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## **RELATIONSHIP OF CREATIVITY AND TEAM EFFECTIVENESS: AN EMPIRICAL STUDY**

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### **Abstract**

*Enhancing creativity, team efficacy and team effectiveness are the paramount interest of the team based organization to achieve sustainability. This study focuses upon identifying the relationship of freedom, communication and team creativity with team efficacy and team synergy. A sample of thirty eight executives of team based organization was selected through simple random sampling technique and a structured questionnaire was distributed to collect the data for the study. A structural equation model using Partial Least Square (PLS) method reveals the significant relationship of freedom, communication and team creativity with team efficacy and team synergy.*

### **Introduction**

In competitive world, creativity becomes the vital trait for any successful team performance. There is an important need for empirical study on the extent of creativity enabled in an organization and within the individuals, and its influence on the effectiveness of teams. This study attempts to find the effect of creativity on the team effectiveness. Improving the creativity of employees is important if organizations are to compete successfully in today's globally competitive environment. In this study, based on the previous researches, three dimensions have been identified as independent variables to measure creativity of employees in an organization i.e. Freedom, Communication and Team creativity and their relationship with dependent variable i.e. Team efficacy and Team synergy, the outcome variable.

Freedom is the level of autonomy and openness within the team which will give liberty to perform by their own potential (Geert Vissers and ben Danbaar 2002). Communication is another important component of providing a work atmosphere, in which employees can feel motivated to be creative (Rebecca A. Thacker 1997). Group creativity is influenced by the Individual and the group characteristics that influence creativity of the individuals and can be

described in terms of generation of ideas or solutions (Thomas B, Merryl J & Cynthia M 2004). Billy Bateman, F Collin Wilson and David Bingham (2002) define team effectiveness by a cluster of 6 basics core themes: (1) Team synergy which is the sense of purpose shared within members, (2) Performance objectives established by the team and are monitored on an ongoing basis, (3) Skills of members in order to be competent in their work, (4) Use of resources which includes buildings, people and equipment usage, (5) Innovation for improving products and systems of work and (6) Quality which designates standards of works. However, this study focuses on the two important dimensions i.e. Team efficiency and Team synergy. Team efficiency examines whether team members are adequately trained and are competent to do their work and their flexibility between areas of work. The notion of creative synergy is the idea that a group of people has produced something that no one would have been able to do alone. This may result from the combination of personality characteristics, or the interpersonal interaction that promotes creativity (M.S Kim, Kim & T.H Kim 2007).

### **Review of Literature**

Geert Vissers and ben Danbaar (2002) demonstrated that the best way of optimizing creativity in teams is to support the openness and the freedom of the group members, which act as a strength for the activities they perform. Moreover Jane Collier and Rafael Esteban (1999) precise that freedom is a mean of releasing human potential while working in group. In Greg L Stewart (2006), investigating the relativeness between the team features and the team efficacy, found that increased level of autonomy in team corresponds with an improved degree of efficacy. In another words, teams with more autonomy are given increased freedom to make decisions, to plan work activities, and to adapt to changing conditions hence proving their efficacy in performing. The study of Gabriele Piccoli and Anne Powell(2004) found that communication increases information sharing and its coordination within team s .Expertise in team coordination ,group thinking and the managerial skills, hence efficacy within the work group, are facilitated by it. Sujin K. Horwitz and Irwin B. Horwitz (2007) relate that work teams with diverse background, knowledge and expertise augment their competitive advantage by improving the efficacy of their internal operations. But excess in heterogeneity of teams can also engender difficulties from coordination, tension and group conflict leading to suboptimal



performance. According to Eduardo Salas and Drew Rozell (1999), team-building interventions, such as interpersonal relations, are evidently believed to lead to a substantive increase in team efficacy, by an increase in team work abilities, such as mutual supportiveness, reasoning, and individual competencies. James T. Scarnati (2001) describes synergy as a magnifying effect of each component of a work group. According to him, the quality synergy depends upon the intellectual equipment of the team members. Indeed the synergy is a benefit which is got as a result of members' knowledge, skills and experiences. Based on various literature and studies, a conceptual model considering freedom, communication and creativity of team members as independent variables and team efficacy and team synergy as dependent variable (Figure -1) is evolved and the following hypotheses are developed.

**H<sub>1</sub>:** There is a significant positive relationship between freedom and team efficacy

**H<sub>2</sub>:** There is a significant positive relationship between communication and team efficacy

**H<sub>3</sub>:** There is a significant positive relationship between team creativity and team efficacy.

**H<sub>4</sub>:** There is a significant positive relationship between team efficacy and team synergy

### **Measures and scales**

The instrument used for this study was adapted from Mando Karvelli (2008) which identifies the factors of creativity and Billy Bateman, F Collin Wilson and David Bingham (2002) for identifying the dimensions of team effectiveness. The reliability test of the instrument revealed Coefficient Cronbach's alpha is 0.92, indicating the fitness for main study.

