to spend quality time increases pressure in them, which is an indication of work life imbalance.

### **Inability to attend social gathering:**

Social gatherings are associations of people who meet purposefully or intentionally to share their happiness, joy, enthusiasm, success or failure with each other. Social gatherings within organization or outside the organization with family members, friends and co-workers create an opportunity for employees to know one another and strengthen their relationships. Women are more inclined in managing relation among family members and friends. The factor social gathering has positive correlation with "fulfilling responsibilities". The dual responsibilities of the home and work call for multiple roles, which put great strain on working women (Gupta & Sruti, 1982). These

contradictory expectations cause the most confusion, tension and create many other problems for women. A woman employee finds it difficult to do justice to the two roles at the same time. An attempt to play one of the roles with perfection leads to an inadvertent sacrifice of the other (Abdul Gani & Roshan Ara, 2010). Most of the women hesitate to attend gatherings because of their domestic and career responsibilities. Women thinks spouse, children and parents are their world and love to spend time with them by ignoring to attend gatherings. Social gatherings enable one to associate with each other by sharing their feelings, ideas and issues and feel relief from their routine and stressful life. But as the women employees are unable to attend the gatherings they will not find any kind of entertainment in their life and in fact feel bored.

### **Lack of time management:**

Time management is the basic elements for an employee to successfully lead their life. Family, finance (profession), fitness, friends, faculty (acquiring knowledge & wisdom) and faith are the different aspects of life where employees have to be intellectual in prioritising the availability of time on all these without coinciding one with other. Time management enables to one to balance there personal and professional life. The availability of time is inelastic and one should allocate it properly in order to spend it qualitatively. Particularly in the software company's employees have to be very careful in managing time when doing projects to accomplish the given task within the due date. For the women software employee's this will be the basic challenge to manage time at work and personal life. The factor lack of time management has positive correlation with 'feeling of stress'. Most of the women software employees stated that due to the stress they



experience at work place they are unable to maintain time properly for the activities they are assigned for. Employees are required to attend an email or a voice mail after hours or during weekend which is not comfortable for the women employees all the time. Married respondents have to manage both the work and home which make them feel more stressed. There are some companies where women are also engaged in night shifts which make them feel discomfort and feel more stressed. Pressure from the superiors, long or late work hours, congested life, deadlines, pressurised atmosphere and nature of work are the few reasons for their intensive stress and lack of time management. Hence employees without time management may not balance work and family life.

Table 2 shows Communalities for each variable. The Communalities for each variable were assessed to determine the amount of variance accounted for by the variable to be included in the factor rotations and the results are shown in table 2.

**Table -2 Communalities of factors affecting Work Life Balance**

Factors	Raw		Rescaled	
	Initial	Extraction	Initial	Extraction
a	.456	.406	1.000	.892
b	.488	.398	1.000	.816
c	2.092	1.849	1.000	.884
d	1.269	1.068	1.000	.841
e	.622	.431	1.000	.692
f	.379	.338	1.000	.891
g	1.878	1.767	1.000	.941
h	1.871	1.731	1.000	.925
i	1.249	1.139	1.000	.912

Source: Questionnaire

All the variables had a value greater than 0.50 signifying substantial portions of the variance in the variables are accounted by the factors.

Table 3 projects Total variance explained among the variables taken for analysis.

**Table 3 Total Variance Explained of factors affecting Work Life Balance**

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 %
Raw	a	6.498	37.293	37.293	6.498	37.293	37.293	5.318	30.518	30.518
	b	3.707	21.278	58.571	3.707	21.278	58.571	3.216	18.457	48.975
	c	2.193	12.588	71.159	2.193	12.588	71.159	3.061	17.569	66.544
	d	1.579	9.062	80.221	1.579	9.062	80.221	1.540	8.837	75.382
	e	1.265	7.262	87.483	1.265	7.262	87.483	2.108	12.101	87.483
Rescaled	a	6.498	37.293	37.293	4.948	32.988	32.988	3.902	26.013	26.013
	b	3.707	21.278	58.571	3.392	22.613	55.601	3.140	20.932	46.945
	c	2.193	12.588	71.159	1.683	11.222	66.823	2.443	16.288	63.233
	d	1.579	9.062	80.221	1.685	11.233	78.056	1.738	11.588	74.821
	e	1.265	7.262	87.483	1.068	7.117	85.173	1.553	10.352	85.173

Source: Questionnaire

The principal component analysis in table 3 revealed the presence of five components with Eigen values exceeding criterion of 1, explaining 26.013, 20.932, 16.288, 11.588 and 10.352 of the variance respectively and in combination explained 85.173. The five components which recorded Eigen values above 1 are 'spend quality time, fulfilling responsibilities, lack of co-ordination, feeling of stress and economic problems'. These factors have been identified as primary factors which in general influence the work life balance of women employees working in IT sector.

Table 4 presents rotated component matrix of factors affecting work life balance of women employees working in IT sector.

**Table 4 Rotated Component Matrix of factors affecting Work Life Balance**

Factors	Raw					Rescaled				
	Component					Component				
	1	2	3	4	5	1	2	3	4	5
a	.060	.044	-.134	.616	.059	.088	.066	-.198	.912	.088
b	.601	.153	.105	-.036	.041	.860	.219	.150	-.052	.059
c	.060	.094	.799	-.102	-.262	-.733	.065	.552	-.070	-.181
d	.000	.196	1.012	.058	.031	.000	.174	.899	.052	.027
e	.422	.372	.091	.085	-.314	.535	.471	.115	.108	-.398
f	.173	.472	.148	.190	-.164	.282	.767	.240	.309	-.266
g	.162	.390	.005	.452	-.247	.848	.285	.003	.330	-.181
h	.169	.320	.439	.210	.658	-.855	.234	.321	.154	.515
i	.300	.544	-.772	.381	-.107	.268	.487	-.691	.341	-.095

Source: Questionnaire

Table 4 depicts the following results. For the purpose of analysis, a cut-off of 0.50 is used to identify high loadings. It is clear from the analysis that factor 1 comprises three variables namely fulfilling responsibilities, economic problems and demanding pressures. Factor 2 comprises of one variable namely lack of social support. Factor 3 comprises of two variables namely lack of co-ordination and feeling of stress. Factor 4 comprises of one variable namely spend quality time. On the other hand factor 5 comprises of one variable namely inability to attend social gathering. These factors are clubbed together and termed as *Self esteem, Social support, Stress, Quality time and Social interaction*. Therefore we can conclude that the above five major factors significantly influencing the work life balance of women working in IT sector.

An attempt is also made to know the opinions of employees on the facilities that help in achieving work life balance. The results are presented in table 5.

#### Table 5 Opinions of Employees on Facilities Help in Achieving Work Life Balance

Factors	SA	A	N	DA	SD	Total Weighted score	Rank
Support from Colleagues & Boss at work	40 (200)	48 (192)	4 (12)	NS	8 (8)	412	2
Flexible working hours	52 (260)	30 (120)	14 (42)	4 (8)	NS	430	1
Different Kinds of Leaves & Holidays	4 (20)	12 (48)	36 (108)	24 (48)	24 (24)	248	4
Being able to bring Children to work	4 (20)	4 (16)	36 (108)	36 (72)	20 (20)	236	5
Parenting and Pregnancy Policies	NS	6 (24)	30 (90)	22 (44)	42 (42)	200	6
Latest technology & software	4 (20)	14 (56)	36 (108)	26 (52)	20 (20)	256	3
Time-off for family engagement/events	4 (20)	4 (16)	4 (12)	16 (32)	72 (72)	152	7

Source: Questionnaire

The analysis reveals that 'flexible working hours' and 'Support from colleagues & boss at work' are given 1<sup>st</sup> and 2<sup>nd</sup> ranks respectively by the employees. Family friendly policies and supervisor support at workplace can promote organizational resources such as time, flexibility and recognition of family needs, as well as psychological resources such as self-acceptance (Grzywacz & Butler, 2005). Therefore, in line with Hill (2005), both a general supportive organizational environment and supervisor support may increase the amount of resources available for positive spill over between work and family. 'Latest technology & software' is given 3<sup>rd</sup> rank. Technology enables people to work any where. Cell phones and lap tabs make people especially women feel comfortable working from home. Most of the women take break in career and restrict to house and house hold activities due to domestic responsibilities, pregnancy, children and their education, taking care of dependents, negative attitude of spouse and in-laws etc. But the scenario can be changed with the help latest technology and software as women can concentrate on their personal and professional life. The factor 'Different kinds of leaves & holidays' is given 4<sup>th</sup> rank. Family leave programs like parental

leave, adoption leave, compassionate leave etc and holidays enable women to spend quality time in personal life. 'Being able to bring children to work' was ranked 5<sup>th</sup> by the employees. Women strongly feel that home and children are the prime responsibilities (Srivastava, 1972; Ramanamma, 1969), and she continues to be predominantly governed by this role since that was also the social norm (B.Usha & K.T.Geetha, 2010). In order to engage talented work force the organizations are offering on site child care facility, so that employees can concentrate on their work. 'Parenting and pregnancy policies' & 'Time-off for family engagement/events' are 6<sup>th</sup> & 7<sup>th</sup> rank by the employees. As a part of discussions few women revealed that they feel that their life is complete only if they give birth to a baby. Pregnancy is a precious time for every woman. Hence parenting and pregnancy policies enable women to enjoy her motherhood. Women feel most responsible to attend or organize functions; events and gatherings where they can be meet their parents, siblings, friends, co-workers etc. The events are also a platform to exhibit their talents and get identity of what woman can do for her family, entities and the society. An attempt is also made to know the opinions of employees on Work Life Balance Practices and the results are presented in table 6.

**Table 6 Opinions of Employees on Work Life Balance Practices**

Factors	SA	A	N	DA	SD	Total Weighted score	Rank
Social support & motivation	44 (220)	38 (152)	10 (30)	4 (8)	4 (4)	414	1
Time management	28 (140)	38 (152)	26 (78)	4 (8)	4 (4)	312	2
Change management	10 (50)	12 (48)	32 (96)	6 (12)	40 (40)	246	4
Stress management	18 (90)	12 (48)	24 (72)	6 (12)	40 (40)	262	3

*Source: Questionnaire*

Table 6 reveals the opinions of IT women employees on work life balance practices which help them in balancing work and non-work roles. The factor 'Social support' was given first rank by the employees. The support from spouse, children, in-laws and friends in personal life and co-workers, superiors and subordinates in the work place help them to concentrate on work and family responsibilities actively. 'Time management' is assigned second rank. According to North (2004), "time management is the organization of tasks or events by first estimating how much time a task will take to be completed, when it must be completed, and then adjusting events that would interfere with its completion so that completion is reached in the appropriate amount of time". Time management helps people to allocate their time between priorities and non-priorities. 'Stress management' & 'change management' are given 3<sup>rd</sup> and 4<sup>th</sup> ranks by the employees. Employment pressures in the domain and care for the children, elderly and other dependents in the family domains are often highly demanding and invariably incompatible with each other (S.S. Rao, Aiswarya Ramasundaram, 2011). The employees working in IT sector experience stress from their profession due to deadlines for projects, tremendous pressure, continuous sitting jobs before computer terminals etc. According to Flannery (1995), very stressful experiences can lead to psychological trauma, which, in turn, can lead to post traumatic stress disorder. Stress not only causes health disorders but also hamper relationships in employee's personal and professional lives. Traditionally women role is restricted to domestic responsibilities, but crossing all traditional barriers and prejudices women now in great number are participating in paid economic activities. Organizations consist of people

with different cultures, beliefs, values, attitudes etc. Women must cope up with the diversified work force and update her knowledge and wisdom in order to contribute superior performance to the organization. Change management programs enable women to adjust with work culture. Hence there is immense need on the part of organizations to organize and implement work life balance practices to improve to attain organizational and individual effectiveness.

### **Conclusion:**

Work life imbalance is a result of mismatch between personal and professional life. Work and family life are very important for women. Nuclear family structure, dual earners, unbalanced diet, pollution, unhealthy relationships, lack of social support from family members, increased family responsibilities and improper time management are some the factors which contribute to the imbalance for women at home. Globalization, increased competition, threatening deadlines and schedules, high expectations of boss, updating technology, lack of support from superior and peers, lack of friendly work environment and poor industrial relations are some of the factors which make an employee experience imbalance at work place. Women failing to integrate the multiple responsibilities at home and office lead to work life imbalance. In order to achieve organizational and personal effectiveness, balance between work and non-work life is more important. The present exploratory study identified the factors affecting work life balance and examined the opinions of women employees working in select IT sector on these factors.

From the perceptions of select women employees the researcher found that most of them face imbalance due to the factors like

*Self esteem, Social support, Stress, Quality time and Social interaction.* These factors are significantly influencing the work life balance of women employees.

Further the study identified some facilities which help in achieving work life balance and also offered some suggestions on Work Life Balance Practices like '*Social support, Time management, Stress Management and Change management*'. The researcher strongly feels that the above practices enable women employees working in IT sector in attaining a happy and stress free work and family life.

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## **Examining The Role of Participation and Citizenship Behaviour in Patient Satisfaction**

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### **Abstract**

**Introduction:** Consumers have increasingly been acknowledged in the recent marketing literature as having active participation in the value co creation process (Lusch and Vargo 2006; Prahalad and Ramaswamy 2004; Vargo and Lusch 2004). This role of consumers have gained more importance due to various social changes particularly to those related to internet, social networking site, awareness, availability of choice etc. It is this active participation that has lead to value creation. Ind and Coates (2013) suggests that organisations are shifting from the definer of the value to the participative process where customer and organisation work together to develop/generate a meaningful relationship in the market which establishes the concept of co-creation in the market. To describe shift of market from good dominant logic to service dominant logic, the most popular term co-creation has been used widely by the researchers and marketers. Co-creation is a form of marketing or business strategy that emphasizes the generation and ongoing realization of mutual firm-customer value. It views markets as forums for firms and active customers to share combine and renew each other's resources and capabilities to create value through new forms of interaction, service and learning mechanisms.

**Keywords:** Co-creation, customer participation, citizenship behaviour, customer satisfaction

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**Purpose of the study:** The purpose of this study is to measure the nature and extent of co-creation behaviour among patient. The present study examines the level of co-creation and its impact on patient's satisfaction.

**Research Methodology:** This study uses Yi & Gong (2012) scale for collecting data regarding co-creation behaviour and its dimensions. The data was collected from 103

patients who were suffering from various chronic /lifestyle diseases and getting their treatment from private clinics.

**Data analysis and results:** The analysis of paper reflects that co-creation behaviour is prevalent among the patients and not only participation but the citizenship behaviour also affects the co-creation behaviour of patients.

## **Introduction**

The involvement of customer as co-creator in new service innovation is increasingly being suggested as a successful strategy to improve the success rate of new services. In this context, Prahalad & Ramaswamy (2000) stated that “customers are fundamentally changing the dynamics of market place”. Vargo & Lusch (2004) claimed that customers are always co-creators of value. In the present competitive and ever-changing business environment, maintaining the customer has never been more difficult and at the same time imperative. The main attention of managers is the customer because by achieving satisfaction and loyalty of the customer the market value of the firm is achieved (Abbas et.al, 2011). Prahalad & Ramaswamy (2004) argue that “we are on the cusp of a profound shift in the way value is created – from a firm-centric process to a co-creation process jointly by the customer and the company.” According to them, the way value emerges depends upon the interactions between the company and the customer.

Indian Healthcare Industry was estimated at USD 79 Billion in 2012 and is expected to grow at USD 280 Billion by 2020. India is fast becoming a preferred destination for medical tourism and is a popular option for the patients across the globe. While the Indian healthcare sector is poised for growth in the next decade, it is still plagued by various issues and challenges. Urban India is now on the threshold of becoming the disease capital of the world and is facing an increased incidence of lifestyle related diseases such as cardiovascular diseases, diabetes, cancer, COPD etc. This represents a serious challenge that the Indian healthcare system needs to address and calls for health reform. Globally it is believed that patient engagement is at the core of health reform. It is the co-creation

process that leads to value creation. In health care sector co-creation helps in reducing the health cost, improve the health care outcomes, increase the loyalty and satisfaction of patients towards the doctor (Ouschan, Sweeney & Johnson 2006). In this regard, Ennew & Binks (1999) state that in healthcare if essential information is not provided to healthcare professionals, they will not be able to meet the particular patient needs and are not in position to provide satisfactory service to their patient which results in low quality of co-creation behaviour. According to Yi & Gong (2012), co-creation behaviour comprises of two dimensions - customer participation (CP) and customer citizenship behaviour (CCB). He further segregates CP and CCB into four elements respectively. The customer participation behaviour includes these four elements: information seeking, information sharing, responsible behaviour, and personal interaction, whereas the customer citizenship behaviour includes feedback, advocacy, helping, and tolerance.

Customer participation behaviour is in-role behaviour whereas customer citizenship behaviour is extra-role (voluntary) behaviour, which shows that for value co-creation customer participation behaviour is one of the important and necessary behaviour whereas customer citizenship behaviour is not necessary for the success of value co-creation, it provides some extraordinary value to the firm (Groth, 2005; Yi, Natarajan, & Gong, 2011).

The study defines co-creation behaviour and the various dimensions that stimulate co-creation behaviour. It highlights the importance of co-creation behaviour in healthcare and investigates the readiness of Indian patients towards co-creation. Thus the aim of this paper is to measure the nature and extent of co-creation behaviour in health care.



## Literature Review

### Customer participation (CP)

Customer participation is defined as “the degree to which the customer is involved in producing and delivering the service” (Dabholkar, 1990). Olsen & Mai (2012), suggested that in the marketing literature with the rise of the concept of service dominant logic, the major, important and the current topic of discussion is customer participation (Vargo & Lusch, 2004), which shows customer as co-creators of value. According to Kellogg, Youngdahl, & Bowen (1997), customer want satisfaction from services, for this they have to seek information to satisfy their needs. According to Yi & Gong (2012) information seeking is important to customers because it reduces doubts and hesitation which helps customer to manage their co-creation behaviour. It also helps customers to understand their position as value co-creators and is incorporated into the value co-creation process.

The success of the co-creation depends upon the information provided by customer (Lengnick-Hall, 1996) so information sharing is an important aspect in value co-creation. In healthcare sector if patient does not give necessary information to the doctor than the service provided by the doctor will not meet the expectation of the patient. Thus, it is important that patients provide the accurate information about their health problem to the doctor so as to get better service. If customers are unsuccessful in providing accurate information, the provider cannot provide the service properly which decreases the superiority of value co-creation.

For successful value co-creation personal interaction and responsible behavior are also important. Personal interaction refers to interpersonal relations between customers and providers, which are necessary key for

value co-creation (Ennew & Binks, 1999). For the interaction between customer and provider Kelley et al. (1990) use the term customer functional quality, which includes interactional aspects such as politeness, courtesy, friendliness and respect. Responsible behaviour occurs when customers behave as partial employee and perform their duties properly (Ennew & Binks, 1999).

### Customer citizenship behaviour (CB)

Extra-role behaviour of customer citizenship behaviour from the customers of the organisations has recently gathered the attention of researchers and managers (Abbas et.al, 2011; Bove et al., 2008; Yi & Gong, 2008). In organisations employees are one of the important resources but in the present era, not only the employees but customers are also one of the important resources of the organisation. Customer in many aspects act as employee, they indirectly or directly take part in many activities of the organisation (Halbesleben & Buckley, 2004). Groth (2005) defines customer *citizenship behaviour* as “*the voluntary behaviour which is not essential to successful production or to introduction of services but totally useful to the whole service Organisation*”. Customer citizenship behaviour can be explained by the following terms : customer's voluntarily performance (Bailey, Gremler & McCullough 2001; Bettencourt 1997), organisational citizen in customers' section (Lengnick-Hall et al 2000), lateral product of production process (Gruen, Summers & Acito 2000), and extra-role behaviours of customer (Aherene et al 2005). As per the Yi & Gong (2012) the various elements of CCB are feedback, advocacy, helping, and tolerance.

Feedback is basically the useful or not useful information that customer gives to the provider, which is very helpful for provider

and organisation in improving their service if they use it properly (Groth, Mertens, & Murphy, 2004). Customer behaviour is the mirror of the services provided by the organisation, as it is he who informs or gives suggestion regarding service provided (Bettencourt, 1997).

Advocacy means to advocate or counsel the service, by the organisation or the employee or the provider to others such as friends or relatives (Groth et al., 2004). Advocacy also refers to positive word of mouth, which designates the loyalty of customer towards the organisation and ultimately helps the organisation to increase the status of the organisation, product and services (Bettencourt, 1997) thereby resulting in value co-creation.

Helping is one of the behaviour of the customer, in which customers help the other customer by giving advice or suggestion to him (Yi & Gong 2012).

Tolerance as a word refers to patience in which the customer must have open-mind in delivering the services in the case of shortage or delaying (Lengnick-Hall et al., 2000). This results in setting of first hypothesis:

H1: Customer Participation and Customer Citizenship Behaviour are the dimensions of Co-Creative Behaviour.

### **Satisfaction**

According to Bendapudi & Leone (2003) the customer is satisfied only when the services meet the need of the participating customer. Ennew & Binks (1999) suggest that quality of services and satisfaction results from positive participation of customer which also affects the future purchase and quality of services. Customer satisfaction arises when customers compare their perception of a service performance with their expectations. It is a psychological concept arising from an individual's comparison of perceived product

performance (Barsky 1992), if product performance does not match the expectation of customer he is not satisfied. Thus to enhance customer satisfaction, co-creation has been devised as another strategy for improving the value of services. The interest in measuring customer satisfaction is reflected in its ability to build up customer loyalty. Thus, service provider's most important agenda is to keep customer satisfied which can be achieved through co-creation of services. Thus the second hypothesis is:

H2: Co-Creative Behaviour has a positive relationship with customer satisfaction.

### **Objective And Hypothesis**

The purpose of this study is to measure the nature and extent of co-creation behaviour among patient.

H1: Customer Participation and Customer Citizenship Behaviour are the dimensions of Co-Creative Behaviour.