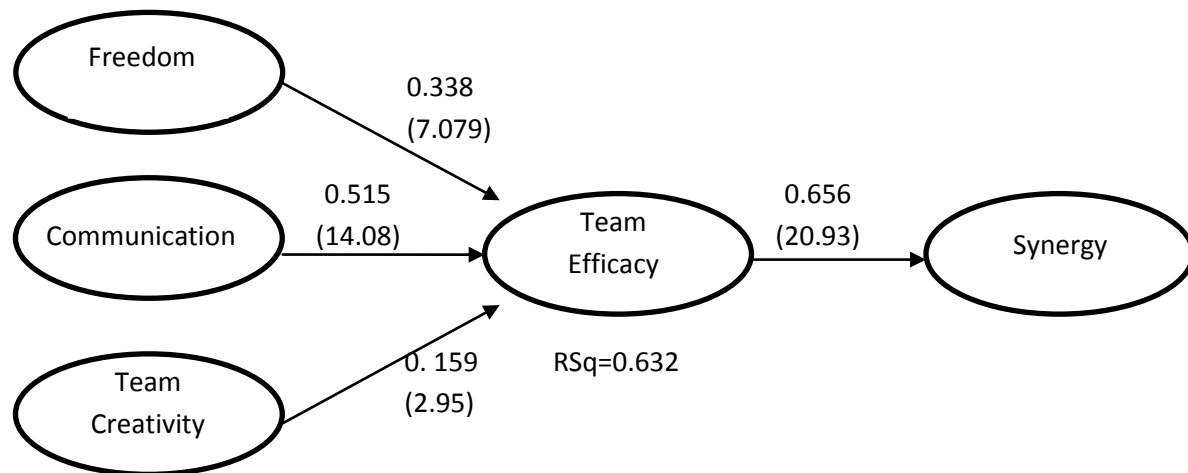
### **Profile of the sample**

The sample consists of 38 executives of team based organisation. The population is well defined and the source list was available for the study hence simple random sampling was adopted to select the sample from the given population. This includes employees of junior, middle, and senior level management. Since all the samples were in executive level, the questionnaires were distributed to each of them individually.

## Results and Discussion

The data collected were analysed using visual PLS to test the model and hypotheses that can explain the relationship between dimensions of creativity and team effectiveness. Figure 1 depicts a fully specified model with path coefficient between dimensions under study. The estimate for relationship between the dimensions creativity and team effectiveness is shown in table 1, indicating the different paths of the structural model and its significance. The path coefficient between freedom, communication and team creativity and the team effectiveness dimension of team efficacy is positively significant (at 0.01 levels) implying higher level of autonomy, interaction and creativity enhances the team efficacy. The path coefficient between team efficacy and team synergy is positively significant (at 0.01 levels) and predicts 65.60% variance in synergy. Hence, the research hypotheses are accepted.

**Fig 1: Structural Equation Model**





**Table 1: Estimates of creativity and team effectiveness**

Path	Entire Sample estimate	't'-Statistic
FRE->EFF	0.3380	7.0791
COM->EFF	0.5150	14.0823
TC->EFF	0.1590	2.9521
EFF->SYN	0.6560	20.9334

### **Managerial implications**

This study made a significant attempt in understanding the relationship of the dimensions of creativity with team efficacy and team synergy functioning thus contributing towards theoretical formulation of team functioning. The result of this research has significance for the practitioners and the HR managers who should focus on providing an environment and climate that encourages creativity. As stated in the study, cascade of creative efforts can be possible only when sufficient height of autonomy is allowed in the organization: creativity, in contrast to humdrum work, cannot be forced or coerced, but has to flow out as per their abilities and intents. Allowing people to volunteer for tasks instead of assigning them and leaving them the decision power on the leeway in timing, have a significant effect on the intellectual capacity of employees. Moreover devising non evaluating meetings that will let people freewheel and proposing them a range of resource on which they can proceed on creative initiation can support freedom of employees. Communication is the fuel that powers the engine of creativity: interactive sessions can be conducted to improve creativity level such as workshop to help creative thinking, bringing guest speakers and creativity consultants or develop informal meetings where people share ways of enriching their own job creatively. The common brainstorming, the Delphi technique or even luncheon discussion activities can also be included where potential of individuals is shared and imagination is exhausted to solve a single problem. The managerial level could reward creative accomplishments by establishing an incentive program for new and productive ideas and foster daily enjoyment of intrinsic motivation.

Reduce the fear of failure among employees to encourage them to break down the barriers and produce new ideas is the challenge to be brought into the culture of the organization.