H2: Co-Creative Behaviour has a positive relationship with customer satisfaction.

### **Research Methodology**

The present study examines the level of co-creation and its impact on patients' satisfaction towards health practitioners. The study uses Yi & Gong (2012) scale for collecting data regarding co-creation behaviour dimensions which are customer participation (CP) and customer citizenship behaviour (CCB). In the scale, CP consisted of four elements i.e., information seeking (4 items), information sharing (4 items), responsible behaviour (4 items) and personal interaction (5 items). CCB comprised of feedback (3 items), advocacy (3 items), helping (4 items) and tolerance (3 items).

Further, patient satisfaction was measured through 8 items which were generated through review of literature and its linkages with co-creation behaviour were also studied. Thus, in all 38 item scale was used to

investigate the co-creation behaviour of patient. The study uses 7-point Likert scale in the questionnaire ranging from 1 “completely disagree” through 7 “completely agree”, with a midpoint labeled 4 “neither agree nor disagree.

The data was collected from 120 patients who were suffering from various chronic /lifestyle diseases and getting their treatment from private clinics in Jammu city. Out of 120 forms, 103 completely filled schedules were obtained from the patients. Among the respondents, 56 were males and 47 were females and about 38.8 % of respondents lie in the age group between 40 to 50 years (Table 1). About 46.6 % respondents have their income between 10000 to 50000.

For determining co-creation behaviour among patient in health care, data reduction technique of factor analysis has been used. This multivariate technique has been used in order to systematically arrange the data into small manageable sets. For the purpose of describing the underlying factor structure, 'the Eigen value-one criterion' has been used to determine the number of components to be extracted for further analysis (Stewart 1981). The test of appropriateness of a factor analysis is KMO (Kaiser Meyer Olkin) measure of sampling adequacy where high values (i.e. between 0.5 and 1.00) indicate its relevance for further analysis. The KMO values of CP and CCB were 0.692 and 0.674 (Table 2 and 3 respectively).

### **Findings And Discussion**

In order to study the co-creation behaviour, factor analysis was conducted. The factors which emerged after factor analysis are discussed as under-

A. Customer participation: Studies on co-creation during consumption show that customer satisfaction with a firm differs depending on whether a customer is given the

opportunity to participate in the production or not (Bendapudi & Leone, 2003).

Following four factors were extracted from CP:

- Information Seeking (ISK): The factor consisted of 4 variables, out of which “information for best doctor” has been accorded highest mean score of (4.49) (Table 2). While the least mean score has been given to “the information on the services offered” (3.98) though with more variability in patient judgments (1.33 and 1.47) respectively. This reflects that patients before approaching the doctor do seek information regarding the services offered by him. The highest factor loading (0.847) (Table 2) of patient seeking information for the doctor and their services reflects its contribution towards the factor.
- Responsible Behaviour (RB): Out of the 4 variables of this factor, patients have somewhat agreed with doctors suggestion (5.97) as well as with 'expected behaviour' (5.38) with inconsistency in their opinion (0.76 and 1.02). The overall mean of this factor has been 5.69 which reflect customers are satisfied with their responsible behaviour towards doctor for generating CP.
- Information sharing (ISH): This factor consisted of 3 variables namely 'clearly explained the expectation, proper information about health problem', 'necessary information for performing doctor's duty'. The analysis reflected that 'necessary information provided to the doctor' has received highest mean score (6.48) with homogeneity in the responses of the patients (0.57), as compared to 'expectation from the doctor' (5.96).
- Personal interaction (PI): It was observed that out of 3 variables of this factor patient

have highly agreed with the item that “they were not rude to the doctor” (6.15) and have somewhat agreed with “the courteous behaviour” of the patient (5.65). This shows that patients are friendly to the doctor. Earlier, the patient did not interact much with the doctor, but these days due to increased awareness regarding health services, patients have become demanding and thus interact with doctors so as to co-create value.

**B. Customer citizenship behaviour (CCB):** Customer citizenship behaviour enables customers to communicate problems actively, to put up with or be patient with a service failure, and to willingly adapt to situations beyond their control, which keeps the firm running smoothly. The mean score of CCB by patient came out to be 5.04 (Table 3). Following three factors were extracted by factor analysis from CCB.

- **Helping:** Under this factor the highest mean score of (5.17) was accorded to “patient assistances to other patients” which reflects their helping behaviour whereas patients have somewhat agreed with “teaching other patients” (4.90) though they reflect high level of heterogeneity among the respondents (1.00 and 1.12) (Table 3) respectively. The factor loading (0.771) (Table 3) of helping other patients if they have problems indicates that this aspect has contributed more towards helping.
- **Advocacy:** Advocacy also refers to word-of-mouth comprises of 3 variables viz., 'positive things about treatment', 'recommended doctor to others', 'encourage friends and relatives for this doctor'. The analysis shows the highest mean score (5.77) for 'the positive things of doctor treatment' whereas lowest score is (5.55) to 'encourage friends and

relatives for this doctor' which conclude that many doctors have positive effect on their patient.

- **Tolerance:** Tolerance word reflects the capability of a person to wait, out of 3 variables many patients were willing to put up with service failure of the doctor (4.47) while they were somewhat satisfied with mistake during service delivering (4.26), though having high disparity in their responses (1.28 and 1.47) respectively.

From the above it is concluded that not only the participation but the citizenship behaviour also affect the satisfaction of patients. Regression has also been applied to establish the relationship between co-creation behavior and satisfaction level of the patients. In regression the independent variable is co-creation and dependent variable is satisfaction.

From the Table No 5 and 6 respectively, there is very less age and gender wise differences, by using one way ANNOVA and independent T-test.

### **Limitations and Implications**

The study has certain limitations. This scope of the study is restricted to Jammu city while further work can be done with a broader sample size. The study focuses on value co-creation behaviour from the patient's point of view. However, value creation is a collaborative work between doctors and patients. Further research could examine value co-creation behaviour from the doctor's point of view. The study also suggests certain implications. The customer co-creation behaviour scale gives support to doctors in selecting patients to smooth the progress of co-creation behaviour. Doctors can also use this scale for market segmentation and customer profiling for maximizing customer value co-creation behaviour by gaining the



useful information. Co-creation behaviour is also helpful in assessing and rewarding the performance of patients as they will be more willing to engage in value co-creation behaviour.

### **Conclusion**

The prevalent trend these days among the firms has been to maintain database of the customers so as to meet their future needs. However many firms have started empowering their customers to become co creators of value. Research till date has focused on co-creation during the consumption act and on value arising during consumer experience (Vargo and Lusch 2008).

From the above deliberations it can be inferred that CP and CCB contribute towards co-creation of value in health care thus resulting in the acceptance of first hypothesis. Infact, it was observed that co-creation behaviour of patient depends upon patient's participation as well as customer citizenship behaviour i.e. how participative the patients are in their interaction with the doctor and how well they exhibit the citizenship behaviour. The present study reflects that the co-creation behaviour among the patients is 5.29 which imply higher satisfaction towards co-creating value. In fact, it reflects the readiness of the patients to co- create value. This is mainly due to high level of participative role played by the patients (6.24) (Table.2) in their treatment process and also the high level of citizenship behaviour (5.04) (Table.3) exhibited by them which makes patients- doctor interaction a worthwhile experience.

The study reflects that information sharing plays an important role in ensuring patients participation followed by personal interaction and responsible behaviour. However, information seeking came out to be a weak

factor as compared to others in patient participation which reflects that patients do not seek much information regarding the doctor's professional capabilities and still are affected by the strong word of mouth.

Further, the study depicts a high level of citizenship behaviour exhibited by the patients which leads to creating value in treatment of health problem. The highest contributory factor in CCB has been advocacy followed by helping and tolerance. This reflects that patients are generally less tolerant towards the mistakes made by their doctors in their treatment. However they are ready to put up with delays in service delivery though are not tolerant towards service failure. Majority of the patients still believe that “doctor knows the best” and are thus willing to put up with services if not delivered as expected.

The sole criteria of patients remain to get a possible cure of their health problem from the best doctors as per their information. But recently it has been observed that the experience of getting the treatment is also playing an important role in the mind of the patients while evaluating the services offered by the doctors. Patients tend to evaluate pre and post treatment care offered by the doctors before committing themselves to the treatment. The result of regression (Table.4) reflects that co-creative behaviour has a positive relationship with customer satisfaction which leads to accepting of the second hypothesis.

Table 1 : Demographic Profile		
	FREQUENCY	PERCENTAGE
<b>GENDER</b>	<b>103</b>	
Male	56	54.3
Female	47	45.6
<b>AGE</b>		
Up to 40	31	30.09
40 to 50	40	38.8
50 to 60	19	18.4
Above 60	13	12.6
<b>QULIFICATION</b>		
Matriculation	19	18.4
Graduate	53	51.4
Post graduate	22	21.3
Others	9	8.7
<b>OCCUPATION</b>		
Service	36	34.9
Professional	16	15.5
Business	17	16.5
Others	34	33.009
<b>INCOME PER ANNUM</b>		
Up to 100000	32	31.06
100000-500000	48	46.6
500000-1000000	23	22.3
Above 1000000	0	

Table 2 : Customer Participation (CP)				
FACTOR	VARIABLES	MEAN (S.D.)	FACTOR LOADING	CROANBACH ALPHA
F1 INFORMATION SEEKING	I have searched for information on where the best Doctor could be found	4.49 (1.32)	0.763	0.834
	I have searched for information on where this service is located	4.35 (1.28)	0.830	
	I have asked others for information on what service these Doctor offers	3.98 (1.46)	0.847	
	I have paid attention to how others behave to use service of this Doctor well	4.44 (1.32)	0.546	
F2 RESPONSIBLE BEHAVIOUR	I followed the Doctor's directives or suggestion.	5.97 (0.75)	0.815	0.807
	I fulfilled all responsibilities regarding to my treatment.	5.79 (0.93)	0.666	
	I adequately completed all the expected behaviors.	5.38 (1.02)	0.757	
	I performed all the tasks that are required.	5.64 (0.94)	0.752	
F3 INFORMATION SHARING	I clearly explained what I wanted the Doctor to do.	5.96 (1.06)	0.734	0.591
	I gave the Doctor proper information about health problem.	6.26 (0.60)	0.769	
	I provided necessary information so that the Doctor could perform his or her duties.	6.48 (0.57)	0.741	
F4 PERSONAL INTERACTION	I was courteous to the Doctor	5.65 (0.75)	0.762	0.402
	I didn't act rudely to the Doctor.	6.15 (0.78)	0.578	
	I was polite to the Doctor..	5.97 (0.79)	0.739	
KMO OF CP	692			
TOTAL MEAN OF CP		5.54		

S.D- standard deviation

Table 3 : CUSTOMER CITIZENSHIP BEHAVIOUR (CCB)				
FACTOR	VARIABLES	MEAN (S.D.)	FACTOR LOADING	CROANBACH ALPHA
<b>F1 HELPING</b>	I teach other patients to use the service correctly.	4.90 (1.12)	0.677	<b>0.823</b>
	I assist other patients if they need my help.	5.17 (1.00)	0.693	
	I help other patients if they seem to have problems.	5.14 (0.94)	0.771	
	I give advice to other patient.	5.04 (1.06)	0.629	
<b>F2 ADVOCACY</b>	I said positive things about Doctor and his treatment to others.	5.77 (0.79)	0.689	<b>0.789</b>
	I recommended the Doctor to others.	5.63 (0.88)	0.658	
	I encouraged friends and relatives to use the service of the Doctor.	5.55 (0.91)	0.694	
<b>F3 TOLERANCE</b>	If the Doctor makes a mistake during service delivery, I would be willing to be patient.	4.26 (1.46)	0.596	<b>0.613</b>
	If I have to wait longer than I normally expected to receive the service,	4.46 (1.37)	0.732	
	I would be willing to adapt.			
	If service is not delivered as expected, I would be willing to put up with it.	4.47 (1.28)	0.647	
<b>KMO OF CC</b>	<b>.674</b>			
<b>BTOTAL MEAN OF CCB</b>		<b>5.04</b>		

S.D- standard deviation

**Table 4 Regression  
Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.388 <sup>a</sup>	.150	.142	.55631	.150	17.853	1	101	.000

a. Predictors: (Constant), co-creation average(coavg)

b. Dependent Variable: satisfaction average( savg)

#### ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1) Regression	5.525	1	5.525	17.853	.000 <sup>a</sup>
Residual	31.258	101	.309		
Total	36.783	102			

a. Predictors: (Constant), coavg

b. Dependent Variable: savg

#### Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1) (Constant)	2.704	.736		3.673	.000
Coavg	.665	.157	.388	4.225	.000

a. Dependent Variable: savg

**Table 5: Age wise differences (using one way ANNOVA)**

Averages	Up to 40 N=31	40-50 N=40	50-60 N=19	Above 60 N=13	F-value
Customer participation (CP)	5.68 (0.412)	5.64 (0.414)	5.13 (0.46)	5.51 (0.31)	8.276 (p<0.05)
Co-creation (CO)	4.70 (0.34)	4.71 (0.31)	4.47 (0.35)	4.67 (0.40)	2.422 (p>0.05)
Customer citizenship behaviour (CCB)	3.72 (0.46)	3.78 (0.37)	3.81 (0.43)	3.83 (0.58)	0.264 3.196
Satisfaction (S)	5.54 (0.61)	5.85 (0.61)	5.98 (0.52)	6.0 (0.45)	

**Table 6: Gender wise differences (using independent t-test)**

Averages	Male N=56	Female N=47	t-test
Customer participation (CP)	5.49 (0.437)	5.60 (0.47)	-1.243* (p>0.05)
Customer citizenship behaviour (CCB)	3.75 (0.412)	3.80 (0.474)	-0.596* (p>0.05)
Co-creation (CO)	4.62 (0.34)	4.70 (0.35)	-1.191* (p>0.05)
Satisfaction (S)	5.76 (0.47)	5.85 (0.72)	-0.809* (p>0.05)

\*not significant at 5% level of significance

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## Will Pfizer be able to regain the top position in Big Pharma

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### Abstract

*The patent expiry of Pfizer's Lipitor, the world's top selling drug, in the US market, was one among the major reasons to impact Pfizer and the global rankings of Big Pharma. Pfizer, which had been consistently ranked as number one among the largest pharmaceutical companies world-wide by sales for many years, lost its crown to Novartis.*

*By a series of mergers & acquisitions and other measures, Pfizer had been trying to make-up for the revenue lost due to patent expiries of its numerous products. The current case focuses on the challenges faced by Pfizer in maintaining the leadership position in the global pharmaceutical market. This case provides an overview of the dynamic nature of the global pharmaceutical industry & builds a platform to discuss strategies for Pfizer to regain its numero uno position in Big Pharma & roadmap for its future growth.*

**Keywords:** Blockbuster, Big Pharma, Patent, Generics, Therapeutic class, Mergers & Acquisitions.

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### Introduction

On the cool winter morning of 30 November, 2013, it seemed business as usual outside the Chairman's office of Pfizer's Global Head Quarters at New York city in the US. Inside, it was quite the opposite. Lipitor, the popular cholesterol lowering drug, had lost its patent in the US market the same day two years ago. Before patent expiry, Lipitor had peak sales of about \$13 billion and used to bring in nearly \$11 billion a year, about a sixth of Pfizer's revenue. There were no suitable replacements for revenue generation of Lipitor's scale in place even after two years. Ian, the Chairman of the Board and Chief Executive Officer of Pfizer, was a worried man. This was one of the most challenging moments for Pfizer, the

company where he began his career as an operational auditor in 1978.

### Background

Ian started thinking about what Pfizer needed to do to regain the coveted top position. To understand the background of the situation, he started reading various research reports, news articles, analyst blogs, etc. & preparing notes. According to a research study, it is tough time for Big Pharma. It stated that the entire industry is facing an unprecedented crisis in terms of sales growth, profitability and discovery of new drugs for many years now. With increasing rate of patent expiry of several blockbusters and reduced spending on research, top multinational drug companies are going to face a rather gloomy future in the

years to come. The study of financial performance of top 15 international pharmaceutical companies during 2013 has revealed these prospects somewhat clearly. The study shows that net sales of these 15 companies from the pharmaceutical segment including vaccines and generics during 2013, remained flat at \$431 billion as against \$430 billion reported in the previous year. The operating profit of 15 companies increased only by 2.1 per cent to \$122.4 billion from \$119.9 billion in the previous year. During 2013, Swiss based Novartis International AG has emerged as the top company in pharmaceutical sales with \$53.85 billion as compared to its sales of \$52.93 billion in the previous year registering a growth of 1.7 per cent. Pfizer remained at the second position with a 6.5 per cent decline in pharmaceuticals sales at \$47.87 billion from \$51.21 billion in the previous year.

Ian realized that it was a wake-up call for Big Pharma. He felt that the sector was heading towards a scenario where its profit margins will be substantially lower than current levels. This dramatic situation required Big Pharma executives like Ian to envision responses that will go well beyond simply tinkering with the cost base or falling back on mergers and acquisitions. A bolder, more radical approach to Big Pharma's operating model must become a realistic planning scenario.

Ian concluded that while an immediate corrective response in the short term may not be the answer, a purposeful strategy that provides for this change in the medium and longer term is required.

### **Competitive Landscape**

Ian started reflecting on how Pfizer had grown over the years and how Pfizer's arch-rival, Novartis, had always been trying to play catch-up and was now ranked number one based on global sales (Refer Exhibit 1).

Ian started reading news articles about Novartis. According to it, the Swiss pharmaceutical giant Novartis and British drug maker GlaxoSmithKline have entered into a multibillion dollar swap deal in which the former would buy the cancer drug business (oncology unit) of the latter for as much as \$16 billion and sell its vaccine division, excluding its influenza vaccines, to Glaxo for \$7.1 billion in exchange. Upon completion of the deal, Novartis would be able to generate one-fifth (roughly \$10.9 billion) of its annual revenues from the combined cancer drug business which would include Novartis's Excedrin pain reliever and Maalox antacid, and GlaxoSmithKline's Aquafresh toothpaste and Nicorette chewing gum.

Meanwhile, Novartis will also sell its animal health division to the U.S. pharmaceutical company Eli Lilly for \$5.4 billion.

According to another news article, Novartis had overtaken Pfizer in pharmaceutical sales during 2012 and jumped to first rank from its second place in the previous year. Pfizer's pharmaceutical sales declined with loss of patent exclusivity for five products namely Lipitor, Xalatan, Aromasin, Geodan and Detrol during the last couple of years in the US, Europe and other markets.

Ian noted that among the major reasons why Novartis has overtaken Pfizer are due to its robust generics operations where generic drug versions are marketed by Sandoz, its business division. In comparison, Greenstone, the subsidiary by which Pfizer marketed its generics, was ranked much lower than Sandoz among the top generic global drug companies.

### **Pfizer's rise to the top**

Ian went back in time to understand how Pfizer had worked its way up the global ranking list by way of internal growth and development, acquisitions, the licensing of



products from competitors (Pfizer generously borrowed research from its competitors and released variants of these drugs. While all companies participated in this process of molecular manipulation, whereby a slight variance is produced in a given molecule to develop greater potency and decreased side effects in a drug, Pfizer was particularly adept at developing these drugs and aggressively seizing a share of the market), research & development, and by way of comprehensive marketing efforts.

Ian recollected how Pfizer's successful marketing efforts impinged on other companies in the pharma sector. Pfizer's modern market campaigns broke tradition in the pharma industry. Pfizer's Terramycin campaign turned the company, a relative newcomer to the industry, into the largest advertiser in the American Medical Association's journal. Some companies did not appreciate Pfizer's hard sell tactics and attacked Pfizer. However, after Pfizer's campaign proved to be highly effective, other companies took a similar lead. It manifested itself in the "arms race" of escalating numbers of sales representatives, particularly in the US, the huge pre-launch marketing budgets when companies try to make as big a splash as possible and aggressive TV advertising campaigns in which drugs are seemingly being treated and presented to the consumer audience as any other consumer product.

Ian noted that back in the 1980s, Merck led the field. It built a great product line from the combination of in-house R&D (Mevacor, Zocor, Vasotec) with astute licensing deals (Fosamax, Pepcid, Cozaar) and rode these and other compounds to become the world's most admired company. The next big mover was Pfizer. With compounds that were referred to internally as the "Big 5" (Zoloft, Zithromax, Norvasc, Cardura and Dilflucan), it

dramatically climbed the leader board. Pfizer quickly followed up on these discoveries with Viagra, then did great co-promotional deals for Lipitor and later Celebrex. To ensure its leadership, Pfizer grabbed all of Lipitor first with its hostile take-over of Warner-Lambert, followed by the purchase of Pharmacia.

Ian smiled when he realized how both Pfizer, the company, and his career graph reached their peaks since the 1980s.

### **Challenges faced by Pfizer**

After pondering over the background, competitive landscape & how Pfizer rose to the top, Ian focused on the challenges being faced by the company. Ian identified the following key challenges:-

#### **1) Impact of cheaper generic versions**

Pfizer, best known for the once top-selling cholesterol drug, Lipitor, is losing sales at a rapid pace. Lipitor has already generated more than \$140 billion in cumulative sales for the company, but generic introductions are impacting Pfizer on a big scale. Ian noted that in 2014, Pfizer will lose patent protection on its blockbuster Celebrex for arthritis, which will reduce its revenue even further.

#### **2) Setback in AstraZeneca deal**

While pondering over the acquisition of AstraZeneca by Pfizer, Ian began to realize how re-creating the world's largest drug company was never going to be easy. But, he didn't expect it would be this hard. After months of speculation, mounting opposition and multiple offers, Pfizer looked set to give up its attempt to take over AstraZeneca, Britain's second largest drug maker, which would have created the biggest drug company in the world & placed Pfizer back on top of the global rankings.

Had the acquisition deal been successful, post-merger, Pfizer would have been in a much stronger position in the biologics industry with meningitis vaccine Prevnar and

rheumatoid arthritis drug Enbrel. Ian knew that biologics tend to be more resistant to generic competition due to the complexity in the drug structure. But the deal did not work out, as planned.