### **Conclusion and Direction for future research**

Creativity is known to be the key factor for teams to be effective and to survive in a constantly changing environment. Hence it is important for an organization to support the emergence of creativity within the individuals and the work groups, and to make it grow within the corporate culture so that to improve the whole organizational efficiency. This research addresses creativity and team efficacy and team synergy in an IT industry, to generalise these findings, research can be extended to other industries where the creativity have great impact on team outcomes. Team composition, team diversity which is not a part of this study may act as an intervening variable and have impact on team outcomes can be considered in future research. A model of team synergy considering these variables can be developed. The results of this study may differ based on the team approaches and knowledge management practices of the organization, the researchers in work teams and organizational creativity may contemplate these aspects in their study.

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## **PROBLEMS AND PROSPECTS OF WOMEN ENTREPRENEURSHIP: AN IDENTIFICATION OF THE BARRIERS**

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Kalasalingam University, Anand Nagar, Krishnan Koil.**

### **Abstract**

*Women are an emerging economic force that policy makers cannot afford to ignore. The worlds modern economy and in fact democracy depends on the participation of both sexes. An appreciation of gender issues is important when considering strategies to improve India's competitiveness in the world and ways to promote private-sector development. The main aim of this research is to find what kind of business are undertaken by women in Virudhunagar district, what are the problems they are facing and the seven barrier construct and overall benefit being women entrepreneur and challenges they are facing. This study was undertaken because of gender bias. Women are major players in the private sector, particularly in agriculture and in informal businesses. Their business is mostly traditional product and service. The ability of women to formalize and grow their businesses, to create jobs, and to enhance productivity is hampered where legal and institutional barriers exist. This research will help to create policy for the development Women entrepreneurship for the enlistment of society.*

### **Introduction**

Entrepreneurship originates from the French word entrepreneur that means "to undertake" Burch (1986). Entrepreneurship is the process of identifying new opportunities and transferring them into marketable ideas, products and services. Richard Cantillon, an Irish man living in France, was the first who introduced the term "entrepreneur" and his unique risk bearing function in economics in the early 18<sup>th</sup> century. The drive to entrepreneurship is innate to human beings, as they compete in life for profit, similar to what they do in business (Montanye, 2006). At the micro level, entrepreneurship benefits individuals or teams, at the macro level it creates and catalyzes employment and economic growth. In developing countries, small and medium enterprises are important for the economic growth and development.

Entrepreneurship supports the process of economic development, fosters economic growth, job creation, and reduces rural unemployment and migration. Small scale enterprises have been given an important place in the framework of Indian planning for both ideological and economic reasons. Women, all over the world, have demonstrated success in handling small scale projects. This study aims to find the factors inhibiting women entrepreneurship in Virudhunagar region, focusing on women entrepreneurs.

### **Review of Literature**

The number of Women entrepreneurs is rising in the global world and it accounts to more than 25% of all business (Woldie & Adersua, 2004). Walker et al. (2007) argue that historically women were "pushed" rather than "pulled" into business ownership. In recent studies it is indicated that many young women actively choose self-employment than to be an employee. In addition to this Walker et al. (2008) observe that women's preference to home-based business ownership predominantly by the flexibility afforded to lifestyle and the ability to balance work and family. Women entrepreneurs can significantly contribute in poverty reduction, mobilization of entrepreneurial initiatives, autonomy, and in accelerating the achievement of wider socio-economic objectives (Belwal & Singh, 2008). However, the contribution of women entrepreneurs depends on their performance, which in turn is affected by the underlying facilitators and barriers, understating of which is a key to nurturing a balance economy and the growth in a long run. However, women entrepreneurs in developed countries such as the US are much more ambitious in constructing a professional identity. James et al. (2006) revealed that they actively draw on role models from different domains and prefer to learn from external role models. Ashford C. Chea (2008) identified that the factors like innovation (the most influential), a business plan, a strong family support system, social networks, and professional development is helping women in starting and operating their small business. Sindhu S. Narayan and P.S. Geethakutty (2003) pointed that very high literacy rate and lack of employment opportunities paved way for many unemployed youth including women to take up small-scale business units. Kamal Naser et.al (2009) financial support from the government especially in the start-up capital is an important factor that motivates women to establish their own businesses. Self-fulfillment, knowledge, skills and experience, including relationship to

spouse/father business, are all important factors in the development of women entrepreneurs. Unlike previous research factors such social norms, market network, and competition do not seem to be barriers for women in becoming entrepreneurs. Bitange Ndemo, Fides Wanjiku (2007) Maina Evidence in the paper finds that women, whether pushed or pulled into starting an enterprise, desire to make independent decisions. Lack of resources made them dependent on their spouses, thus limiting their capacity to make independent decisions. Those pushed into setting up subsistence enterprises had greater discretion in terms of decision making compared with those who started enterprises to exploit an opportunity and whose basic needs were comfortably met by the spouse's income. Other factors determining levels of decision making include: culture, level of education and poverty. Daphne Halkias et. Al (2011) with no or few significant differences shown to exist between male and female business owners or managers once they have already started an enterprise, there is a strong indication that Africa has sizeable hidden growth potential in its women. From the results presented, it is evident that female entrepreneurship in Nigeria is driven by micro-financing as well as family dynamics that work to shape and influence the birth of a business.

### **Research Method**

The prospective women entrepreneurs were visited to reinforce good rapport and explained the objective of this study in order to get the accurate data. The personal contacts ensure the smooth collection of data. Totally 275 women entrepreneurs were contacted personally to get the information.

Namaki & Gerritson (Birley, 1988), he identifies the challenges under seven categories namely barriers of infrastructure, professional barriers, educational and training barriers, social and cultural barriers, legal barriers, behavioral constraints and role barriers. The study is carried out in Virudhunagar district to assess the obstacles faced by the women entrepreneurs while running their ventures.

The data collection method is obtained through a well structured questionnaire. The questionnaire includes the details of the demographic profiles and eight constructs.



**Table 1 Constructs**

No.	Constructs	Indicators
1	Barriers affecting Women Entrepreneur	7
2	Professional Barriers	4
3	Education and Training Barriers	4
4	Social and Cultural Barriers	4
5	Legal Barrier	2
6	Behavioral Barriers	5
7	Barriers of Role	3
8	Major Benefits being Women Entrepreneur	8
9	Major challenges	13

The main purpose of this research is to reveal to what extent these factors and components affect women entrepreneurs in Virudhunagar district. The following research questions are raised to assess the above factors. 1. What are the challenges faced by Woman Entrepreneurs in Virudhunagar district? 2. What factors inhibit the women from starting their entrepreneurial ventures? 3. How could improve the participation of women in the entrepreneurial ventures?

## **Results & Discussion**

### **Demographic profile of the respondents**

The demographic profile of the respondent's given in table 2 states that 47% of the respondents were married and 53% were unmarried. 56% of the women entrepreneurs are having primary level education and 44% are secondary level education. Marital status and education qualification are the two main influencing factors to reflect the type of business the entrepreneurs had chosen. 91% are having micro enterprise and only 8% have employed more than 10 employees. 47% of the women entrepreneurs are residing in the city and 53% are residing in the village side. As age increases the level of self confidence also increases and it is noted that 41% are less than 30 yeas and 59% are in the age group of 30-50. Experience

enhances to gain better knowledge in the respective field which ensures to gain additional benefits. 82% are having previous experience and 18% are not having previous experience.

**Table 2 Profile**

<b>Marital Status</b>	<b>Frequency</b>	<b>Percent</b>	<b>Education</b>	<b>Frequency</b>	<b>Percent</b>
Married	130	47	Primary	154	56
Un Married	145	53	Secondary Level	121	44
<b>Residence</b>	<b>Frequency</b>	<b>Percent</b>	<b>Driving License</b>	<b>Frequency</b>	<b>Percent</b>
City	130	47	Yes	58	21
Village	145	53	No	217	79
<b>Age</b>	<b>Frequency</b>	<b>Percent</b>	<b>Size of Enterprise</b>	<b>Frequency</b>	<b>Percent</b>
Less than 30 years	112	41	Micro(1-9 employees)	250	91
30-50	163	59	Small (10 - 49 employees)	25	9
<b>Previous Working Experience</b>	<b>Frequency</b>	<b>Percent</b>	<b>First Enterprise</b>	<b>Frequency</b>	<b>Percent</b>
Yes	226	82	Yes	242	88
No	49	18	No	33	12
<b>Condition of Previously owned Enterprise</b>	<b>Frequency</b>	<b>Percent</b>	<b>Nature of Owning</b>	<b>Frequency</b>	<b>Percent</b>
Are still successful	136	51	Created the company	234	85
Have been sold	135	49	Inherited family business	33	12
Total	275	100	It is a business I have bought	8	3

**Table 3: Source of Finance**

Source of Finance	Frequency	Percent
Personal savings	129	47
Loan from Banks	80	29
Both Personal Savings and Bank Loan	16	6
Borrowing from friends	9	3
Borrowing from relatives	41	15

47% of Women started their business by their own funding. Their business concentrated more on Cottage industries, retail shop; and beauty parlor. Only 29% started their business by bank loan and other sources of funds from personal savings and bank loan, borrowing from friends and borrowing from relatives.