### 3) Impact of R&D cost-cutting measures

By continuously cutting costs on R&D expenses, Ian realized that such measures will adversely impact the pipeline and future growth of Pfizer. During the past decades, Pfizer had created a database of intellectual insights into drug development that, Ian felt, should help it bring new medicines to market. Ian looked at a Standard & Poor's (S&P) research report which stated that by 2014, all of Pfizer's Phase III & later molecules will account for about \$6 billion in sales. Ian wondered if Pfizer was doing the right thing by following a strategy based on M&A instead of internal R&D since according to S&P, Pfizer has sales potential in some of its late-stage molecules. These sales will help soften the blow of patent expiries.

### 4) Impact of recession on Europe

Ian remembered that in Europe, as opposed to in the US, the patent expirations do not have devastating impact on company sales after loss of exclusivity (LOE) because the branded product's retention of sales is much higher than in the US. But, due to policy changes in the last five years, this pattern had changed substantially leading to significant sales reduction for off-patent brands as well as steeper erosion of new patent expiries. As a result, Pfizer along with few other companies' performance contracted by almost 6% in 2012 (Refer Exhibit 2)

Besides these key challenges, Ian identified an increasingly stringent FDA, stronger managed-care negotiating power, patent-exclusivity periods of several blockbusters nearing the end, new drug development to fill revenue gaps and litigation risks (Ian recalled

Merck's high settlement costs involving Vioxx) as the other challenges currently being faced by Pfizer.

To overcome such a challenging situation, Ian observed that most pharmaceutical companies have implemented restructuring program which may help to change the shape of their business in long term. Mergers & acquisition, divestment of unrelated business or products, tie-ups and focus on new markets may give some relief in coming years. The alliance revenue, third party manufacturing sales and focus on emerging markets may also assist well to push profitability. He wondered if Pfizer should follow suite or adopt an altogether different strategy.

### **Decision to be taken**

After considering various pros & cons, Ian did not think that it was that easy for Pfizer to buy its way out of troubles. Instead, it should focus more on organic growth. He referred the forecasted growth projections of major therapeutic classes (Refer Exhibit 3) to check if Pfizer has presence in those classes. Next, Ian wanted to know that if Pfizer had presence in those classes, how significant it was in terms of market share. Then, Ian went through the factors, which according to KPMG's estimates (Refer Exhibit 4), will drive success in the industry in the future, and pondered among these factors, which ones will provide Pfizer the competitive edge in the year 2020.

To compare the business areas of Pfizer with Novartis & other close competitors, he studied the matrix of their business areas (Refer Exhibit 5). He also studied R&D productivity in terms of number of applications for new medical entities to USFDA (Refer Exhibit 6) & wondered if Pfizer was following the right strategy by under investing in R&D and focusing on cost-cutting measures for a rapid recovery of sales, which was among the reasons why the

company aimed to resort to a \$106 billion acquisition of AstraZeneca.

By now, Ian had a fair idea that in the short term, Pfizer should focus on generics and increase R&D expenses instead of cost-cutting on the R&D front. For the long term, Ian could foresee that Pfizer needed to diversify further into consumer healthcare, decrease reliance on blockbusters and increase expansion into emerging markets.

But, before taking any decisions, he wanted to consult the other members of Pfizer's board.

### **Conclusion**

Ian had called a meeting of Pfizer's board members post-lunch to finalize an action plan to be followed by Pfizer to regain the coveted top position. He had spent the first half of his day going through several analyst reports, presentations, etc to contemplate various options. Now, after lunch, as he started walking towards the board room from his office, he felt confident that a feasible strategy will come out after this meeting. As he entered the board room to take his seat, there was only one question on his mind "Will Pfizer be able to regain the top position in Big Pharma"?

### **Glossary**

**Blockbuster:** An extremely popular drug that generates annual sales of at least \$1 billion for the company that creates it. Examples of blockbuster drugs include Lipitor by Pfizer and Vioxx by Merck. Blockbuster drugs are commonly used to treat common medical problems like high cholesterol, diabetes, high blood pressure, asthma and cancer.

**Big Pharma:** It encompasses the largest players in the pharmaceutical industry, including Pfizer, Novartis, GlaxoSmithKline, Merck, AstraZeneca, etc.

**Patent:** A government license that gives the holder exclusive rights to a process, design or new invention for a designated period of time. Applications for patents are usually handled

by a government agency. The owner of a patent has the right to exclude others from making, using, offering for sale, or selling the invention for a period of 20 years from the filing of the patent application.

**Generics:** A generic drug is a pharmaceutical product, usually intended to be interchangeable with an innovator product that is manufactured without a license from the innovator company and marketed after the expiry date of the patent or other exclusive rights.

**Therapeutic class:** Therapeutic classes are a way of classifying medical drugs according to their functions. Each therapeutic class is a group of similar medications classified together because they are intended to treat the same medical conditions. Therapeutic classes are used by doctors and pharmacists when selecting appropriate treatments for patients. Commonly used therapeutic classes include analgesics, which relieve pain; antibiotics, which kill bacterial infections; and anticonvulsants, which prevent seizures.

**Biologics:** A preparation, such as a drug, a vaccine, or an antitoxin, that is synthesized from living organisms or their products and used as a diagnostic, preventive, or therapeutic agent.

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<http://www.pfizer.com>

<http://www.imshealth.com>

### Annexures

Exhibit 1: Top 10 corporations rankings based on sales at ex-manf levels (US \$)

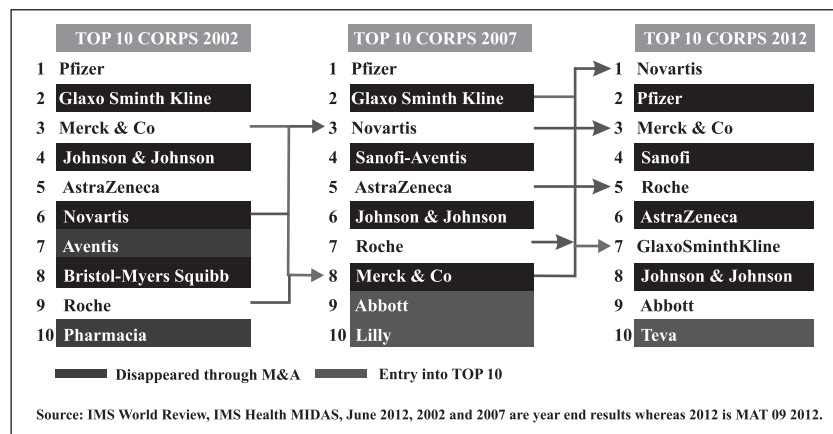
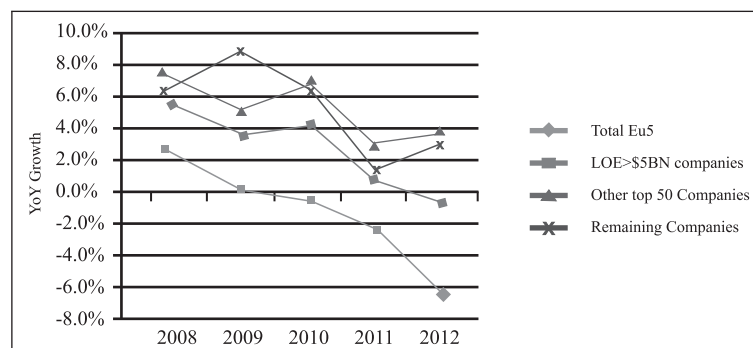
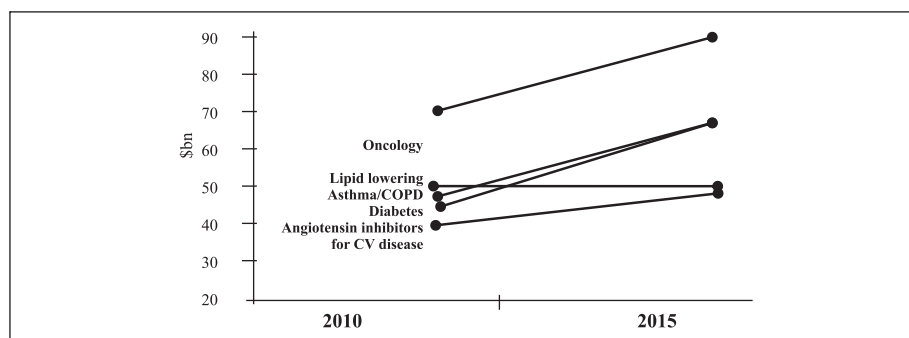


Exhibit 2: Performance of EU pharma market by company type



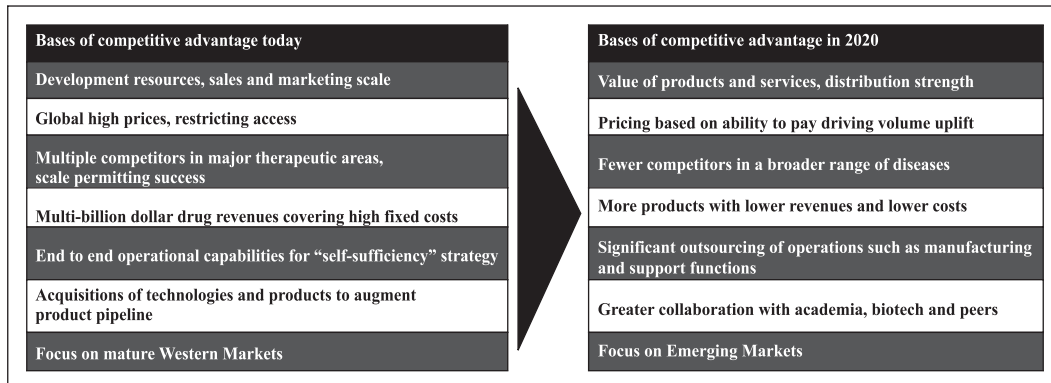
Source: [www.PharmExec.com](http://www.PharmExec.com)

Exhibit 3: Forecast Therapeutic Class Growth (2010-2015)



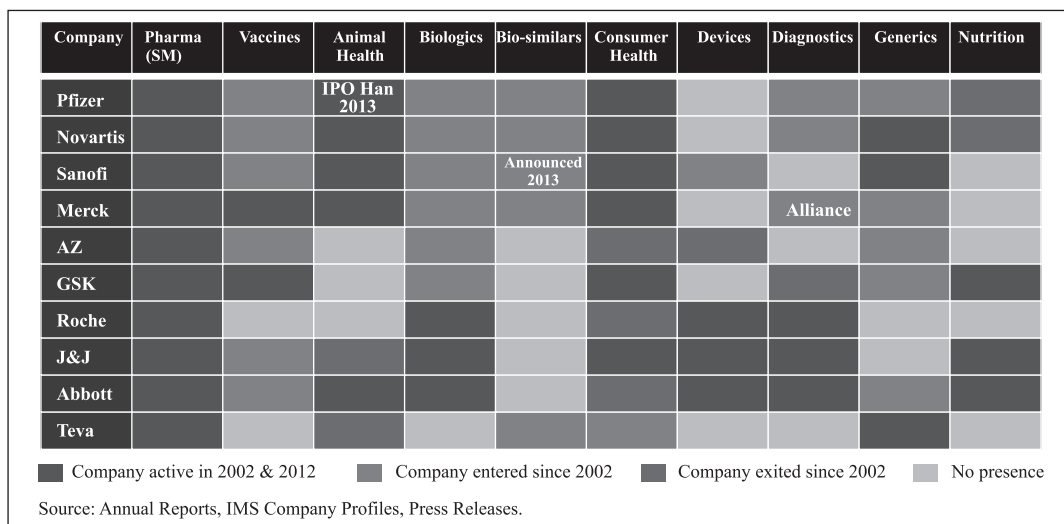
Source: IMS Health

#### Exhibit 4: Future Industrial Success Factors

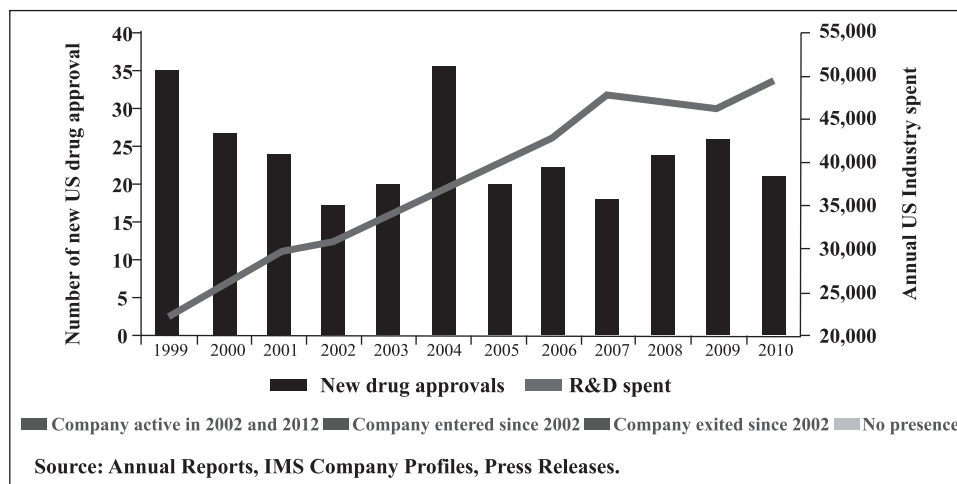


Source: KPMG estimate

#### Exhibit 5: Business Area Matrix (2002-2012)



#### Exhibit 6: New medical entity approvals and annual R&D spending (1999-2010)



Source: pHMA and FDA



## Need for Innovative Pedagogy in Management Education

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### Abstract

*Earlier Management Education was given the highest priority in professional life as well as in personal life. Also, the employee's role in the office was not analytical; thus learning was also limited. Analytical thinking and creativity were not accorded too much value. Management Education in India has not grown in an evolutionary manner. After many years of supervising MBA's projects and teaching, it has been seen that students are not getting involved in acquiring of core information. Students are not interested in gaining / understanding the practical implementation of ideas. Concepts play a crucial role in the understanding and implementation of the subject. Implementation of concepts in the industry is very significant. The industry today is demanding and wants students' active participation and interaction, which means that the classroom is not merely for transmitting information or teaching; it has become a large field of open learning. Classrooms today are no longer restricted to one-way communication.*

*This paper talks about the gap in the traditional methods of teaching and the latest methods required to survive in the industry. The aim is to study the same and design an innovative pedagogy for Management Education. In order to study the gap, students of First Year and Second year of MMS were contacted; they were asked to rate traditional methods as well as modern methods of teaching based on the quality and satisfaction. Efforts were made to get the respondents to rank the training they felt was necessary beyond fixed syllabus that would improve their chances of entry into the corporate world.*

**Key words:** Management Education, Teaching Pedagogy, Training

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### Introduction

Management Education in India has not grown in an evolutionary manner. After many years of supervising MBA's projects and teaching, it has been seen that students are not getting involved in acquisition of core

information. Students are not interested in gaining / understanding the practical implementation of ideas. Concepts play a crucial role in the understanding and implementation of the subject. The knowledge quotient of subject covered under

the university system lacks content, is repetitive and boring, resulting in poor attendance in classrooms and therefore, poor knowledge. Poor knowledge has resulted in students not being accepted by the business. Thus the demand for this course is automatically reducing.

Management education in India has limited evidence on quality. There are examples of excellence as IIM's XLRI's, FMS, etc., where scope for improvement in the quality and relevance of education and development exists. Innovations in Management Education continue to occur but it needs an intensified effort across program content and curricula, teaching and learning methods, and partnerships and interactions with business and other stakeholders.

From academic perspective, it is difficult to engage students and measure the extent to which the learning outcomes were achieved; examinations are not the right tools for measuring learning. Subjectivity, interest, modules, methods and several such factors make measurement very difficult.

Following a review of different teaching learning methodologies, activity based approached needs to be designed. Initially, it is important to study student's needs and satisfaction level with respect to present practices and then new modules need to be designed. Management Institutes are often criticized for focusing more on theory and quantitative analysis while they neglect interpersonal relationship and their importance in the world of business.

### **Innovation in Management Education**

Internationally too management education has faced challenges, Australian schools came up with innovative ideas like reviewing curricula, adopting new/advanced teaching methods & approaches, 'working on varied students' engagement program and alumni

delivery partner. Management Education needs to be based on faculty experience & improvised based on feedback of students, faculty & corporate.

Industry is placing knowledge under sharp focus; thus it has become imperative to look at management education from the market application point of view & take a strategic view to better align business education with the requirement of the market.

### **Literature Review**

Quality on higher education has proved to be a very challenging task. Quality has different meanings for different stakeholders. Both Internal and External Stakeholders are likely to have disparate or even contradictory definitions of quality within higher education. In the educational sector, the term quality has become a vague and controversial concept. It is varied and extensive, although different for different targets. Talking about various courses in higher education; each course has different elements with different permutations and combinations. Hence, each educational product is unique by itself, and it has its own value.

According to Deming (1993), education can be seen as a complete system or combination of interdependent components that work together and try to accomplish the aim of the value of the trust.

- According to Pounder (1999), quality is a very ambiguous terminology since it has many different meanings for different stakeholders.

Therefore, it is very important to define quality whereas it is difficult to measure or compare it.

Many studies have been conducted on education. Education in itself is vast. Many studies have been conducted on B School education. Research has shown that the traditional lecture based format, where

students sit passively as notes are getting distributed and the lecturer talks has dominated in higher education institutions up until relatively recently.

- As noted in Johnson, Johnson & Smith (1998) (cited in Ahlfeldt, Mehta & Sellonow, 2005, p.52), students are more passive if instructor provides all the materials as in the old paradigm. They talk about new paradigm in which active engagement of students with the material is of great importance.
- Chickering & Gamson (1987, p.78) cited in Bonwell & Eison (1991) that students listening skills need to be worked on. According to them, *'students must do more than just listen. They must read write discuss, or be engaged in solving problems'*
- Bonwell & Eison (1991, p.83) go on and succinctly define active learning as *'instructional activities involving students in doing things and thinking about what they are doing.'*
- Fallows & Ahmet (1999, p.34) assert that *'learning is most effective when student involvement, participation and interaction is maximised.'*
- McGrath & MacEwan (2011, p.23) say that students become more involved in the learning process through acts of doing in activity based education. According to them, this approach is more centered on passive act of knowing than in traditional.

Thus, the system consists of several teaching inputs, teaching materials, teaching transformation processes, result outputs & job placements.

### Problem Statement

Many researchers have studied different areas related to Education. The importance of performance analysis i.e., Importance Satisfaction approach has still not been studied. The aim is to study this gap and to develop a module that can be implemented on

students to measure their learning. Once the learning and teaching approach have been decided upon, the next area of research could be to find a way of establishing the success and feasibility of the module

### Objectives

- To study the need for change in teaching learning practices
- To study the students' preference about training beyond syllabus.
- To study the relationship between importance and satisfaction in Modern Teaching Methods

### Hypothesis

#### 5.1 1<sup>st</sup> set of hypothesis

**H<sub>0</sub>:** There is a significant correlation between Specialization and need for training beyond syllabus.

**H<sub>1</sub>:** There is no correlation between Specialization and need for training beyond syllabus.

#### 5.2 2<sup>nd</sup> set of hypothesis

**H<sub>0</sub>:** There is a significant correlation between Importance and Satisfaction level of Advance Teaching Methods.

**H<sub>1</sub>:** There is no correlation between Importance and Satisfaction level of Advance Teaching Methods.

### Research Methodology

The researcher contacted the respondents personally as well through different online networks with a well-prepared sequentially arranged questionnaire. The questionnaire was divided into two parts. Part one was respondent's profile and Part two was the main survey.

### Primary Data

Primary data was collected randomly through the structured questionnaire in Mumbai; Navi Mumbai & Thane District using convenience based random sampling. This sampling method is the least expensive and least time consuming of all sampling techniques. The

data was collected from a questionnaire that was administered face – to – face to students.

### Sample Size

The study was limited to those participants who willingly elected to complete the instruments in their entirety. There were a total of 45 respondents.

### Sample Design

The researcher relied upon convenience based random sampling technique, considering the research methodology and research type as per guidelines. A caution was exercised during the study that the respondents who did not show an inclination to be a part of the study were not covered. An attempt was made to maximize homogeneity between participants; a requirement of the sample was that all participants were enrolled on the Management degree program.

### Secondary Data

The secondary information or data was collected from published sources such as journals, magazines, newspapers, government reports, internet and other sources.

### Statistical Analysis

Efficient and effective data analysis is the result of effective data preparation. This was found to be very crucial between the completion of the field work and the statistical processing of the collected data. Data preparation involved transferring the questionnaire into an electronic format which allowed and facilitated subsequent data processing. Data sheet was prepared directly at Statistical Program for Social Sciences (SPSS) software for further analysis. Code was assigned to each response for data entry and data record. Transcribed data sheet was prepared for data analysis. On the basis of data sheet, tables and graphs were prepared for the analysis.

### Limitations

- Time constraint
- Mumbai University
- Only students were approached.
- Industrialist and academicians' research was restricted.

### Data Analysis

#### 1<sup>st</sup> Set of Hypothesis: Relationship between Specialization and need for training beyond the syllabus.

Initially, the respondents were asked whether they felt the need of any training beyond syllabus for placements, which should be provided by the college.

If yes, then they were asked to judge each method separately based on the importance they feel that it needs to be adopted.

**Table 1: Descriptive Statistics Specialization & Need for Training beyond the syllabus**

#### Descriptive Statistics

	Specialization	Beyond the syllabus are you looking for extra training in placement point of view?
Valid	45	45
N	0	0
Missing	2.36	1.04
Mean	1.282	.208
Std. Deviation	1.643	.043
Variance	5	1
Range		

**Table 2: Chi Square Test Test Statistics**

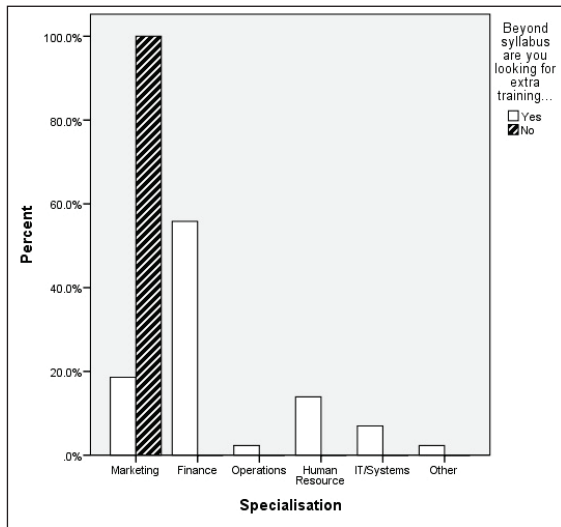
	Specialization	Beyond the syllabus are you looking for extra training in placement point of view?
Chi.Square	51.400*	37.356 <sup>b</sup>
df	5	1
Asymp.Sig.	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell



frequency is 7.5.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 22.5.



**Figure 1: Specialization & Need for Training beyond syllabus Analysis:**

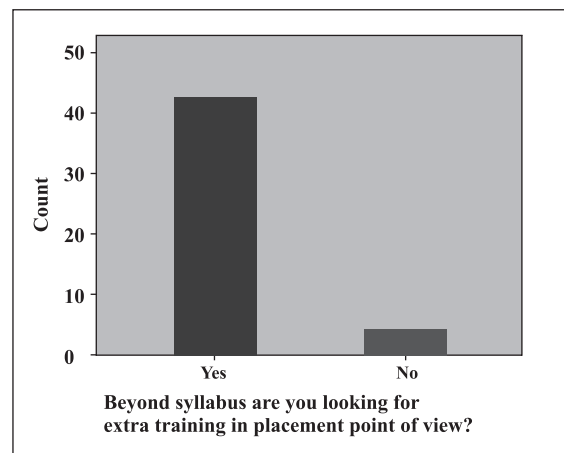
Training beyond syllabus plays an imperative role especially during placement. There are maximum students who enter Masters in Management or higher education courses without any work experience or immediately after graduation. For the same reason, training must be given to the students. Training should be provided on Group Discussions, Mock Interviews, Personality Development, etc. Academicians think the value of the training is beyond syllabus. The point is - what do students think? Their judgement is critical. As per the study only marketing specialised students think they do not need the training beyond the syllabus, whereas, all students from all other specialisations feel the training beyond syllabus is a must for this era.

In this downturn of the economy, job search has become a challenge for anyone for any position, but for the marketing stream, jobs are easily available. So the students from the marketing field need not struggle to hunt for a

job or even change their work. At the same time, for all other specialisations, the vacancies are less and also reducing day by day.

Students' attitude and commitment towards the program needs to be considered. Casual attitude towards the program, not being serious, no commitment, etc. also leads them to understand that they are more knowledgeable than anyone else, betraying the fact. Such students think they are correct in all approaches and can do better and need no training. The students in other specialisation besides marketing think that there is a need for training beyond syllabus, and it must be given. Some marketing students also feel the need for the same.

With the above analysis, it has been observed that there is a strong relation between specialization and need for training beyond the syllabus by students. Hence, Null Hypothesis gets accepted.



**Figure 2: Need for Training beyond syllabus** The overall acceptance and urge for training were analysed. It was observed that maximum students need training that goes beyond the syllabus. The next step was to understand the training that needs to be provided. The students were asked to rank twelve different areas for which the training could be provided.



**Table 3: Rank for Different Training Methods**

	Range	Mean	Std. Deviation	Variance	Rank
[Mock Group Discussions]	8	2.91	2.636	6.946	4
[Mock Interviews]	11	3.29	2.905	8.437	9
[Current Affairs]	10	3.53	2.777	7.709	6
[Personality Development]	9	2.98	2.321	5.386	1
[Body Language]	10	3.22	2.531	6.404	2
[Stress Management]	9	3.18	2.631	6.922	3
[Training - Subject Matter]	11	3.33	2.868	8.227	7
[Positive Thinking]	10	3.04	2.876	8.271	8
[Book Review]	11	4.18	3.017	9.104	10
[Emotional Intelligence]	10	3.64	2.681	7.189	5
[Communication Skills]	11	3.29	3.167	10.028	11
[Resume Writing]	11	3.82	3.557	12.649	12

Mean, Standard Deviation, Variance and Rank of different training methods as per students' preferences are listed above in the table.

Personality Development was ranked 1<sup>st</sup>. Students felt that development of personality was very important as it counted for a lot in the industry. Unfortunately their concept of personality seemed to be stuck with height, body structure, clothing etc. which forms a small part of personality development. What is heartening is that they realise that a good personality is important. When they were told about other aspects of personality development they were keen to be trained in them.

Body Language was rated 2<sup>nd</sup> in importance. The importance of body language cannot be emphasised less. Many times the teachers observe in class that the most brilliant students or the student with the most potential

has the worst body language and since during the interview they get very little time to portray themselves they end up with a poor impression and do not get selected.

Stress Management was rated 3<sup>rd</sup>. Industry demand a lot for its workers. The demand on times and the changing business scenario is full of stress. Our education system is evolving in a way where it emphasises on passing over least possible stress to the students. This has resulted in students not being able to take stress at all. When faced to stress they break down thus stress management has to be trained at management schools so that the students form a better workforce. Hence, a training program needs to be designed for managing stress, since stress is an inevitable and integral part of corporate life.

Other aspects that were considered as important were Resume Writing, Communication and Book Review. Reading among youngsters is very poor; reading beyond syllabus is ever poorer. Youngsters have developed the habit of adopting shortcuts in studies and in all aspects of life. The linking of concepts with analysis and then practical implementation is completely absent, this could be contributed to poor reading habits. Teachers can help to cultivate this habit by avoiding providing notes, accepting assignments copied from Internet, Presentation worked a day prior.

The importance of writing an effective Resume is not well emphasised because there are several online developers as well as consultancy who do the job on paying some fees. But a self written personalised CV has a lot of importance which the students do not realise and understand thus they do not give enough importance of CV writing training.