**Table 4: Motive for starting Business**

Reasons	Frequency
Profit / making money	145
Not want to work for others	65
Want for control and freedom to make own decisions	81
Social status	97
Self - achievement	84
Confidence in the products /services offered	83

The major reason behind for starting business is to earn profit, social status and freedom to make own decisions. The various other factors like Not want to work for others, Want for control and freedom to make own decisions, Social status, Self – achievement and Confidence in the products /services offered were given less importance when compared to the profit.

**Table 5: Barriers affecting Women Entrepreneurs**

Barriers affecting Women Entrepreneurs	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Weighted Score	Weighted Average
Access to credit	113	81	32	16	32	1051	3.82
Access to technology	65	89	73	8	40	954	3.47
Guidance from institutions	65	89	49	24	49	922	3.35
Information	49	65	65	40	57	833	3.03
Government support	8	73	40	40	113	647	2.35
Industrial support	32	89	24	49	81	768	2.79
Financial support	81	81	32	8	73	914	3.32

Table 5 and figure 1 indicates that among seven components access to credit, technology effects highly but they disagree government support. 41% of the Women complained about the unavailability of capital for their projects and the limitation of financial support from institutions. They reported convincing Financial Institution and proving their business success is difficult one. 55% of Women entrepreneur agreed access to technology and related materials as barrier. So Government should take effort to reach technology and knowledge to women entrepreneur and make them participate in industrial bodies. There is a gap in knowledge sharing and transfer in of technology. 41% of women disagreed Government support as a barrier. The weighted average of 2.8 for industrial support shows that their opinion is neutral. They further reported there must be a industrial support, in providing information flows from industrial companies, They cited the unavailability of centralized modes of information and complained that most opportunities are given to the already well-established companies.

Figure 1

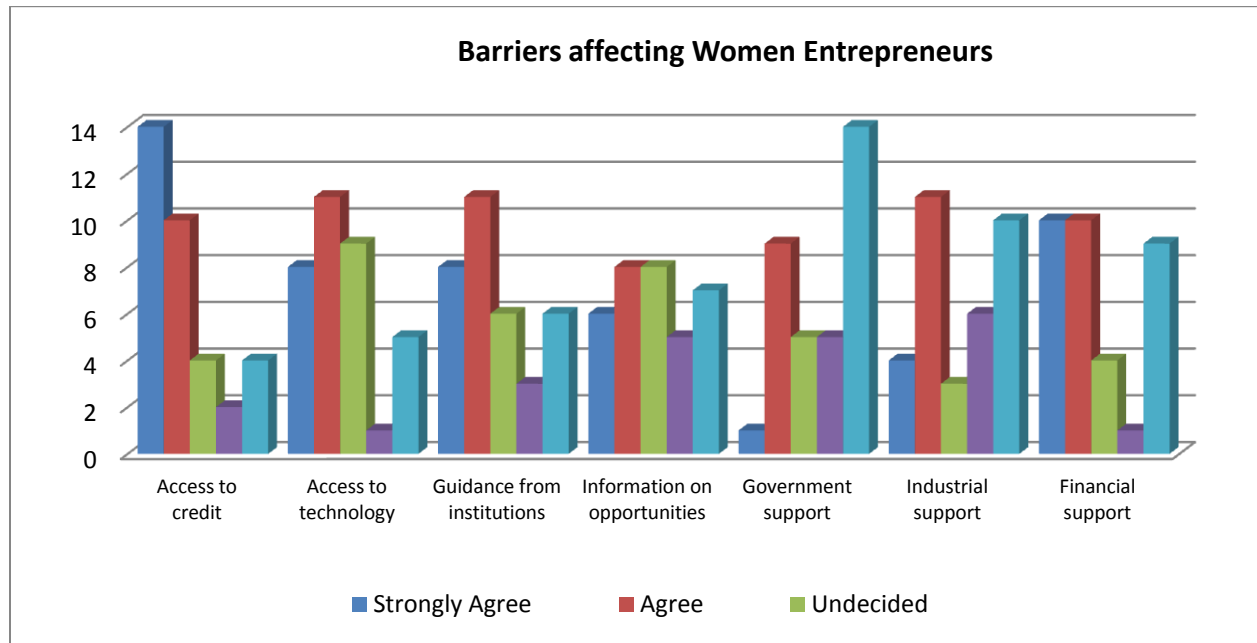


Table 6: Professional Barriers

Professional Barriers	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Weighted Score	Weighted Average
Traditional restrictions	40	113	24	8	89	833	3.0
Lack of professional education	49	105	40	32	49	898	3.3
Generation of skills	81	113	32	8	40	1011	3.7
Knowledge to collaborate	73	65	40	73	24	914	3.3

Table 6 indicates that generation of skills highly affect the women entrepreneur. Among traditional restrictions are difficulties in travelling alone, working after hours. Generation of Skills by acquiring new knowledge and training is very essential for expansion, new market and decision making. Most of the women agreed professional barriers of generation of skills affects the women entrepreneur. Traditional restriction on meeting people and collaborate.

Collaborations are affected due to weak networking or relationship between the parties and lack of good communication.

**Table 7: Education and Training Barriers**

Education and Training Barriers	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Weighted Score	Weighted Average
Training opportunities	449	146	8	24	49	946	3.4
Information on education	57	89	49	24	57	890	3.2
Time for training	40	97	73	32	32	906	3.3
Basic education	138	40	32	24	40	1035	3.8

**Table 8: Age at starting of Enterprise**

Age	Frequency	Percentage
20-25	137	50
26-30	97	35
30-35	25	9
40-45	16	6

Table 7, 8 indicates that among four components Training opportunities and basic education affect more intensively than the other two. Training opportunities are not freely available, and even if it available it is not reached to women entrepreneur. 55% of women completed only primary school and 50% women started their business at the age of 20-25. Initial period of establishing make them to concentrate more on business so they missed the opportunity of updating their skill by training and further education. Shortage of Institution offering courses on flexible time and course for the age group of above 25 affects the women for upgrading their skill.

**Table 9: Social and Cultural Barriers**

Social and Cultural Barriers	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Weighted Score	Weighted Average
Values system of society	49	49	49	49	81	760	2.8
Family structure	57	81	40	16	81	841	3.1
Gender bias	49	73	24	89	40	825	3.0
Combining family and work life	65	105	24	32	49	930	3.4

Table 9 indicates that combining family and work life highly affects women entrepreneur. But value system of the society does not affect intensively. Combining family and work life is difficult because amidst other constraints, the women find difficult to rationalize their time between their work and the family.

**Table 10: Legal Barriers**

Legal Barrier	Strongly Agree	Agree	Un decided	Dis agree	Strongly Disagree	Weighted Score	Weighted Average
Act independently	81	81	24	24	65	914	3.3
Responsibility center	49	49	121	40	16	898	3.3

Table 10 indicates that legal barriers are near to neutral position. The women entrepreneurs are exercising their rights. It clearly shows that they are able to act independently and also they take up the responsibilities to succeed in the business.

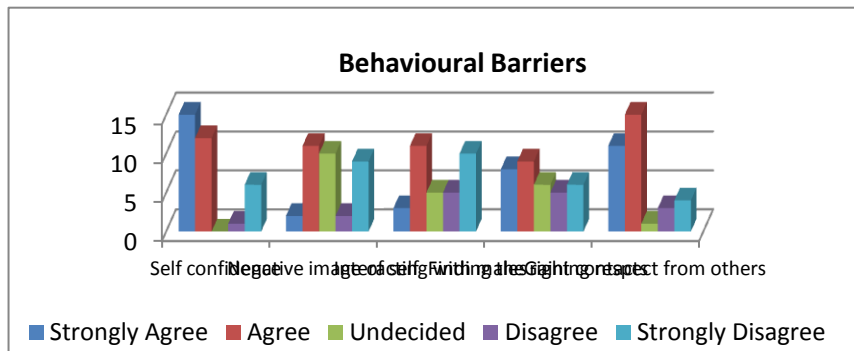


**Table 11: Behavioral Barriers**

Behavioral Barriers	Strongly Agree	Agree	Un decided	Disagree	Strongly Disagree	Weighted Score	Weighted Average
Self confidence	121	97	0	8	49	1060	3.9
Negative image of self	16	89	81	16	73	785	2.9
Interacting with males	24	89	40	40	81	760	2.8
Finding the right contacts	65	73	49	40	49	890	3.2
Gaining respect from others	89	121	8	24	32	1035	3.8

Table 11 and Figure 4 collectively indicate self confidence and gaining respect from others has been a barrier for them. Their position was near to neutral for interacting with males along with finding the right contacts affect with higher intensity.

**Figure 4**



**Table 12: Barriers of Role**

Barriers of Role and their effect on Women Entrepreneur	Strongly Agree	Agree	Un decided	Disagree	Strongly Disagree	Weighted Score	Weighted Average
Leadership and requirements	113	73	49	16	24	1060	3.9
Compatibility with the task	49	81	57	57	32	882	3.2
Pressure to achieve	97	57	32	40	49	938	3.4