## 2<sup>nd</sup> Set of Hypothesis: Relationship between Importance and Satisfaction Level of Advance Teaching Methods

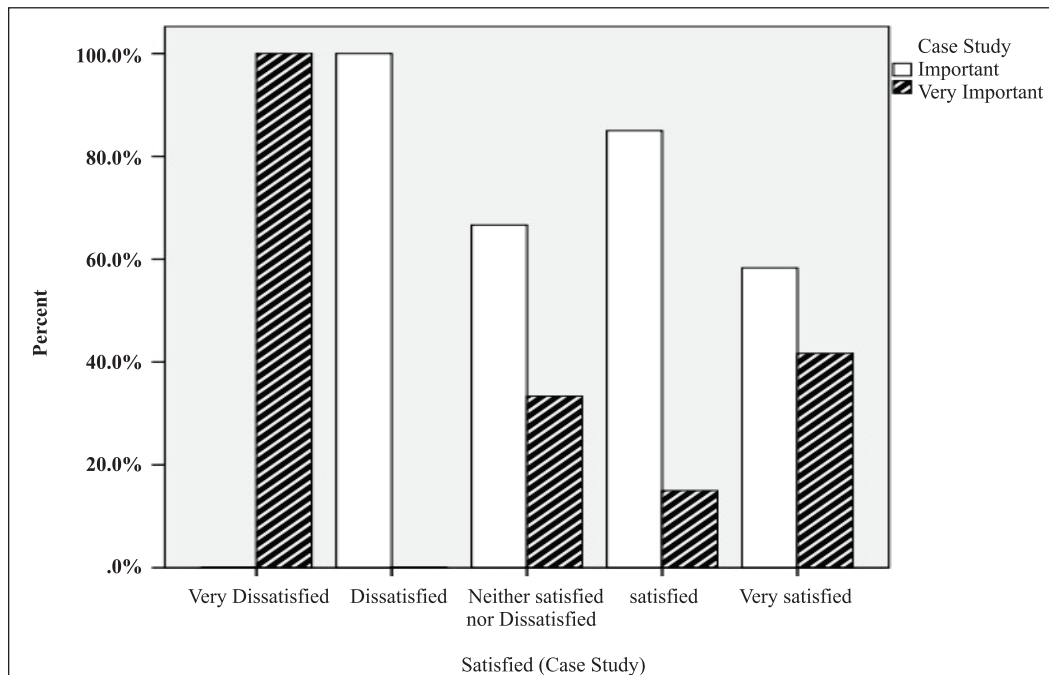


Figure 3: Bar Chart representing Importance & Satisfaction of Case Study

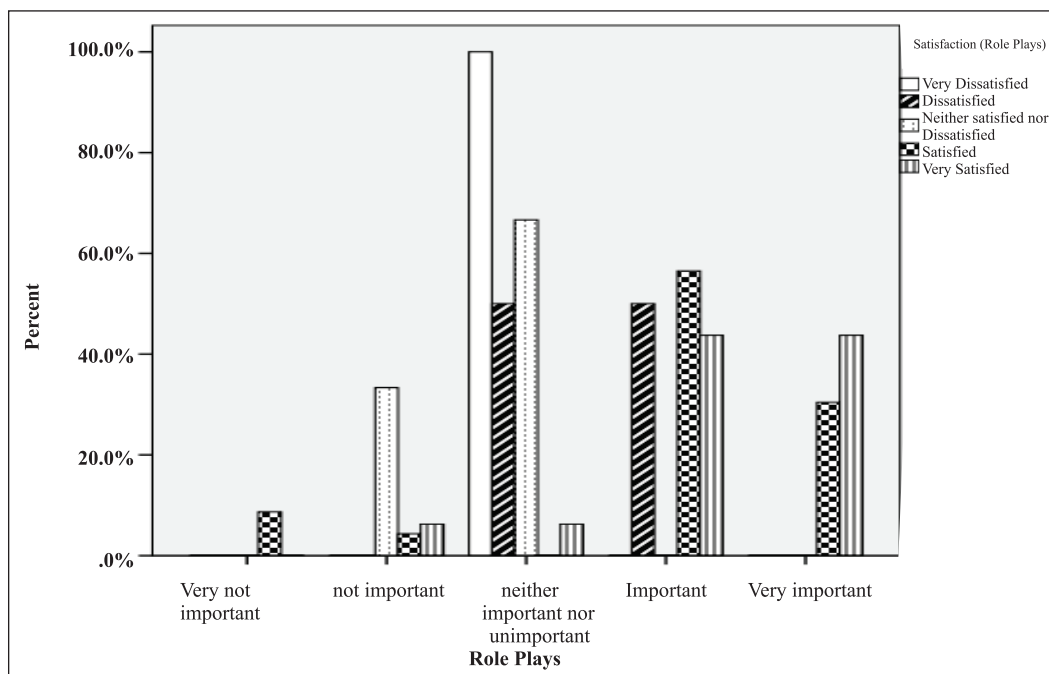


Figure 4: Bar Chart representing Importance & Satisfaction of Role plays

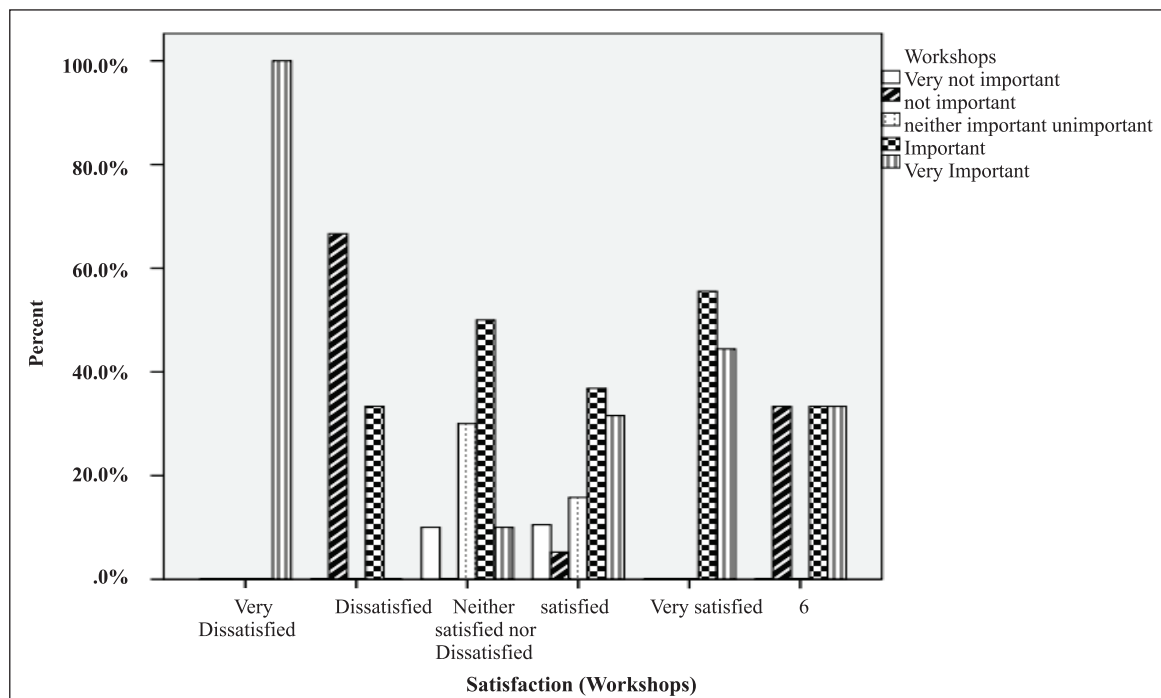


Figure 5: Bar Chart representing Importance & Satisfaction of Workshops

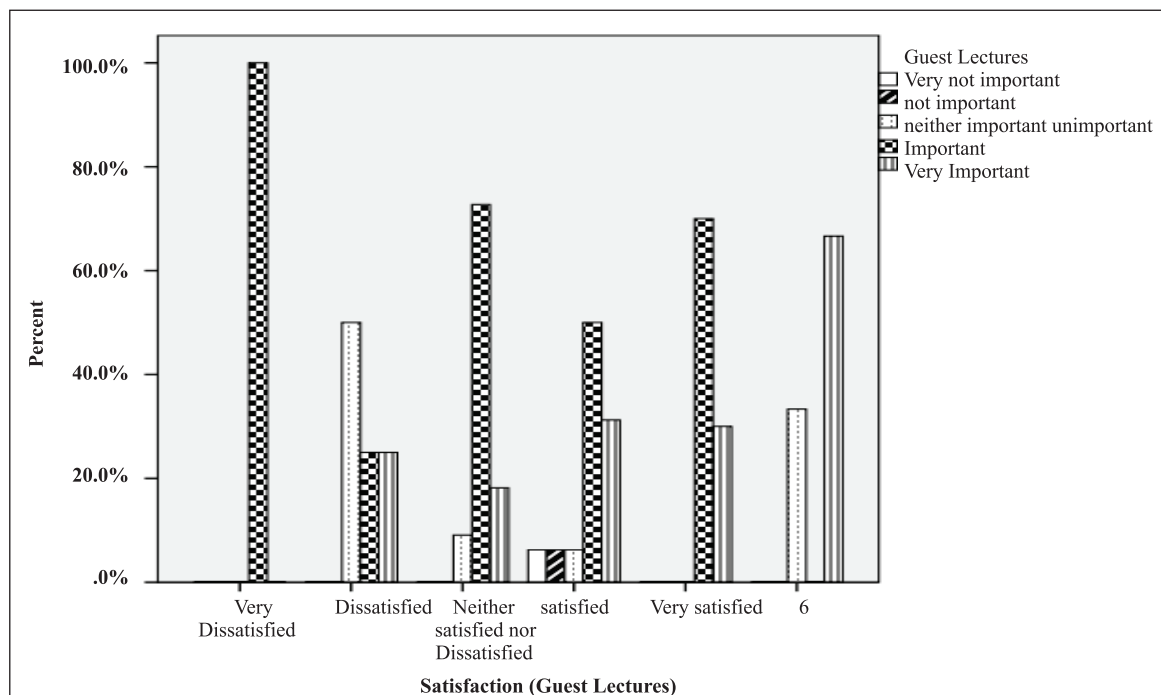


Figure 6: Bar Chart representing Importance & Satisfaction of Guest Lectures

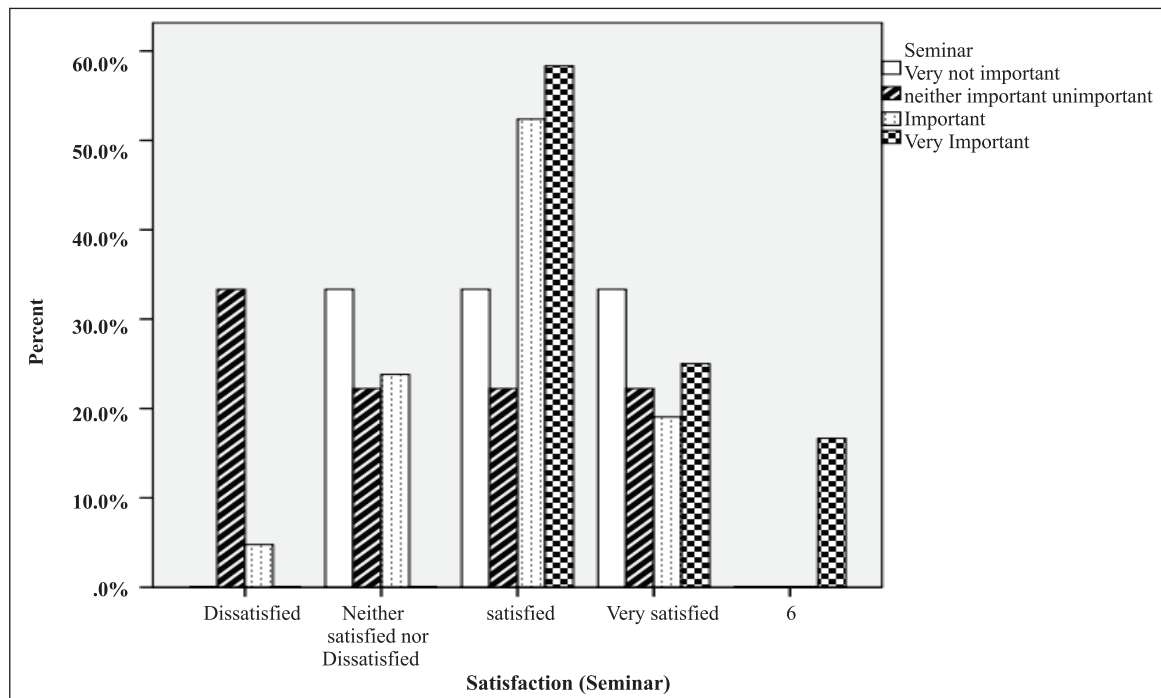


Figure 7: Bar Chart representing Importance & Satisfaction of Seminar

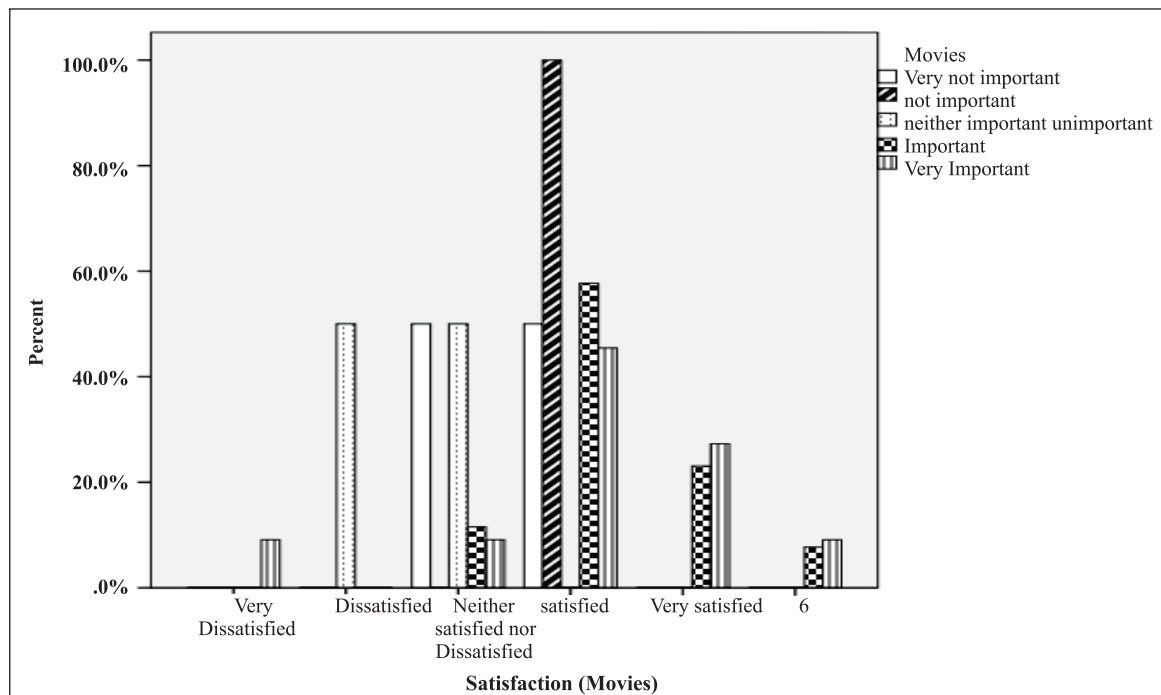
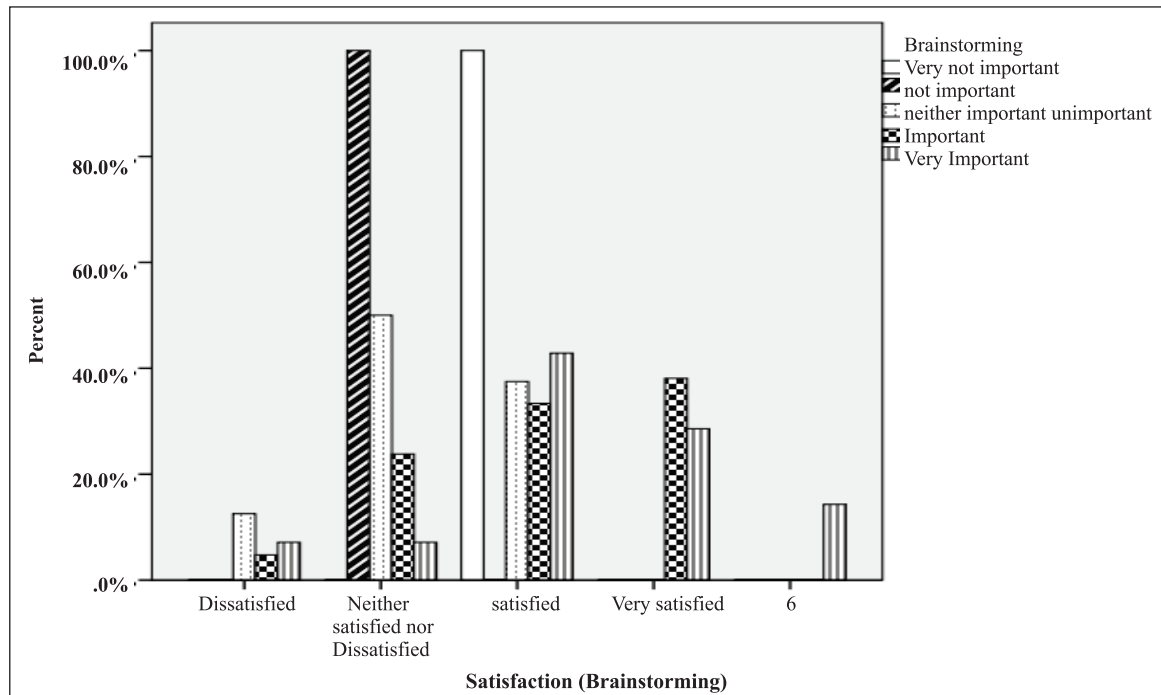
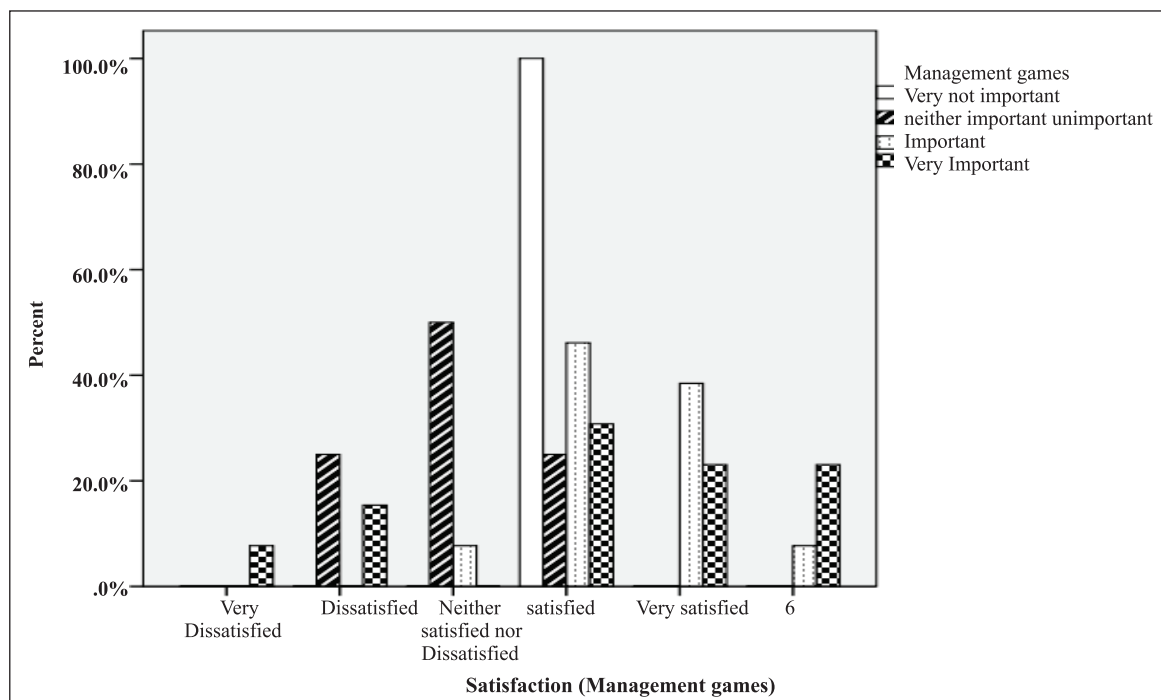


Figure 8: Bar Chart representing Importance & Satisfaction of Movies

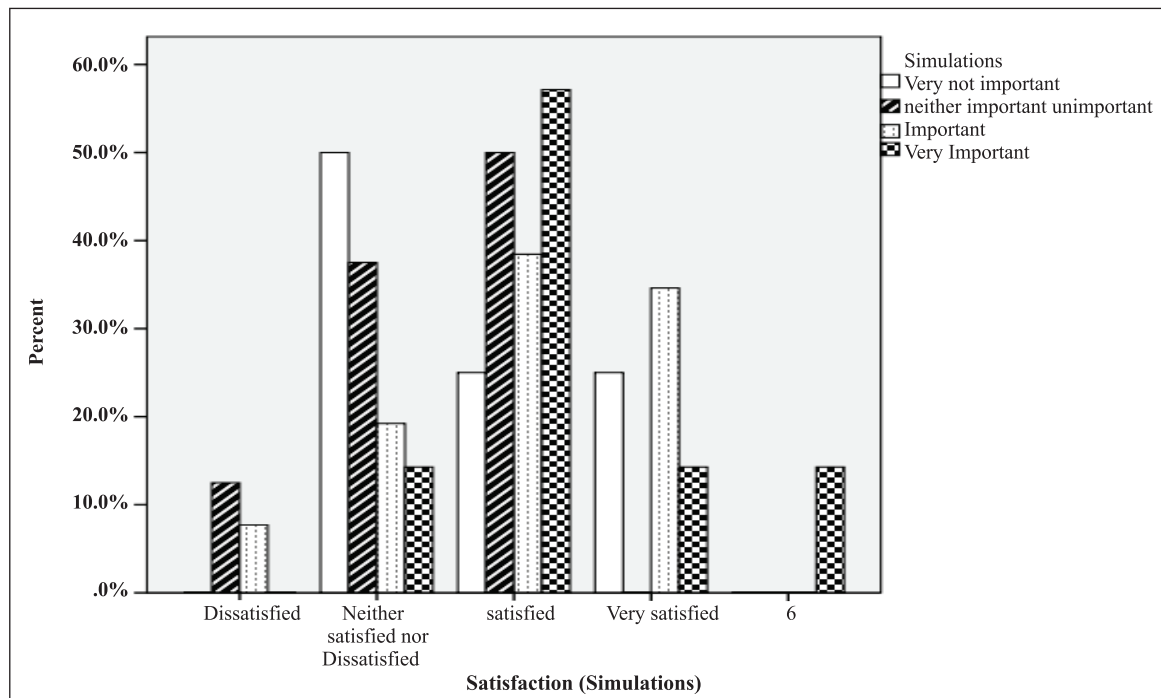


**Figure 9: Bar Chart representing Importance & Satisfaction of Brainstorming**

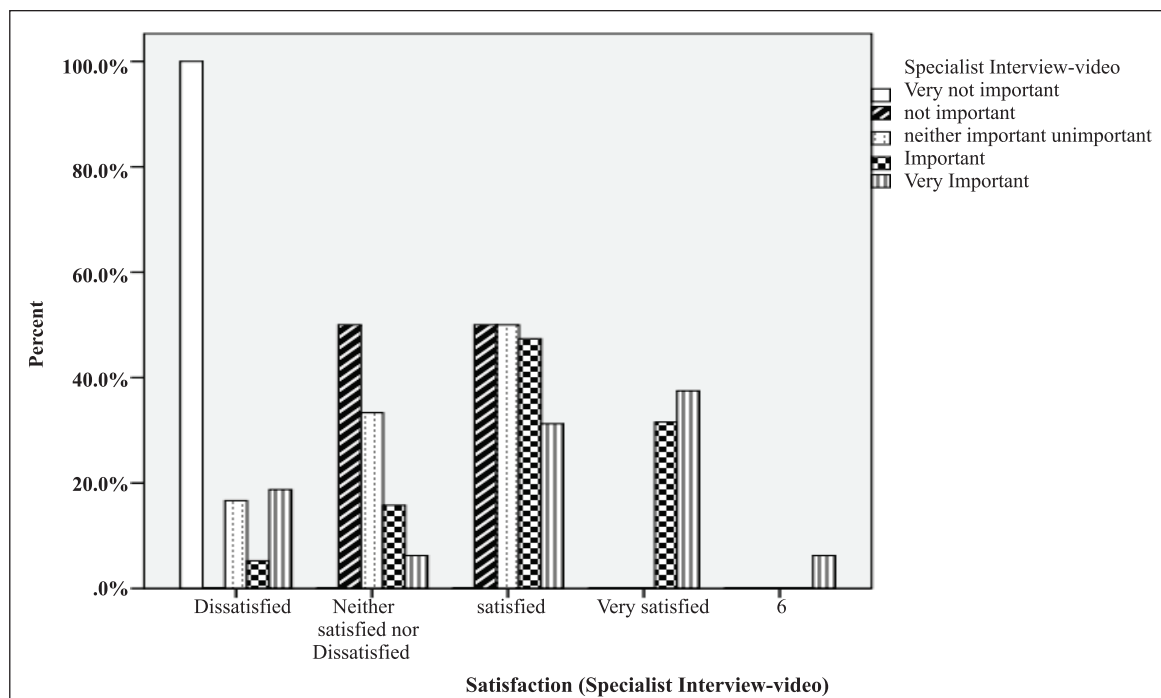


**Figure 10: Bar Chart representing Importance & Satisfaction of Management Games**

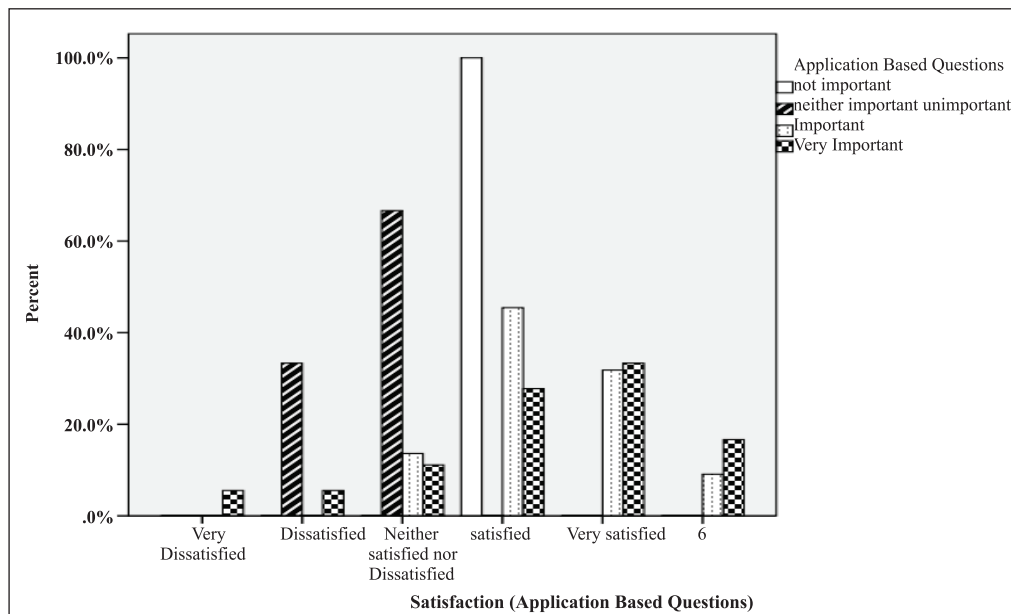




**Figure 11: Bar Chart representing Importance & Satisfaction of Simulation**



**Figure 12: Bar Chart representing Importance & Satisfaction of Specialist Interview - Video**



**Figure 13: Bar Chart representing Importance & Satisfaction of Application Based Question**

**Analysis:** The study clearly indicates that the students are dissatisfied with many methods such as role play, simulation exercises, workshops, etc., especially since these are the activities the students consider as important.

#### Importance Performance Analysis (IPA)

Importance Performance Analysis (IPA) was used for profiling the data for each variable. IPA is one of the most useful forms of analysis in marketing research, combining information about customer perception and importance of ratings (Zeithmal *et al.*, 2009). In this instance, IPA was used to link perceptions of importance with perceptions of performance for different service quality features as perceived by students. The data were then ranked (Importance and Satisfaction wise) so that Professors or Teaching Faculties could use the same. In order to establish the service quality of deliverance of any single method efforts are needed to be address the change, improvement and maintenance standards. For example, a methodology that was perceived to be extremely important but

performed poorly, leading to low satisfaction level, would be considered as a problematic area and would require to be addressed. Although students' perceptions were measured using a scale ranging of 1 – 5 for both, the importance (e.g. 1 = Low Importance, 5 = High Importance) and Satisfaction (e.g., 1 = Low Satisfaction level, 5 = High Satisfaction level) of methods.

**Table 4: Importance Performance/ Satisfaction Analysis**

Advance Teaching Methods	Importance				Satisfaction (Performance)			
	Mean	Std. Deviation	Variance	Rank	Mean	Std. Deviation	Variance	Rank
Case Study	4.27	.450	.203	1	4.02	.892	.795	1
Role Plays	3.93	1.053	1.109	10	4.13	.894	.800	2
Workshops	3.78	1.166	1.359	11	3.91	1.083	1.174	8
Guest Lectures	4.07	.837	.700	3	3.87	1.140	1.300	11
Seminar	3.87	1.036	1.073	7	3.96	.976	.953	4
Movies	3.93	.963	.927	6	4.02	1.011	1.022	6
Brainstorming	4.02	.892	.795	5	3.98	.988	.977	5
Management Games	4.07	.899	.791	4	4.22	1.126	1.268	10
Simulations	3.71	1.036	1.074	8	3.91	.925	.856	3
Specialist Interview Video	4.00	1.044	1.091	9	3.84	1.065	1.134	7
Application Based Questions	4.24	.773	.598	2	4.20	1.120	1.255	9

The study clearly indicates that students feel that the Importance of 'Case Study' is highest and based on performance the satisfaction level are also highly satisfactory. Thus there is no need for change only the standards set need to be maintained. 'Application Based Questions,' are also ranked high but the satisfaction level in performance terms is ranked quite low thus indicating that the performance by teachers needs to improve so that satisfaction levels are higher.. Though students were very satisfied with the role plays they feel that they are not very important.

**With the above analysis and IPA, it has been observed that there is no correlation between Importance and Satisfaction level of Advance Teaching Methods. Hence, Null Hypothesis gets rejected.**

### 1. Future of Management Education

The aim of the paper is to study the gap in present methods of teaching and required innovative methods of teaching at MBA level. Emphasis has been on need for change in teaching pedagogy. Institutes that can improve the level of Teaching by introducing advance approaches in teaching can attain a competitive advantage. Training beyond syllabus is also important. Students have a different perspective on training and their opinion must be considered. The same model can be implemented in a few colleges, and the results can be analyzed. Continuous improvements and additions need to be a part of the curriculum. With the improvement in this area, the Management of the B Schools will achieve the greatest marginal benefit.

### 2. Conclusion

It was observed from the last decade that admissions in B Schools are declining. Seat intake all over India has been increased 10 times over the last decade. Obviously the competition is getting tough, and things are

getting challenging. With all this, quality of education has to be improved; by adding new advance methods in teaching. Besides this the role of placements, management, college reputation, etc. is also.

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## **“Empirical Study of Non Performing Assets with Reference to Public Sector Banks for The Period of 31<sup>st</sup> March 2004 – 31<sup>st</sup> March 2013”**

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### **Abstract**

*“Managing bad loans and keeping them at the lowest level has become a key word for the banking industry in recent years. NPAs reflect the performance of banks and its failure adversely affects their financial health and paralyzed the economy in the long run. A high level of NPAs suggests a high probability of a large number of credit defaults that affect the profitability and net worth of banks and also erodes the value of the asset. A strong banking sector is important for flourishing economy. In India as well as globally banks had registered rapid credit growth, which is partly blamed for the slippage. Besides, a hardening of interest rates has also resulted in a rise in bad debts. The global most calamitous problem for commercial banks in recent times is spiraling nonperforming assets which are affecting their viability and solvency and thus ultimately posing challenge to their survival. NPAs in the Indian banking system came into existence consequent to the introduction of prudential and potential accounting norms. However, non performing loans did exist even before and its proportion to gross advances were highest with 23.5 percent in March 31, 1994. The best improvement in India's banking history was that its ratio fell from 9 per cent in FY03 to 2.4 per cent in FY08. It is like a two edge swords from one side, it cuts the bank's survival and from the other side, it cuts the economic growth of the respective nation. It is also a kind of mirror which reflects the health of the nation's trade, industry, and exposes the weak implementation of the banking norms and fraudulent business culture. The present study made an attempt to study the composition of NPAs of Public Sector Banks in India and to determine the reasons for the higher NPAs in public sector banks. To achieve the aforesaid objective data is gathered from secondary sources.”*

**Key words:** Non Performing Assets, Nationalized Banks, Public Sector Banks, SBI groups, Priority and non priority sector

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### **Introduction**

NPAs turn to be a major stumbling block affecting the profitability of Indian banks before 1992; banks did not disclose the bad debts sustained by them and provision made by them fearing that it may have an adverse. Infusion of additional capital from government makes bank more strengthened in terms of its owned funds. Prudential norms in

the banking sector is a game changer for the entire banking industry and it strengthens the bank's financial position and enhance the transparency of the banking industry. Prudential norms relate to income recognition, asset classification, provisioning of NPAs and capital adequacy ratios (capital to risk weighted asset ratio, CRAR)



### **Review Of Literature:**

A number of studies have been conducted by researchers on NPAs in the banking industry. The researcher has made attempts to present a brief review of the literature available, which are published in the form of research articles and technical papers published in the journals, magazines and websites in the related area.

Krishnamurthi, C.V. (2000) observed that the rising Non Performing Asset is serious diseases for the public sector banks. It shows that the gross Non Performing Asset of Public Sector Banks is mounted very heavily. The Non Performing Asset curses lie between a gross of Rs.39.253 crores in 1992-93 to Rs.45,463 crores in 1997-98.

Munniappan (2002) studied the diseases of Non Performing Asset into two factors. One is the internal factor in respect of portfolio of funds for expansion, modernization and diversification, accept new projects etc. The second is an external factor in respect of recession in the economy, other countries suffered from non performing assets assessment, input/power shortage, price ups and downs, uncertain natural calamities etc.

Das & Ghosh (2003) studied non-performing loans of Indian Public Sector Banks on the basis of various indicators like as asset size, operating efficiency, and macroeconomics condition and credit growth.

Gupta, S and Kumar, S (2004) defined that redeeming features of banking sector reforms is the continuing downfall in gross and net Non Performing Asset as a proportion of total assets for all bank groups. Non Performing Assets need resolution otherwise it can break the backbone of the entire economic system with the financial system.

Banerjee, B. and Dan, A.K (2006) analyzed that Non Performing Asset is one of the most crucial problems which is faced by bank to require attention for improvement in the

management of PSBs are increasing very speedily at present scenario due to following reason, one is the government has got to bail out banks with monetary fund provisions sporadically and ultimately taxpayers bear the value. The funds are borrowed for the investment purpose not utilized properly and it affects adversely the creation of assets and this vicious cycle affects the economy as a whole very badly.

Jatna, Ranu (2009) states main cause of mounting, Non Performing Assets in public sector banks is malfunctioning of the banks. The Narasimham Committee identified the Non Performing Assets as one of the possible effects of malfunctioning of Public Sector Banks.

Dong he (2002) in his study focuses on the nature of Non Performing Asset in Indian banking system and define the important role of asset reconstruction companies in resolving Non Performing Assets.

Prof. G.V. Bhavani Prasad and Veera D (2011) examined that the reason behind the falling revenues from traditional sources is 78% of the total Non Performing Assets accounted in Public Sector Banks.

Dr.P. Hosmani & Hudagi Jugdish (2011) found that a slight improvement in the asset quality reflected by downsize in the Non Performing Asset percentage. Performing Asset is an improved scale for assessing financial performance of Indian banks. The mounting value of Non Performing Assets will adversely affect to the financial position in term of liquidity, profitability and economic of scale in operation. The bank has to take timely, necessary steps against degradation of good performing assets.

Manish B Raval (2012) studies to understand the major composition of Non Performing Assets in Indian Banks and compared the three compositions i.e. Priority sector, Non

Priority sector and others sector of Non Performing Assets between Nationalized and SBI and its associates. The researcher stated that there is no significant difference between three compositions of Non Performing Assets to total Non Performing Assets in nationalized banks and SBI and its associates.

Dr. A. Dharmendran (2012) examine the position & growth of standard assets, substandard assets, loss assets, gross nonperforming assets, provision for non performing assets & net non performing assets with the help of percentage analysis method & compound growth rate for all the state Co-operative banks in India.

#### **Objective of Study:**

- To understand the concept of Non-performing assets (NPA).
- To know about priority sector and non priority sector NPA's in Indian Nationalised Banks, SBI group Banks and Public Sector Banks.
- To offer suggestions and recommendations based on the findings of the study.

#### **Scope of The Study:**

- To understand the concept of the NPA in Indian Banking industry.
- Causes and remedial actions for reductions of NPAs.
- To analyze the past trends of NPA of Public sector.

#### **Limitations of The Study**

The study is limited to the functions of Indian Banking industry pertaining to its management of NPAs and profitability. Thus, the important limitations are as follows:

- The study is based on the availability of data.
- The basis for identifying non-performing assets is taken from the Reserve Bank of India circulars.
- Reasons for NPAs and Management

of NPAs are changing with the time. The study is done in the past, present environment without foreseeing future developments.