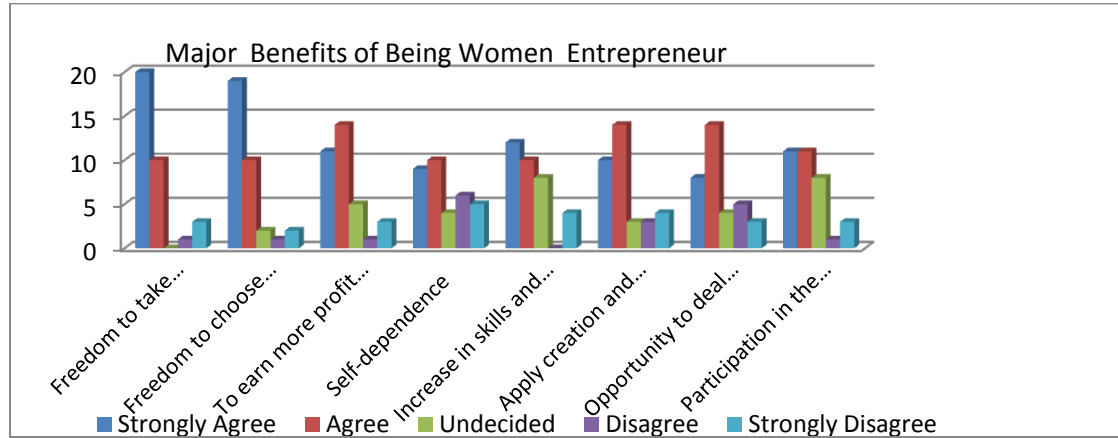
Table 12 indicates that pressure to achieve along with leadership and requirements affect with higher intensity. Leadership qualities enhance the women entrepreneurs to achieve their goals in due course of time. This can be achieved if the women entrepreneurs by participating in various development programmes.

**Table 13: Major Benefits being Women Entrepreneur**

Major Benefits being Women Entrepreneur	Strongly Agree	Agree	Un decided	Dis agree	Strongly Disagree	Weighted Score	Weighted Average
Freedom to take decision	162	81	0	8	24	1173	4.3
Freedom to choose work and time	154	81	16	8	16	1173	4.3
To earn more profit as an individual	89	113	40	8	24	1060	3.9
Self-dependence	73	81	32	49	40	922	3.4
Increase in skills and experience	97	81	65	0	32	1035	3.8
Apply creation and innovation at work	81	113	24	24	32	1011	3.7
Opportunity to deal with others and getting respect	65	113	40	40	24	979	3.6
Participation in the social services	89	89	8	8	24	1035	3.8

Table 13 and figure 5 collectively indicates freedom to take decision, freedom to choose work and time, participation in social service, development of skills and experience are the major benefits for being a women entrepreneur.

**Figure 5**



**Table 14: Major Challenges**

Major Challenges	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Weighted Score	Weighted Average
Getting Capital	97	105	16	8	49	1019	3.7
Believing in their abilities	89	105	32	24	24	1035	3.8
Choice of Location	97	97	40	16	24	1051	3.8
Society's outlook	105	65	24	32	49	971	3.5
Supplier search and interactions	73	113	32	16	40	987	3.6
Balancing Home and Business	105	105	32	24	8	1100	4.0
Handling Men	24	81	32	65	73	744	2.7
Problems with the customers	16	129	49	24	57	849	3.1
Marketing	32	97	32	46	40	857	3.1
Personal Mobility	49	81	16	8	89	817	3.0

Lack of Management Skills	57	138	8	8	40	987	3.6
Exclusion from informal networks	89	113		24	32	1027	3.7
Perception of Women Role	65	146		32	24	1019	3.7

Table 14 indicates that Balancing Home and Business, believing in their abilities, Choice of Location, Getting Capital, and Exclusion from informal networks and Perceptions of Women Role are the major barriers for being women entrepreneur.

**Table 15: Over all Barriers**

Barriers	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Weighted Score	Weighted Average
Barriers affecting Women Entrepreneur	8	146	105	40	16	874	3.2
Professional Barriers	0	105	121	49	8	857	3.1
Education and Training Barriers	16	97	105	49	8	890	3.2
Social and Cultural Barriers	24	97	89	121	0	793	2.9
Legal Barrier	32	40	32	105	16	841	3.1
Behavioral Barriers	24	89	97	49	0	930	3.4
Major Challenges	0	105	73	32	0	963	3.5
Barriers of Role	65	170	105	32	8	971	3.5

### Suggestion and Conclusion

Entrepreneurship is a desirable trait for catalyzing the economic growth and development in developing. Table 15 presents the overall score of different categories of barriers currently women entrepreneur are facing. Through this research we found that social and cultural

barriers were not intensively affected women entrepreneur. Women rely on their own funding for starting business.

Our study reveals that the nature of enterprise promoted is more linked with occupational experience than the educational qualification of the women entrepreneurs it shows, that experience has more bearing than the education qualification of the choice of an industry. Women entrepreneurs under study preferred those industries in which they had working experience. Training and developing the skills and abilities were limited. Government should take initiatives to upgrade their skill and institutions should come up with offering education program for women entrepreneur.