#### **Statement Of Problem:**

The NPA is one of the biggest problems that the Indian Banks are facing today. If the proper management of the NPAs is not undertaken it would hamper the business of the banks. If the concept of NPAs is taken very lightly it would be dangerous for the Indian banking sector. The NPAs would destroy the current profit; interest income due to large provisions of the NPAs, and would affect the smooth functioning of the recycling of the funds. It is a known fact that asset quality of banks is an important indicator of their financial health and also it reflects on the efficacy of their credit risk management and recovery environment. At present NPAs reduction a key issue in the field of banking industry. As it is the known fact that for flourishing economy, the banking industry plays a very vital role. It is the right time to take suitable and stringent measures to get rid of NPA problem.

#### **Research Methodology:**

Research Methodology adopted was qualitative with secondary data analysis, where data were taken from the Department of Banking supervision, RBI

Research Type: Qualitative

Research Design: Exploratory

Type of Data: Secondary

#### **Data Collection:**

The study mainly uses the secondary data for the purpose of the analysis. The information regarding NPAs at Public sector banks, NPAs of Nationalized Banks with priority and non priority sector, NPAs at SBI group Banks with priority and non priority sector in India, NPAs of Nationalized Banks and SBI Groups Banks in India, NPAs at Public sector Banks with

Priority and non priority sector in India were obtained from the Department of Banking supervision, RBI for the period from March 2004 to March 2013 on a yearly basis.

#### **Hypotheses:**

H<sub>1</sub>: There is no significant relation between priority sector and non-priority sector NPAs in contributing to total NPAs at Nationalized Banks.

H<sub>2</sub>: There is no significant relation between priority sector and non-priority sector NPAs in contributing to total NPAs at SBI group Banks.

H<sub>3</sub>: There is no significant relation between priority sector and non-priority sector NPAs in contributing to total NPAs of Public Sector Banks.

**Table1: Total amount of NPAs at Public sector banks from March 2004 to March 2013. (Amount in Billion)**

Nationalized and SBI group banks	Total Amount of NPAs	% of increase of decrease in NPAs
2004	501.48	-
2005	468.17	-6.64
2006	413.78	-11.62
2007	383.05	-7.43
2008	396.00	3.38
2009	440.32	11.19
2010	572.93	30.12
2011	710.80	24.06
2012	1124.89	58.26
2013	1558.90	38.58

Source: Department of Banking supervision, RBI

#### **Observation:**

The above table shows the NPAs at public sector banks in India from 31<sup>st</sup> March 2004 to 2013. The above table depicts the changes i.e. increment and decrement in the percentage of NPAs of public sector banks since last 9 years. From the above table it can see that there was a reduction of NPAs from 2004 to 2005 to 2006 the NPAs of the nationalized banks was 501.48 billion in the year 2004, during 2005

the amount of NPAs was decreased by 6.64%, during 2006 it was decreased by 11.62%, during 2007 the reduction in NPAs by 7.43%, but from 2008 onwards NPAs are increasing in public sector banks due to massive changes in Indian economy, during 2008 NPAs was increased by 3.38%, and during 2009 NPAs are increased by 11.19% as against 3.38% of the previous year. During 2010 it was increased by 30.12% as compared with the previous year. During 2011 and 2012 the NPAs touches very high percentage, increased by 24.06% and 58.26% respectively. During 2013 also the trends of NPAs were 1558.90 billion as against 1124.89 billion of 2012. From the above table it can infer that the percentage of NPAs at Public sector banks are high, this is the need of the hour to take appropriate step to reduce the NPAs.

#### **HYPOTHESIS:**

H<sub>1</sub>: There is no significant relation between priority sector and non-priority sector NPAs in contributing to total NPAs at Nationalized Banks.

**Table 2: Total amount of NPAs at Nationalized Banks with priority and non priority sector from March 2004 to March 2013 (Amount in Billion)**

Bank Group/ Years	Priority sector		Non Priority sector		Nationalized Banks		Total
	Amount	% share	Amount	% share	Amount	% share	
2004	167.05	47.74	178.95	51.14	3.90	1.11	349.90
2005	163.81	51.17	153.46	47.94	2.83	0.88	320.09
2006	151.24	53.66	122.53	43.98	8.08	2.87	281.85
2007	157.79	61.28	96.68	37.55	3.02	1.17	257.49
2008	163.85	67.21	77.93	31.96	2.02	0.83	243.80
2009	157.21	60.10	101.40	38.76	2.97	1.13	261.58
2010	199.06	56.13	152.77	43.08	2.80	0.79	354.62
2011	257.21	59.90	169.47	39.47	2.73	0.64	429.40
2012	322.90	48.34	343.13	51.37	1.92	0.29	667.95
2013	404.86	42.21	553.59	57.71	0.78	0.08	959.52

Source: Department of Banking supervision, RBI

**Priority Sector:** The priority sector comprises Agriculture, Loans to Micro and Small Service enterprises up-to Rs.5crore and all loans to Micro and Small manufacturing enterprises, Retail Trade, Micro Credit (amounts not exceeding Rs.50,000 per borrower), Education loans (up to Rs.10lakhs for studies in India and Rs.20lakhs for studies abroad, and do not include those granted to institutions) and Housing loans (Loans up to Rs. 25lakhs to individual for purchase / construction of house in the metropolitan centers of population above 10lakhs and Rs.15lakhs at other centers, loan up to Rs. 1lakh in rural and semi-urban areas and up to Rs. 2lakhs in urban and metropolitan areas given for repairs to the damaged dwelling units to families).

**Non Priority Sector:** The non priority sectors are those where India is self sufficient and did not need foreign technology or capital. For example a local grocery store sells its goods to local households, businesses, and individuals.

**Public Sector:** The public sector refers to the part of the economy concerned with providing basic government services.

**Observation:**

The above table shows the total amount of NPAs and the composition of NPAs among priority, non-priority and public sector at nationalized banks in India from March 2004 to March 2013. During 2004 the share of NPAs among non-priority sector share was 51.14%, priority sector share was 47.74% and public sector was 1.11% of nationalized banks. During 2005 the priority sector share was 51.17%, non-priority sector share was 47.94% and the public sector share was 0.88%. During 2006 priority sector, non priority sector and public sector share of NPAs of Nationalized banks were 53.66%, 43.48% and 2.87% respectively. In the year 2007 the priority sector share was 61.28%,

non-priority sector share was 37.55% and the public sector share was 1.17%. During 2008, priority sector share was 67.21%; non-priority sector was 31.96% and the public sector share was 0.83%. In the year 2009 the share of NPA's among priority sector, non-priority sector and public sector share were 60.10%, 38.76% and 1.13% respectively. In the year 2010 priority sector share was 56.13%, Non-priority sector share was 43.08 and public sector share was 0.97%, during year 2011 priority sector, non-priority sector and public sector share were 59.90%, 39.47% and 0.64% respectively. In the year 2012 priority sector share was 48.34%, Non-priority sector share was 51.37% and the public sector share was 0.29% and in the year 2013 priority sector was 42.21%, Non-priority sector share was 57.71% and the public sector share was 0.08% in the amount of NPAs of Nationalized banks in India.

**Table 3: Correlation between Priority sector, Non priority sector NPAs of Nationalized Banks**

Correlation			
		Priority sector	Non Priority sector
Priority sector	Karl Pearson's coefficient of correlation	1	.947*
	Sig. (2-tailed)		.000
	N	10	10
Non Priority sector	Karl Pearson's coefficient of correlation	.947*	1
	Sig. (2-tailed)	.000	
	N	10	10

**Interpretation:**

Karl Pearson's coefficient of correlation value between Priority sector, Non priority sector NPAs of Nationalised Banks is 0.947 indicates strong correlation (range of strong correlation is 0.80). There is significant relation between priority sector and non-



priority sector NPAs in contributing to total NPAs of Nationalised Banks, hence hypothesis gets rejected.

**H<sub>2</sub>: There is no significant relation between priority sector and non-priority sector NPAs in contributing to total NPAs at SBI group Banks.**

**Table 4: Total amount of NPAs at SBI group Banks with priority and non priority sector in India from March 2004 to March 2013 (Amount in Billion)**

Bank Group/ Years	Priority sector		Non Priority sector		SBI group Banks		Total
	Amount	% share	Amount	% share	Amount	% share	
2004	71.36	47.07	78.03	51.48	2.20	1.45	151.59
2005	70.17	47.39	76.24	51.48	1.68	1.13	148.08
2006	72.50	54.95	58.19	44.10	1.25	0.95	131.93
2007	71.75	57.15	51.93	41.36	1.88	1.50	125.56
2008	89.02	58.49	62.22	40.88	0.97	0.63	152.20
2009	84.47	47.26	92.50	51.75	1.77	0.99	178.74
2010	109.40	50.11	106.46	48.77	2.44	1.12	218.40
2011	155.67	55.32	125.67	44.66	0.06	0.02	281.40
2012	239.11	52.33	217.59	47.62	0.25	0.05	456.94
2013	264.42	44.09	337.94	55.85	0.31	0.05	599.67

Source: Department of Banking supervision, RBI

**Observation:**

The above table depicts the total amount of NPAs at SBI Group banks in India from March 2004 to March 2013. The above table also depicts the sector wise share in the amount of NPAs of SBI Group in India. From the year 2013 Non-priority share was high in the creation of amount of NPAs in the SBI Group banks. At last from the above graph it can be inferred that Priority sector is the troubling sector for SBI Group banks in the amount of NPAs.

**Table 5: Correlation between Priority sector, Non priority sector NPAs of SBI group Banks**

Correlation			
		Priority sector	Non Priority sector
Priority sector	Karl Pearson's coefficient of correlation	1	.954*
	Sig. (2-tailed)		.000
	N	10	10
Non Priority sector	Karl Pearson's coefficient of correlation	.954*	1
	Sig. (2-tailed)	.000	
	N	10	10

**Interpretation:**

Karl Pearson's coefficient of correlation value between Priority sector, Non priority sector NPAs of SBI group Banks is 0.954 indicates strong correlation (range of strong correlation is 0.80). There is significant relation between priority sector and non-priority sector NPAs in contributing to total NPAs of SBI group Banks, hence hypothesis gets rejected.

**Table 6: Total amount of NPAs at Public sector Banks with Priority and non priority sector in India from March 2004 to March 2013**

Years	Amount of NPAs Nationalized Banks	Amount of NPAs SBI Groups Banks
2004	349.90	151.59
2005	320.09	148.08
2006	281.85	131.93
2007	257.49	125.56
2008	243.80	152.20
2009	261.58	178.74
2010	354.62	218.31
2011	429.40	281.40
2012	667.95	456.94
2013	959.22	599.67

Source: Department of Banking supervision, RBI

**Observation:**

The above table depicts the total amount of NPAs at Nationalized banks and SBI Groups Banks in India from March 2004 to March 2013. During 2004 the total amounts of NPAs of Nationalized banks were 349.90 billion and



SBI Groups banks were 151.59 billion. In the year 2005 it was 320 billion in nationalized banks and 148.08 billion at SBI Groups banks. During 2006 NPAs of Nationalized banks and SBI Groups banks were 281.85 billion and 131.93 billion respectively. In the year 2007 NPAs of Nationalized banks and SBI Groups banks were 257.49 billion and 125.56 billion respectively. During 2008 NPAs of Nationalized banks and SBI Groups banks were 243.80 billion and 152.20 billion respectively. In the year 2009 NPAs of Nationalized banks and SBI Groups banks were 261.58 billion and 178.74 billion respectively. During 2010 NPAs of Nationalized banks and SBI Groups banks were 354.62 billion and 218.31 billion respectively. In the year 2011 NPAs of Nationalized banks and SBI Groups banks were 429.40 billion and 281.40 billion respectively. During 2012 NPAs of Nationalized banks and SBI Groups banks were 667.95 billion and 456.94 billion respectively. During 2013 NPAs of Nationalized banks and SBI Groups banks were 959.22 billion and 599.67 billion respectively.

**H<sub>3</sub>: There is no significant relation between priority sector and non-priority sector NPAs in contributing to total NPAs of Public Sector Banks.**

**Table 7: Total amount of NPAs at Public sector Banks with Priority and non priority sector in India from March 2004 to March 2013. (Amount in Billion)**

Bank Group/ Years	Priority sector		Non Priority sector		Public Sector		Total
	Amount	% share	Amount	% share	Amount	% share	
2004	238.40	47.54	256.98	51.24	6.10	1.22	501.48
2005	233.97	49.98	229.69	49.06	4.50	0.96	468.17
2006	223.74	54.07	180.72	43.68	9.32	2.25	413.78
2007	229.54	59.92	148.61	38.80	4.90	1.28	383.05
2008	252.87	63.85	140.15	35.39	2.99	0.75	396.05
2009	241.68	54.89	193.90	44.04	4.74	1.08	440.32
2010	380.46	53.84	259.23	45.25	5.24	0.91	517.93
2011	412.87	58.09	295.15	41.52	2.78	0.39	710.80
2012	562.01	49.96	560.71	49.85	2.17	0.19	1124.89
2013	669.28	42.93	888.53	57.00	1.08	0.07	1558.90

Source: Department of Banking Supervision, RBI

**Observation:**

The above table shows the total amount of NPAs of Public sector banks with priority and non priority sector contribution to the total NPAs. In the year 2004 priority sector share was 47.54%, Non-priority sector share was 51.24% and the Public sector share was 1.22% for the total NPAs of 501.46 billion. During the year 2005 priority sector share was 49.98%, Non-priority sector share was 49.06% and the Public sector share was 0.96% for the total NPAs of 468.17 billion. In the year 2006 the priority sector share was 54.07%, Non-priority sector share was 43.68% and the Public sector share was 2.25% for the total NPAs of 413.78 billion. In the year 2007 priority sector share was 59.92%, Non-priority sector share was 38.80% and the Public sector share was 1.28% for the total NPAs of 383.05 billion. During the year 2008 priority sector share was 63.85%, Non-priority sector share was 35.39% and Public sector share 0.75 for the total NPAs of 396.05 billion. In the year 2009 priority sector, Non-priority sector and public sector share was 54.89%, 44.04% and 1.08% respectively. During the year 2010 priority sector, Non-priority sector and public sector share was 53.84%, 45.25% and 0.91% respectively. In the year 2011 priority sector, Non-priority sector and public sector share was 58.09%, 41.52% and 0.39% of the total amount of NPAs of 710.80 billion. During the year 2012 priority sector, Non-priority sector and public sector share was 49.96%, 49.85% and 0.19% of the total amount of NPAs of 1124.89 billion. In the year 2013 priority sector, Non-priority sector and public sector share was 42.93%, 57.00% and 0.07% of the total amount of NPAs of 1558.90 billion.

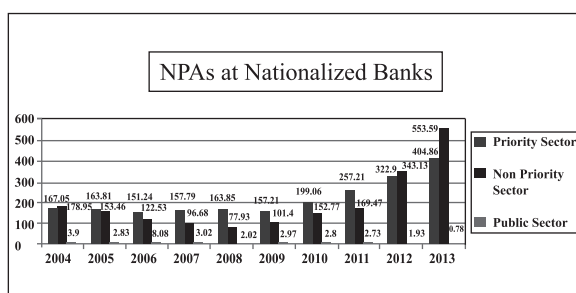
**Table 8: Correlation between Priority sector, Non priority sector NPAs of Public sector Banks**

Correlation			
		Priority sector	Non Priority sector
Priority sector	Karl Pearson's coefficient of correlation	1	.951*
	Sig. (2-tailed)		.000
	N	10	10
Non Priority sector	Karl Pearson's coefficient of correlation	.951*	1
	Sig. (2-tailed)	.000	
	N	10	10

#### Interpretation:

Karl Pearson's coefficient of correlation value between Priority sector, Non priority sector NPAs of Public sector Banks is 0.951 indicates strong correlation (range of strong correlation is 0.80). There is significant relation between priority sector and non-priority sector NPAs in contributing to total NPAs of Public Sector Banks, hence hypothesis gets rejected.

**Graph 1: Total amount of NPAs at Nationalized Banks in India from March 2004 to March 2013 (Amount in Billions)**



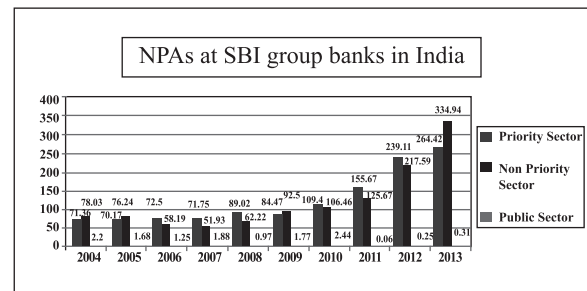
**Source: Department of Banking Supervision, RBI**

#### Interpretation:

The above graph depicts the total amount of NPAs at Nationalized banks in India as on 31<sup>st</sup> March from 2004 to 2013 and also the above graph depicts the composition of NPAs of

different sector at nationalized banks. From the above graph it can be inferred that during 2004, 2012, and 2013 the share of NPAs of non-priority sector Nationalized banks was more as compared to the priority and public sector and during 2005, 2006, 2007, 2008, 2009 and 2010 the share of NPAs of priority sector was more as compared to public sector share and non-priority sector. The graph 1 depicts that the Priority sector is a troubling sector in the generation of NPAs of Nationalized banks.

**Graph 2: Total amount of NPAs at SBI groups Banks in India from March 2004 to March 2013 (Amount in Billions)**

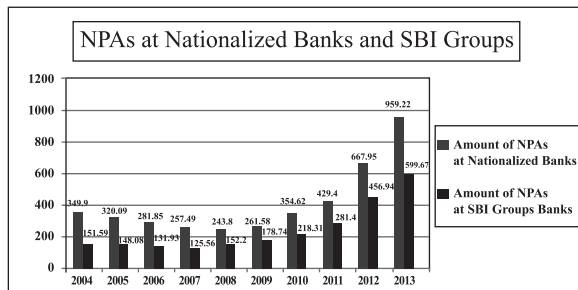


**Source: Department of Banking Supervision, RBI**

#### Interpretation:

The above graph depicts the total amount of NPAs at SBI Group Banks in India from March 2004 to March 2013 and also the above graph depicts the composition of NPAs of different sector at SBI Group Banks. From the above graph it can be inferred that during 2004 and 2005 non-priority sector share was high in creation of amount of NPAs in the SBI Group banks. From 2006 to 2012, except the year 2009, priority sector share was high in the generation of the amount of NPAs in the SBI Group banks, during the year 2013 Non-priority share was high in the creation of amount of NPAs in the SBI Group banks. Graph 2 inferred that Priority sector is the troubling sector for SBI Group banks for NPAs.

**Graph 3: Total amount of NPAs at Nationalized Banks and SBI Groups in India from March 2004 to March 2013 (Amount in Billions)**

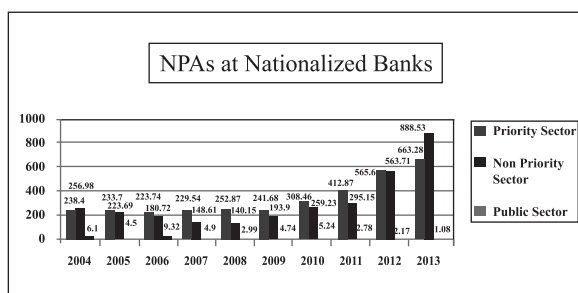


**Source: Department of Banking Supervision, RBI**

**Interpretation:**

The above graph depicts the total amount of NPAs at Nationalized Banks and SBI Groups Banks in India from 2004 to 2013. From the above graph it can be easily inferred that the amount of NPAs in public sector banks was high throughout the period as compared with Nationalized Banks.

**Graph 4: Total no. of NPAs at Public sector Banks in India from March 2004 to March 2013 (Amount in Billion)**



**Source: Department of Banking Supervision, RBI**

**Interpretation:**

The above graph shows the total amount of NPAs at Public Sector Banks in India from March 2004 to March 2013. It depicts priority sector, non-priority sector and public sector share of NPAs. From the above table it can be inferred that during 2004 the share of NPAs of

non-priority sector was more r as compared to the priority and public sector. From 2005 till 2011 the share of NPA's in priority sector was higher as compared to non-priority and public sector. During 2012 priority and non-priority sector share was almost equal in terms of NPAs. During 2013 non-priority share was high in the creation of NPAs in non-priority sector banks as compared to the priority and public sector.

**Causes and remedial actions for reductions of NPAS:**

There are internal as well as external causes for creation of Non-Performing Assets. External causes like natural calamities and climatic conditions, recession, changes in Government policy changes in economic conditions, industry related problems, impact of liberalization on industries, technical problems. Internal causes such as internal defaulters, proper linkages, product pricing, poorly paid skilled workers and technicians, building up pressure for sanctions, non observance of systems,, lack of post sanction monitoring, unchecked diversions etc.

**Following are the remedial actions for reducing NPAs:**

- Prepare a loan recovery policy and strategies for reducing NPAs.
- Create special recovery cells as head office/Zonal office/regional office levels identify critical branches for recovery.
- Fix targets of recovery and draw time bound action programmer.
- Select proper techniques for solving the problem of each NPA.
- Monitor implementing of the time bound action plan
- Take corrective steps when ever found necessary while monitoring the action plan and make changes in the original plan if necessary.

**The impact of NPAs on the profitability of the banks is mentioned below:**

- Reduces earning capacity of the assets: NPAs reduced the earning capacity of the assets and as a result of this return on assets get affected.
- Blocks capital: NPAs carries a risk weight of 100% (to the extent it is uncovered). Therefore, they block capital for maintaining Capital adequacy. As NPAs do not earn any income, they are adversely affecting “Capital Adequacy Ratio” of the bank.
- Incurrence of additional cost: Carrying of NPAs require incurrence of 'Cost of Capital Adequacy', 'Cost of funds in NPAs' and 'Operating cost for monitoring and recovering NPAs'.
- Reduces EVA: While calculating Economic Value Added (EVA =Net operating profit after tax minus the cost of capital) for measuring performance towards shareholder value creation, cumulative loan loss provisions for NPAs considered as capital. Hence, it increases the cost of capital and reduces EVA.
- Low yield on advances: Due to NPAs, the yield on advances shows a lower figure than the actual yield on “standard Advances”. The reasons that yield are calculated on weekly average total advances including NPAs.
- Affect on Return on Assets: NPAs reduces earning capacity of the assets and as a result of this, ROA gets affected.

**Findings:**

- Table No.1 depicts the rising trend in NPAs from 2010 onwards in public sector banks.
- Table No.2 illustrates that the share of NPAs in Priority sector is much more than non-priority sector and public sector in India.

- Table No.3 shows that priority sector is the troubling to SBI groups banks in the amount of NPAs.
- The present study describes contribution of NPAs among non-priority sector was high in the year 2004 as compared to the priority and public sector. From 2005 till 2011 priority sector share of NPAs was high as compared to Non-priority and public sector.

**Recommendations for reducing NPAs**

- Effective and regular follow-up on the end use of the funds sanctioned is required to ascertain any embezzlement or diversion of funds. This process can be undertaken every quarter so that any account converting to NPA can be properly accounted for.
- Combining the traditional wisdom with modern statistical tools like Value-at-risk analysis and Markov Chain Analysis should be employed to assess the borrowers. This is to be supplemented by information sharing among the bankers about the credit history of the borrower. In case of new borrowers, especially corporate borrowers, proper analysis of the cash flow statement of the last five years is to be done carefully.
- A healthy Banker-Borrower relationship should be developed. Many instances have been reported about forceful recovery by the banks, which is against corporate ethics. Debt recovery will be much easier in a congenial environment.
- Assisting the borrowers in developing his entrepreneurial skills will not only establish a good relation between the borrowers, but also help the bankers to keep a track of their funds.
- Countries such as Korea, China, Japan, Taiwan have a well functioning Asset reconstruction/Recovery mechanism



wherein the bad assets are sold to an Asset Reconstruction Company (ARC) at an agreed upon price. In India, there is an absence of such mechanism and whatever exists, it is still in nascent stage. One problem that can be accorded is the pricing of such loans. Therefore, there is a need to develop a common prescription for pricing of distressed assets so that they can be easily and quickly disposed. The ARCs should have clear 'financial acquisition policy' and guidelines relating to proper diligence and valuation of NPA portfolio.

- Some tax incentives like the capital gain tax exemption, carry forward the losses to set off the same with other income of the Qualified Institutional Borrowers (QIBs) should be granted so as to ensure their active participation by way of investing a sizeable amount in distressed assets of banks and financial institutions.
- So far the Public Sector Banks have done well as far as lending to the priority sector is concerned. However, it is not enough to make lending to this sector mandate; it must be made profitable by sharply reducing the transaction costs. This entails faster embracing of technology and minimizing documentation.
- Commercial Banks should be allowed to come up with their own measures to address the problem of NPAs. This may include waiving and reducing the principal and interest on such loans, or extending the loans, or settling the loan accounts. They should be fully authorized and they should be able to apply all the preferential policies granted to the asset management companies.
- Another way to manage the NPAs by the banks is Compromise Settlement Schemes or One Time Settlement

Schemes. However, under such schemes the banks keep the actual amount recovered secret. Under these circumstances, it is necessary to bring more transparency in such deals so that any flaw could be removed.

#### **Suggestions:**

- Existing credit appraisals and monitoring systems are also a responsible for NPAs; RBI should revise existing credit appraisals and monitoring systems.
- It is advisable for the Banks that banks should avoid NPAs at the budding stage of credit consideration by putting in place of meticulous and appropriate credit appraisal mechanisms.
- Banks should improve upon and strengthened the loan recovery methods.
- Credit appraisal and post-loan monitoring is a crucial step which needs to concentrate by all the public sector banks.
- New body like Debt Recovery Tribunal should be established & capacity of DRTs should be enhanced.
- All banks should keep a stringent check on advance being made to real estate & housing segment as these segments contributed highly towards the NPA in 2009 & 2010.

#### **Conclusion:**

The present study made an attempt to study the composition of NPAs of Public Sector Banks in India and to determine the reasons for the higher NPAs in public sector banks. To achieve the aforesaid objective data is gathered from secondary sources. Table No.1 depicts the rising trend in NPAs from 2010 onwards in public sector banks. Table No.2 illustrates that the share of NPAs in Priority sector is much more than non-priority sector and public sector in India. Table No.3 shows that priority sector is the troubling to SBI groups banks in the amount of NPAs. The



present study describes contribution of NPAs among non-priority sector was high in the year 2004 as compared to the priority and public sector. From 2005 till 2011 priority sector share of NPAs was high as compared to Non-priority and public sector.

The NPA is one of the biggest problems that the Indian Banks are facing today. If the proper management of the NPAs is not undertaken it would hamper the business of the banks. If the concept of NPAs is taken very lightly it would be dangerous for the Indian banking sector. The NPAs would destroy the current profit; interest income due to large provisions of the NPAs, and would affect the smooth functioning of the recycling of the funds. It is a known fact that asset quality of banks is an important indicator of their financial health and also it reflects on the efficacy of their credit risk management and recovery environment. At present NPAs reduction a key issue in the field of banking industry. It is known fact that for flourishing of any economy, the role of banking industry is very vital or crucial. It is the right time to take suitable and stringent measures to get rid of NPA problem. An efficient management information system should be developed. The bank staff engaged in sanctioning the advances is expected to be educated about the proper documentation and charge of securities and motivated to take preventing actions when advances turning into the NPA. Public sector banks must pay attention to their entire operation activity to compete with the private sector. Banks should be well equipped in proper selection of the borrower or project and in analyzing the financial statement. With the help of inferential statistics it has been proved that all hypotheses are getting rejected because there is a strong positive correlation between priority, non priority sector NPAs of Nationalized Banks, SBI groups' banks and

public sector banks.

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## Competition in Indian Banking Industry: An Impact Analysis of Global Financial Crisis

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### Abstract

*Indian banking sector has seen many favourable developments in the last decade. The positive developments are reflected in the favourable metrics like growth, profitability and reducing non-performing assets (NPAs). Banking industry in India has established a sound track record of innovation and value creation even during the global crisis in late 2000s. Policy makers, investors and bankers have developed various business plans for Indian banking sector in order to sustain the market value of the sector. The impact of global financial crisis on competition level in Indian banking industry is needed to be explored in order to frame policies and plans for further improvement. The present treatise is an attempt to statistically analyse the impact of global financial crisis on the competitive dynamics of Indian commercial banks. The data of Indian commercial banks has been divided into three time period viz. pre-crisis period, crisis period and post-crisis period. The entropy (including minimum and maximum entropy), exponential index, Gini coefficient, herfindahl index and concentration coefficient has been calculated and compared for all three periods. The results clearly indicate fall in level of competition in crisis period and rise in level of competition in post-crisis period. There have been new entries of foreign banks in Indian banking sector that raises the level of competition in the post-crisis period.*

**Key words:** Concentration coefficient, Entropy, Exponential index, Herfindahl index and Gini coefficient.

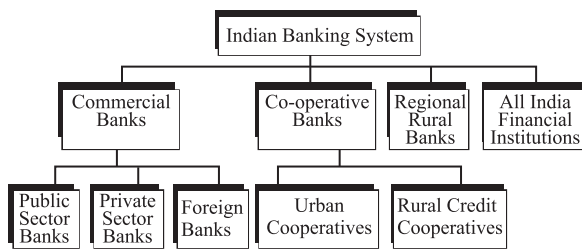
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### Introduction

Commercial banks, co-operative banks and all India financial institutions are constituents of the Indian banking system and above all the Reserve Bank of India acts as a central bank. The commercial banks are further divided into three categories on the basis of their ownership pattern. The three categories of

commercial banks are public sector banks, private sector banks and foreign banks. Public sector banks include nationalised banks and State bank of India including its associates. The cooperative banks are classified into urban cooperatives banks and rural credit cooperatives. Chart 1 exhibits the pictorial presentation of Indian banking system:



**Chart 1: Structure of Indian Banking System**

Commercial banks are the most important part of the Indian financial sector in terms of their role in channelling credit to the commercial sector and facilitating the process of financial inclusion. The commercial banking sector has retained its predominantly public character. Policy makers and bankers have their own business plans to sustain the market value of the Indian banking sector. However, with the onset of financial crisis, this sector has some changes in terms of competition level, financial soundness, size and efficiency of operation. Hempell H.S. (2002) highlighted the importance of market competition in banking sector. He concluded that the competition increases the level of efficient utilisation of capital, quicker adaptation of innovations, better customer's services and better information system. Many researchers have been working on the exploration of competition by different statistical tools in banking sector in developed as well as developing nations. Berger A. and Hannan T. (1989) studied the price-concentration relationship in banking by using measures of firm efficiency to distinguish among alternative explanations of the structure-performance relationship. Hannan T. and Liang J. (1993) inferred the market power from time-series data in the case of the banking firm. Rhoades S. A. (1995) and Hannan T. (1997) used Herfindahl-Hirschman Index to examine the market share

inequality. Boot A. and Thakor A.V. (2000) found increase in borrower's welfare due to increase in competition. They favoured the monopoly in the banking system. Bikker Jacob A. and Haaf Katharina (2002) investigated the collusive behaviour among larger banks in a highly concentrated market with the help of H statistics (Panzar and Rose (1987)). They concluded that collusive behaviour increases the market performance. Casu B. and Girardone C. (2004) found inverse relationship between competition and efficiency. They concluded that increase in market power with specific bank characteristics is a driver to the poor performance. Leuvensteijn M., Bikker J.A., Rixtel A. and Kok-Sorensen C. (2007) investigated the level of competition with Boone indicator in Euro area, UK, US and Japan. They found more exposure of competition from capital markets and foreign banks in banking sector. Maslovysh M. (2009) also gave similar finding in Ukrainian loan market. Vadym Trembovetskyi (2010) applied Panzar and Rose's H Statistics to evaluate the degree of competition in Ukrainian banking system. He found monopolistic competition in Ukrainian banking system. Bikker J.A. (2003), Classens S. and Laeven L. (2003) concluded that Herfindahl-Hirschman Index is weaker indicator of competition. That is why the entropy index was also calculated in the Dangi (2011) study to properly explore the level of competition along with the Herfindahl-Hirschman Index, exponential index and Gini Coefficient. The dynamics of competitiveness in Indian Banking Industry was explored and it was found that there was fair degree of competition among Indian commercial banks. But impact of the financial crisis on the competition level of the Indian banking industry was not covered. The present treatise

is an attempt to analyse the impact of global financial crisis on the competitive dynamics of scheduled commercial banks operating in India with the help of entropy index, Herfindahl–Hirschman Index, exponential index and Gini Coefficient.

### Objectives Of The Stud

The main objective of the present study is to explore the impact of global financial crisis on competition among commercial banks operating in India.

### Data

The present treatise emphasizes on the in-depth study of dynamics of competitiveness in three periods viz. pre crisis period (i.e. from April 2004 to March 2007), crisis period (i.e. from April 2007 to March 2010), and post crisis period (i.e. from April 2010 to March 2014). The study covers all public sector, private sector and foreign commercial banks operating in India. The data has been taken from various issues of Quarterly statistics on deposits and credit of scheduled commercial banks.

### Methodology

Researchers have applied varied statistical tool to explore the competition. The review of literature indicates that there is no consensus on a single index that completely explores the level of competition. White (1982), Kwoka (1995) had applied the **Entropy index** to measure the *ex-ante* expected information content as:

$$E = - \sum_{i=1}^n s_i \log s_i \quad (1)$$

If the source  $S$  of symbols are from an ensemble  $\{s_1, s_2, \dots, s_N\}$ , then the equation for average information per symbol is:

$$E = - \sum_{k=1}^N \Pr\{S_k\} \log \Pr\{S_k\} = - \sum_{k=1}^N \Pr\{S_k\} (-\log \Pr\{S_k\}) \quad (2)$$

The entropy of the source  $S$  is:

$$H\{S\} = - \sum_{k=1}^N \Pr\{S_k\} \log \Pr\{S_k\} \quad (3)$$

The information content has been studied by calculating the maximum entropy and minimum entropy. In case of uncertainty all signals (positive or negative) are equally likely and there is no ability to guess. Minimum entropy is achieved when only one symbol is certain and the other symbols are impossible i.e. complete certainty. Adelman (1969) presented the **Herfindahl index** (HHI) in form of mean and variance of distribution. This index is defined as:

$$E = - \sum_{i=1}^n s_i^2 \quad (4)$$

Where ' $s_i$ ' = firm's share in the market

$N$  = number of firms in the industry

This index measures the size of all firms in relation to the industry as whole. HHI is an indicator of the level of competition among firms. There is inverse relationship between value of HHI and level of competition. It gives more weight to bigger firms. The value of Herfindahl index ranges from  $1/N$  to 1 whereas the value of Normalised Herfindahl index ranges from zero to one. This index is computed as:

$$H^* = \frac{(H - \frac{1}{N})}{(1 - \frac{1}{N})} \quad (5)$$

where  $N$  = number of firms in the market

$H$  = Herfindahl Index.

The **Gini coefficient** is used to measure equality or inequality. It is the ratio of the area lying between the equality line and Lorenz curve over the total area under the equality line. This ranges from 0 to 1. Its zero value indicates complete equality. This coefficient is further used to calculate the **Concentration Coefficient** with the help of following equation:

$$C = n/(n-1) * G \quad (6)$$

### Competition Scenarios

The conditions in the banking industry have changed and are changing all over the world. The economic reforms and in particular



financial sector reforms have altered the atmosphere in which the participants operate in India. The present treatise calculate entropy, exponential index, herfindahl index, Gini coefficient and concentration coefficient of all scheduled commercial banks operating in India from advances to explore degree of competition in Indian banking industry during pre-crisis, crisis and post crisis period. Table 1 portrays the results of different statistical competition indicator tools:

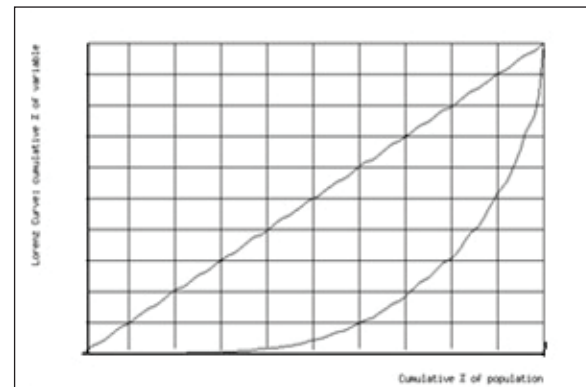
**Table 1: Competition Statistical Measures of Scheduled Commercial Banks**

MEASURES	Pre-crisis Period	Crisis Period	Post-crisis Period
Entropy	3.5041	3.4669	3.4858
Maximum Entropy	4.4188	4.3407	4.4707
Normalized Entropy	0.7930	0.8028	0.8084
Herfindahl	0.0506	0.0520	0.0507
Normalized Herfindahl	0.0390	0.0394	0.0385
Exponential Index	0.0301	0.0309	0.0308
Gini Coefficient	0.6838	0.6941	0.6868
Concentration Coefficient	0.6922	0.6930	0.6927

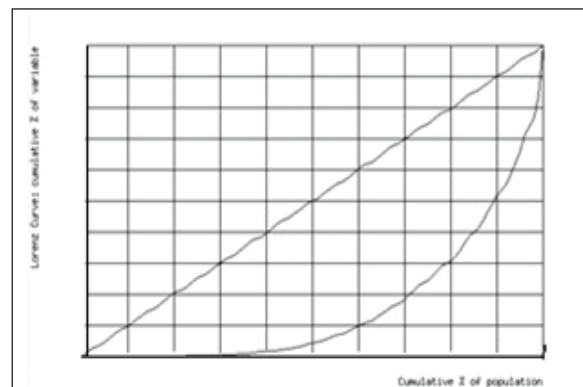
The value of herfindahl index as well as of Gini coefficient is far less than one that clearly rejects the monopoly in the Indian banking sector. There has been fair level of competitiveness in the Indian banking sector. The statistical results indicate the fall in level of competition among all commercial banks operating in India during crisis period as there is decline in the value of entropy and rise in the value of herfindahl index, exponential index, Gini coefficient and concentration coefficient in the crisis period as compared to pre-crisis period. The level of competition rises during the post crisis period as there is rise in the value of entropy and decline in the value of herfindahl index, exponential index, Gini coefficient and concentration coefficient in the post-crisis period as compared to crisis period. Chart 2, 3 and 4 displays the Lorenz

curve, concentration in terms of relative entropy and concentration in terms of cumulative entropy for pre-crisis period, crisis period and post-crisis period respectively.

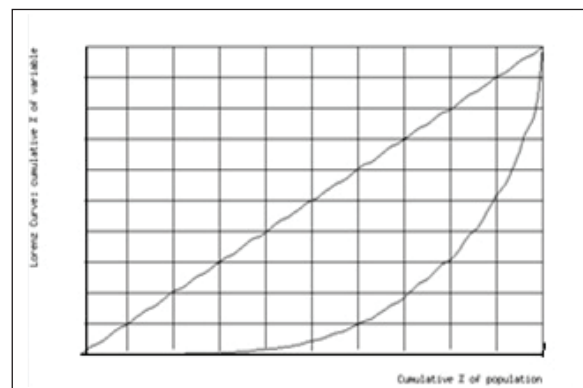
**Chart 2: Lorenz Curve of Scheduled Commercial Banks**



a) Pre-crisis Period

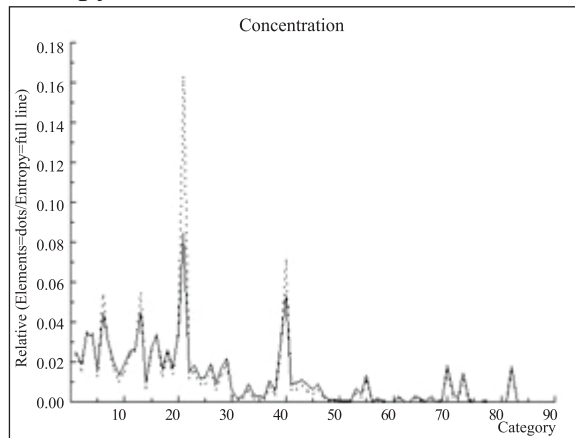


b) During crisis



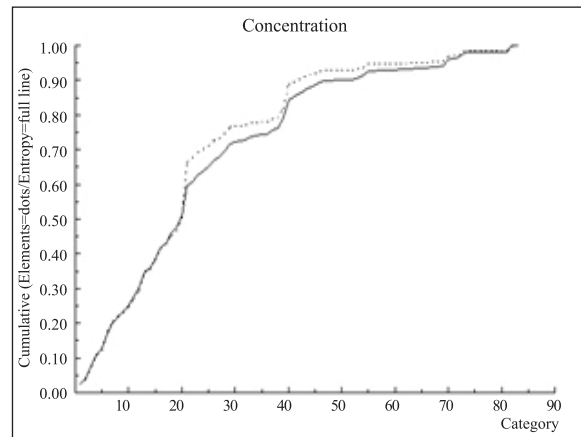
c) Post-crisis Period

**Chart 3: Concentration in terms of relative entropy**

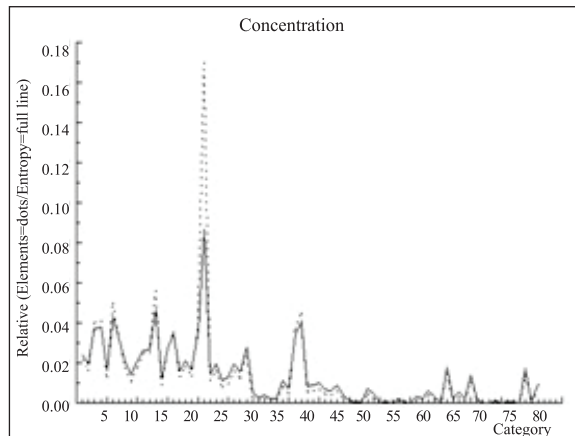


a) Pre-crisis Period

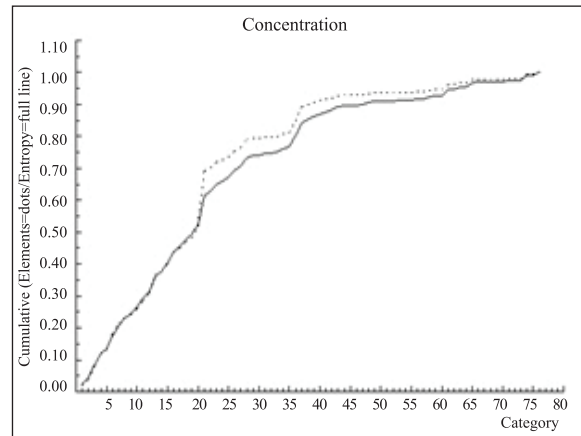
**Chart 4: Concentration in terms of cumulative entropy**



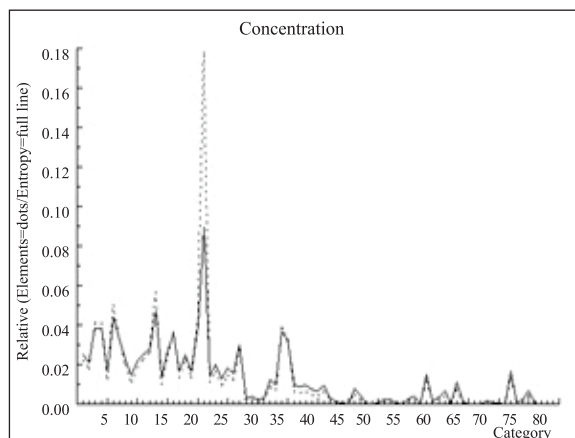
a) Pre-crisis Period



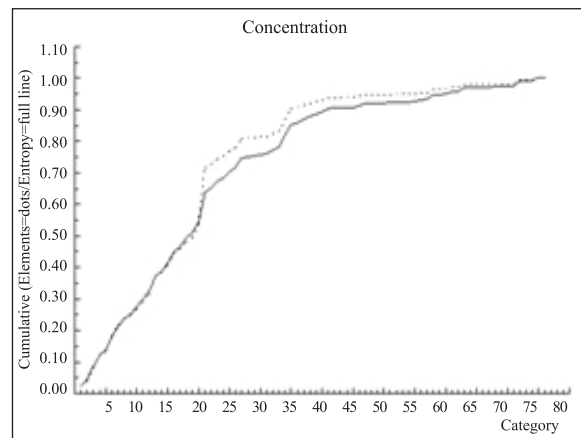
b) During crisis



b) During crisis



c) Post-crisis Period



c) Post-crisis Period

The pictorial presentation of Lorenz curve, concentration in terms of relative entropy and cumulative entropy also portrays the same results. So, it can be concluded that there is decline in the level of competition in the crisis period as compared to pre-crisis period and rise in the level of competition in the post-crisis period as compared to crisis period. Indian banking sector has also encountered some mergers and some new entries in pre-crisis, crisis and post crisis period. Table 2 exhibits the number of commercial banks operating in India:

**Table 2: Number of Commercial Banks Operating in India**

Banks	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-12	2013-14
Public sector banks	27	28	28	28	27	27	26	26	26	26
State Bank of India & associates	7	8	8	8	7	7	6	6	6	6
Nationalized banks	19	19	19	19	19	19	19	19	19	19
IDBI Bank	1	1	1	1	1	1	1	1	1	1
Private sector banks	29	29	29	22	22	22	21	20	20	20
Old private sector banks	20	20	20	15	15	15	14	13	13	13
New private sector banks	9	9	9	7	7	7	7	7	7	7
Foreign banks	31	31	31	30	32	32	36	41	43	43
<b>Total</b>	<b>77</b>	<b>78</b>	<b>78</b>	<b>80</b>	<b>81</b>	<b>81</b>	<b>83</b>	<b>87</b>	<b>89</b>	<b>89</b>

Source: Compiled from Report on Trend and Progress of Banking in India of RBI: 2007-08, 2008-09, 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14.

There is decline in the number of public sector and private sector commercial banks over the

period covered in the present treatise. The main reason for the decline in the number is the mergers in the public sector and private sector commercial banks in India. There has been continuous rise in the number of foreign banks over the period covered in the present treatise. However, the rise in the post crisis period is more as compared to pre-crisis and crisis period. New foreign banks have been entering in India during post crisis period due to higher performance of banking sector as compared to other markets. These new entries of foreign banks in Indian banking sector have raised the level of competition in the post-crisis period as compared to crisis period.

#### Discussion:

Hempell H.S. (2002), Berger A., and Hannan T. (1989), Hannan T., and Liang J. (1993), Bikker Jacob A. and Haaf Katharina (2002), Casu B. and Girardone C. (2004), Leuvensteijn M., Bikker J.A., Rixtel A. and Kok-Sorensen C. (2007), Maslovyh M. (2009), Vadym Trembovetskyi (2010) found the absence of perfect monopoly in banking sector in many developed and developing nations. The results of present treatise also clearly reject the monopoly in the Indian banking sector as the value of herfindahl index as well as of Gini coefficient is far less than one. Researchers like Boot A. and Thakor A.V. (2000) favoured the monopoly in the banking system. But many favoured the competition in banking sector for enhancement of banks' efficiency. Even consumers of banking services are also forcing the pace of competition on price, product and quality products. The banking sector reforms in India have been basically aimed at making this sector more strong, diverse and competitive. Banking industry in India has established a sound track record of innovation and value creation even during the global crisis in late 2000s. The present treatise

attempts to statistically analyse the impact of global financial crisis on the competitive dynamics of Indian commercial banks.

### Conclusion

The Indian banking system has peculiar features like regulatory coverage, transparency in reporting procedures, recapitalisation, sector consolidation, freedom to deploy capital and good corporate governance. These features have enhanced the competitive element in the market especially through the entry of new banks. The statistical results of the present treatise clearly reject the monopoly in the Indian banking sector. The decline in the value of entropy and rise in the value of herfindahl index, exponential index, Gini coefficient and concentration coefficient in the crisis period as compared to pre-crisis period indicate the fall in level of competition among all commercial banks operating in India during crisis period. There is rise in the level of competition during the post crisis period as the value of entropy increases and the value of herfindahl index, exponential index, Gini coefficient and concentration coefficient decreases in the post-crisis period as compared to crisis period. So, there is decline in the level of competition in the crisis period as compared to pre-crisis period and rise in the level of competition in the post-crisis period as compared to crisis period. There have been new entries of foreign banks over the period covered in the present treatise. However, more foreign banks entered in India during the post crisis period as compared to pre-crisis and crisis period. New foreign banks have been entering in India during post crisis period due to higher performance of banking sector as compared to other markets. These new entries of foreign banks in Indian banking sector have raised the level of competition in the post-crisis period as compared to crisis

period. The factors responsible for competitive environment in Indian banking sector are large size of market, high rate of industry profitability as compared to international standards, rapid technological change, product innovations, ease in entry norms and institutional innovations. These results may help investors, bankers and policy makers to develop their plans and strategies for Indian banking sector. The impact of global financial crisis on competition level may be used to frame policies and plans for further improvement in Indian banking sector.

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## **A Study on The Regional Rural Banking of The North-East Region of India**

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### **Abstract**

*This paper particularly focuses on the working of RRBs in the north-east region of India. Emphasis has been put on the branch expansion, deposit mobilization and occupation wise credit delivery in the region by the RRBs for its local development. The compound annual growth rate and correlation figure has been found out to understand the operation of RRBs in the region. At the same time to grasp the productivity performance, branch productivity and staff productivity for the year 2010 has been calculated for the various existing RRBs of the N. E region. The current study confirms that business per branch and business per employee in the region is far lower than the national level figure of all the RRBs in the country.*

**Key words:** RRBs, NER, Branch Expansion, Deposit Mobilization, Credit Channelization, Branch Productivity, Staff Productivity

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### **Introduction**

The north-eastern region (NER) comprised of eight sister states of India. These eight sisters are Assam, Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Nagaland, Tripura and Sikkim. This region constitutes 8 per cent of the geographical area which covers 3.73 per cent of the population and credit flow to the region for agriculture and allied sectors comprised of less than 0.50 per cent of the country as a whole (RBI, 2007). In the region, the network of commercial bank is not widely spread. The concentration of commercial banks branches are mostly in the state of Assam. Thus rural banking institutions have a greater responsibility for the development of the region. In NER, there are eight numbers of RRBs with two in Assam and one each in other six states. Out of eight RRBs in the region, five number of RRBs are sponsored by

the State Bank of India while three number of RRBs in the region are sponsored by United Bank of India. At present, there are 675 number of RRBs branches in the region which covers 62 districts out of 79 districts. The state of Assam is having the largest network of 401 number of RRB branches, followed by Tripura (104), Mizoram (59), Meghalaya (55), Manipur (28), Arunachal Pradesh as on March, 2010 (RBI, 2010). Till now Sikkim does not have any regional rural bank.

### **Review of Literature:**

A wide body of literature exist dealing with the various aspects of the working of RRBs both in India and as well in the north-eastern region. A brief review of these literatures is highlighted in the following paragraph to identify the significance of the present study. The Narasimham Committee (1998)

emphasized that 'while discharging RRBs functions as purveyors of rural credit and mobilizes of rural savings, RRBs should not ignore the importance of financial viability and operational efficiency. The productivity, profitability and solvency of the RRBs must be maintained and sustained to enable them to function as an effective and efficient institution of rural credit. Naidu (2001) viewed that until and unless the RRBs functionaries serve the rural poor with urge and devotion, mere cosmetic changes would pay little in revamping the present scenario. Pati (2005) studied the economic viability of RRBs in general and Subansiri Gaonlia Bank (SGB) of Assam in particular. He found that the banks are facing the problem of loan recovery and fresh accretion in NPAs, lower profitability and the management problem. His study suggested that proper management of spread and burden will improve the performance of the bank. Tasi (2006) studied the role of RRBs in general and Arunachal Pradesh Rural Bank in particular. The study dealt with the performance evaluation of Arunachal Pradesh Rural Bank (APRB) for the economic development of the state. The study has ignored the technical parameters of banks rather it has assessed role of RRBs in economic development in general. The financial viability and possible restructuring of RRBs was studied by Misra (2006). He has categorized RRBs into profit making and loss making. He recommended sponsor bank for the loss making RRBs could be given time to improve the performance. The paper has also enquired the factors that influence the performance of RRBs. Singh and Singh (2009) in their paper examined the recovery performance of Manipur Rural Bank. The study observed that the repayment of loans mainly depends on proper utilization of the

loan amount, supply of quality assets, generation of sufficient income from schemes, availability of infrastructural and marketing, facilities, willingness to repay, continuous supervision and follow-up visits etc. Reddy and Prasad (2011) in their evaluative study observed that these banks penetrate every corner of the country and have been extending a helping hand in the growth of the economy. Despite the RRBs journeyed over three decades, they have achieved performance to the expected level quantitatively but not turning towards sound financial management and productivity. He made an attempt to discuss the financial performance of selected regional rural banks during the post reorganization period by using the technique of CAMEL Model. Again Kumar and Sharma (2011) on the comparative study of Himachal Gramin Bank and Parvatiya Gramin Bank found that the Parvatiya Gramin Bank is more conservative as compared to the Himachal Gramin Bank with regard to NPAs' management. It is because NPAs to total assets ratio for the Parvatiya Gramin Bank has decreased during the last few years of the study. This may be due to better management of NPAs by the bank and the use of better methods of loan recovery. Although some studies have been made to understand the working of RRBs in the North-East Region but they are mostly of the analysis of a particular RRB belonging to a state. Therefore here an attempt has been taken to understand the working position of RRBs belonging to the region in combination. The following paragraphs have highlighted the working of RRBs in north eastern region on the basis of operational parameters of banks like branch expansion, deposit mobilizations, occupation wise credit channelization and productivity performance in terms of branch productivity and staff

productivity etc.

For the study purpose data has been taken for the 11 year period from 2000 to 2010. The basic source of data collection is from Basic Statistical Return of Scheduled Commercial Banks, RBI for various years. At the same time some other publications of RBI and the several reports of NABARD are studied intensively.

### **Branch Expansion, Deposit Mobilization and Credit Channelization of RRBs in North Eastern Region:**

The branch expansion, deposit mobilization and credit extended of RRBs are presented in table-1. It is revealed from the table that in March 2000, there were 661 numbers of branches of RRBs functioning in the region. The numbers of branches have increased to 675 in March 2010. It shows that over the period of 11 years only 14 additional branches of RRBs were established in the region. The deposit mobilization of RRBs in the NER was Rs.1, 31,578 lakhs in March 2000 which has increased to Rs.6, 74,572 lakhs in March 2010 recording a 5.13 fold increases. Similarly, the deposit per branch in the region increased from Rs. 199.06 lakhs to Rs. 999.36 lakhs during the same period. In case of credit channelization, the total amount of credit provided by RRBs in NER was Rs. 39,937 lakhs in March 2000 increased to Rs.3, 03,162 lakhs in March 2010. It is also observed that the compound annual growth rate (CAGR) for total deposit 16.02 per cent and for deposit per branch 15.80 per cent is lower than the growth of total credit (CAGR=20.23 per cent) and for growth of credit per branch (CAGR= 20.0 per cent).

**Table-1: Branch Network, Deposits and Credit of RRBs in North East Region (As on March) (Amount Rs. In Lakhs)**

Year	No. of Branches	Total Deposits	Deposit per Branch	Total Credit	Credit per Branch
2000	661	1,31,578	199.06	39,937	60.42
2001	663	1,50,454	226.93	46,879	70.71
2002	655	2,02,676	309.43	62,114	94.83
2003	654	2,27,619	348.04	76,627	117.17
2004	657	2,66,208	405.19	96,568	146.98
2005	659	2,95,009	447.66	1,21,826	184.86
2006	656	3,24,812	495.14	1,50,710	229.74
2007	655	3,76,121	574.23	1,86,150	284.20
2008	672	4,29,170	638.65	2,16,865	322.72
2009	684	5,52,462	807.69	2,47,772	362.24
2010	675	6,74,572	999.36	3,03,162	449.13
Compound Annual Growth Rate	-	16.02	15.80	20.23	20.0

**Source:** RBI, Basic Statistical Return of Scheduled Commercial Banks, Various Issues

To know the nature of relationship between growth of deposits and growth of advances in the RRBs of NER, coefficient of correlation has been calculated. For this purpose, deposit per office and advance per office have been considered for the period of 11 years from 2000-2010. The result obtained as under-

$$r = 0.986$$

$$t = 17.40 \text{ (cal.)}$$

$$t_{0.05}(9 \text{ df.}) = 1.833 \quad t_{0.01}(9 \text{ df.}) = 2.821$$

The analysis indicates that there is high correlation (0.98) between deposit and advances in the RRBs of the NER. At the same time it is also significant at 5 per cent and 1 per cent level of significance. It signifies that along with the increase in deposits there is an equivalent increase in the advances of the RRBs in the region. Hence, the RRBs in north east are channelizing exactly the proportionate amount in the region what they mobilized from the region.

### **Credit Delivery of RRBs in NER:**

In order to study the credit allocation scenario of the RRBs in NER, the occupation wise data relating to credit

schedule of RRB in the region is presented in table -2.

**Table-2: Credit Channelization of Regional Rural Banks in North East Region (As on March)**  
(Amount Rs. In Lakhs)

Sr. No.	Occupations	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Agriculture	99.84 (24.99)	10204 (21.73)	11170 (17.98)	11697 (15.25)	13173 (13.75)	18423 (15.10)	22936 (15.20)	29861 (16.0)	35897 (16.54)	36059 (14.53)	46743 (15.42)
2	Industry	4018 (10.06)	5293 (11.27)	5988 (9.64)	6513 (8.49)	7355 (7.68)	12380 (10.14)	11351 (7.52)	17601 (9.43)	26002 (11.98)	25811 (10.40)	33582 (11.08)
3	Transport Operators	4638 (11.61)	5129 (10.92)	5100 (8.21)	3884 (5.07)	4506 (4.70)	4236 (3.47)	4115 (2.73)	4168 (2.23)	3914 (1.80)	4590 (1.85)	8346 (2.75)
4	Professional & other services	1616 (4.04)	1397 (2.98)	1628 (2.62)	2443 (3.19)	2819 (2.94)	2820 (2.31)	4244 (2.81)	5882 (3.15)	7091 (3.27)	7855 (3.16)	9128 (3.01)
5	Personal Loans	8988 (22.49)	13278 (28.28)	24575 (39.57)	37274 (48.61)	51065 (53.31)	62770 (51.43)	81894 (54.27)	98001 (52.52)	98256 (45.27)	119552 (48.16)	131579 (43.40)
6	Trade	10111 (25.30)	10747 (22.89)	11732 (18.89)	11722 (15.29)	13062 (13.64)	13946 (11.43)	16500 (10.93)	19225 (10.30)	24374 (11.23)	28212 (11.36)	39786 (13.12)
7	Finance	-	11 (0.02)	20 (0.03)	85 (0.11)	99 (0.10)	173 (0.14)	265 (0.18)	384 (0.21)	2246 (1.03)	9662 (14.53)	46743 (15.42)
8	All others	602 (1.51)	889 (1.89)	1899 (3.06)	3062 (3.99)	3709 (3.87)	7294 (5.98)	9601 (0.36)	11460 (6.14)	19246 (8.87)	16509 (6.65)	23087 (7.62)
Total Bank Credit		39957 (100)	46948 (100)	62112 (100)	76680 (100)	95788 (100)	1 22042 (100)	150906 (100)	186582 (100)	217026 (100)	248250 (100)	303162 (100)

(Figures in the brackets indicates the perecentage share of total bank credit)

Source: RBI, Basic Statistical return of Scheduled Commercial Banks, Various Issues

The amount of credit for agriculture was Rs. 9,984 lakhs in march 2000 which has increased to the total of Rs. 46,743 lakhs. The percentage share to total credit has decreased from 24.99 per cent to 15.42 per cent over the years. The amount of industrial credit of RRBs and its percentage share in NER have increased from Rs 4,018 lakhs (10.06%) to 33,582 lakhs (11.08%). Similarly the total bank credit for transport operators in the region was Rs.4, 638 lakhs in March 2000 which increased to Rs. 8,346 lakhs in March 2000. It is observed that over the years there has been almost continuous decrease in the percentage share of credit for transport operators and reached to a negligible fraction ie, 2.75 per cent from 11.61 per cent over the years. Similarly the credit allocation of the RRBs for professional and other services has

increased from Rs.1, 616 lakhs to Rs.9,128 lakhs but in percentage figure it has decreased from 4.04 per cent to 3.03 per cent. In case of personal loans the amount has increased tremendously from Rs. 8,988 lakhs (22.49%) to Rs. 1, 31,579 (43.40%). Similarly in case of trade the credit channelization in 2000 was Rs. 10,111 lakhs and reached to Rs. 39,786 lakhs in 2010. In percentage figure it has actually declined from 25.30 per cent to 13.12 per cent over the years. In case of finance and other areas also it indicates of increased in amount as well as in percentage figure over the study period. As a result, the total amount of outstanding credit of RRBs in NER was Rs 39,957 lakhs in March 2000, increased remarkably and reached to Rs.3, 03,162 lakhs in March, 2010.



in March, 2010.

### Productivity Performance of RRBs in North East:

Table-3 shows the position of branch productivity and staff productivity of the RRBs in the North-Eastern Region as on March, 2010. As far as branch productivity is concern Tripura Grameen Bank is at the top with business per branch of Rs. 2567.42 lakhs in the N.E Region. Tripura Grameen Bank is also doing better than RRBs as a whole in the country. Manipur Rural Bank is at the lowest level for branch productivity within the region which business per branch is Rs.438.33 lakhs. The average branch productivity of RRBs at the NER is Rs.1138.23 lakhs and for all India level it is Rs.1471.93 lakhs. It also indicates that the average branch productivity of RRBs at NER is behind the average branch productivity of RRBs as a whole in the country.

**Table-3: Productivity of RRBs of NER as on March, 2010 (Amount Rs. In Lakhs)**

Name of RRBs	Branch Productivity (Business per branch)	Staff Productivity (Business per employee)
1. Arunachal Pradesh Rural Bank	963.53	298.56
2. Assam Gramin Vikas Bank	1427.13	298.56
3. Langpi Dehangi Rural Bank	864.90	298.56
4. Manipur Rural Bank	438.33	298.56
5. Meghalaya Rural Bank	1259.63	298.56
6. Mizoram Rural Bank	1166.05	298.56
7. Nagaland Rural Bank	418.86	298.56
8. Tripura Gramin Bank	2567.42	298.56
<b>RRBs at NER</b>	1138.23	268.26
<b>RRBs as a Whole</b>	1471.93	330.02

**Source:** RRB Monitoring, Key Performance Indicators of RRB, Key Statistics 2009-10

In case of staff productivity it is again the Tripura Grameen Bank which is at the top with the business per employee of Rs.437.76 lakhs and performing better than the all India RRBs as whole. The lowerst performance for staff productivity in the region is the Nagaland Rural Bank with the business per employee of Rs. 113.20 lakhs. In case of staff productivity also the performance of RRBs at NER is lower than the RRBs as a whole in the country. The average staff productivity of RRBs at NER is Rs.268.26 lakhs and for all india level RRBs as a whole it is Rs.330.02 lakhs.

**Findings:** Some of the important findings of the current study are the following.

- In the region the penetration of the RRBs is not healthy. Over the period of 2000-2010 there is only an addition of 14 branches. Moreover the concentration of RRBs branches is mostly in the state of Assam only. Except Assam and Tripura other six states have less than 100 branches. In the region still there are 17 districts which are outside the purview of RRBs system. Sikkim till now does not have any RRBs in the state.
- Over the years deposit per branch is increased by 5.02 times while the credit per branch credit has increased by 7.43 times. The correlation study with high value also signifies that along with the increase in deposits there is fair rate of increase in the advances of the RRBs in the region.
- During the formation of RRBs it was hoped that RRBs will serve the village masses providing agricultural loans and loans for other micro industries. The credit channelization table shows that although there is increase of total amount of credit for agricultural sector but in percentage figure to total credit there is actually continuous declining over the

years. It indicates that RRBs in the region are not serious for providing loans to the agricultural segment.

- The credit channelization table also indicates that RRBs in the region are highly increasing their portfolio for personal loans. In 2000 it was Rs. 8,988 lakhs (22.49%) which increased to 1,31,579 lakhs (43.40%) in 2010, which is near to double. This increase of credit by the RRBs may be due to good return and easy recovery of the loan.
- Over the years the total bank credit of the RRBs in the region has increased from Rs. 39,957 lakhs to Rs. 30,3,162 lakhs which is which is 7.59 times of the original amount of the year 2000.
- As far data of 2009-10 shown in table-3 the Tripura Grameen Bank is the only RRB in the region which is having higher branch productivity and staff productivity than the national average RRBs as a whole.
- The same table also indicates that the average branch productivity and the average staff productivity of the N.E Region are lower than the national average of RRBs as a whole.

### **Conclusion:**

Financial inclusion is one of the important conditions for the development of the North-East Region. Because of the hilly geographical surrounding and the lack of good communication facilities the entire region is still highly backward both industrially and financially. Most of the commercial banks do not want to expand its branches due to low business viability in the region. Thus only way is to strengthen the regional rural banking and co-operative banking structure to strengthen the economy of the region. The region is highly rich in natural resources especially in forest based

resources and the harnessing of these resources could give a new direction in the way of employment and the income generation and poverty reduction of the in the area. Financial institutions like RRBs need to come up with new viable projects which are poor people friendly and able to utilize these resources which are lying idle in the diversified areas of the region.

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