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## APPLICATION OF REGRESSION ANALYSIS IN SOFTWARE QUALITY

### ESTIMATION

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#### Abstract

*Estimation is one of the critical activities in the Software Project Management area. The predictability of quality becomes very vital as it impacts the estimates to be submitted to the customer during presales and in the subsequent stages of the product development lifecycle. This paper focuses on using Correlation analysis technique to estimate/predict the quality for software projects. The major objective of this paper is to understand the relationship between the effort spent in various phases and the defects that are generated at the end of each phase. The methodology consisted of major activities like defining the key projects, stakeholders of each of these projects, data requirements, data capturing mechanisms, Data validation, model building etc. The data is collected from the IT organizations in Hyderabad. While collecting the data, lot of challenges like lack of valid data, missing data, sometimes unwillingness to share the data, delays were encountered. However with right follow up and discussions, the data was gathered. After establishing the relationship, The relationship is quantified using regression method by looking at various options to fit the right regression line. Then the reliability of the regression line is estimated and the confidence limits are found. The information is shared with the stakeholders and it is tested with some of the projects to understand if the results are acceptable. The regression line established is periodically revisited to refine further that contributed to developing the Process capability limits satisfying “CMMI level IV” standards.*

#### Introduction

Estimation is one of the critical activities in the Software Project Management area. The predictability of quality becomes very vital as it impacts the estimates to be submitted to the customer during presales and in the subsequent stages of the product development lifecycle. This paper focuses on using Correlation analysis technique to estimate/predict the quality for software projects.



A forecasting technique used to establish the relationship between quantifiable variables. In regression analysis, data on dependent and independent variables is plotted on a scatter graph or diagram, and trends are indicated through a line of best fit. The use of a single independent variable is known as simple regression analysis, while the use of two or more independent variables is called multiple regression analysis.

#### **Samples of Previous Research:**

The Correlation and regression analysis is widely used in the industry in various sectors like Financial. An empirical study was conducted to identify the impact of foreign investors funds on the BSE index. Similarly another application used this technique in the real estate sector to use standard appraisal approaches including the market comparison technique as well as the advantages and disadvantages of using multiple regression analysis. So this technique is used in multiple sectors and found very useful in the forecasting.

#### **Objectives of the Study**

To understand the relationship between the efforts spent in various phases' development and the defects and test the reliability of the relationship.

#### **Methodology**

- Identification of the Requirements
- Identification of the Target Projects
- Identification of the stakeholders of the initiative
- Identification of the data requirements
- Designing the Data Collection Mechanisms
- Piloting of the Data collection mechanisms

#### **Data Collection**

- Collection of data from the stakeholders
- Validation of Data
- Consolidation of Data
- Computation
- Computation of the Correlation coefficient and regression Curve

- Selection of the appropriate Regression Curve
- Estimating the Reliability of the Regression Curve
- Testing of the Regression Line

### Observations

**Consolidated data (Table I):**

Project	Effort	Defects	Defects\100 hours of Effort
P1	12614	514	4.074837482
P2	28008	502	1.792345044
P3	1235	1052	85.18218623
P4	3575	121	3.384615385
P5	1231	9	0.731112916
P6	9042	129	1.426675514
P7	11380	200	1.757469244
P8	8232	164	1.992225462
P9	12130	247	2.036273702
P10	15456	250	1.617494824
P11	7136	153	2.144058296
P12	5234	98	1.872372946
P13	4145	83	2.002412545
P14	6754	126	1.865561149
P15	9345	164	1.754949171
P16	7564	132	1.745108408
P17	10245	159	1.551976574
P18	2356	43	1.825127334
P19	4248	68	1.600753296
P20	6353	85	1.337950575
P21	3852	71	1.843198339
P22	5469	98	1.791918084

**Refined Data (Table II):**

Project	Effort	Defects	Defects\100 hours of Effort
P1			4.074837482
P2	28008	502	1.792345044
			85.18218623
P4	3575	121	3.384615385
P5	1231	9	0.731112916
P6	9042	129	1.426675514
P7	11380	200	1.757469244
P8	8232	164	1.992225462
P9	12130	247	2.036273702
P10	15456	250	1.617494824
P11	7136	153	2.144058296
P12	5234	98	1.872372946
P13	4145	83	2.002412545
P14	6754	126	1.865561149
P15	9345	164	1.754949171
P16	7564	132	1.745108408
P17	10245	159	1.551976574
P18	2356	43	1.825127334
P19	4248	68	1.600753296
P20	6353	85	1.337950575
P21	3852	71	1.843198339
P22	5469	98	1.791918084

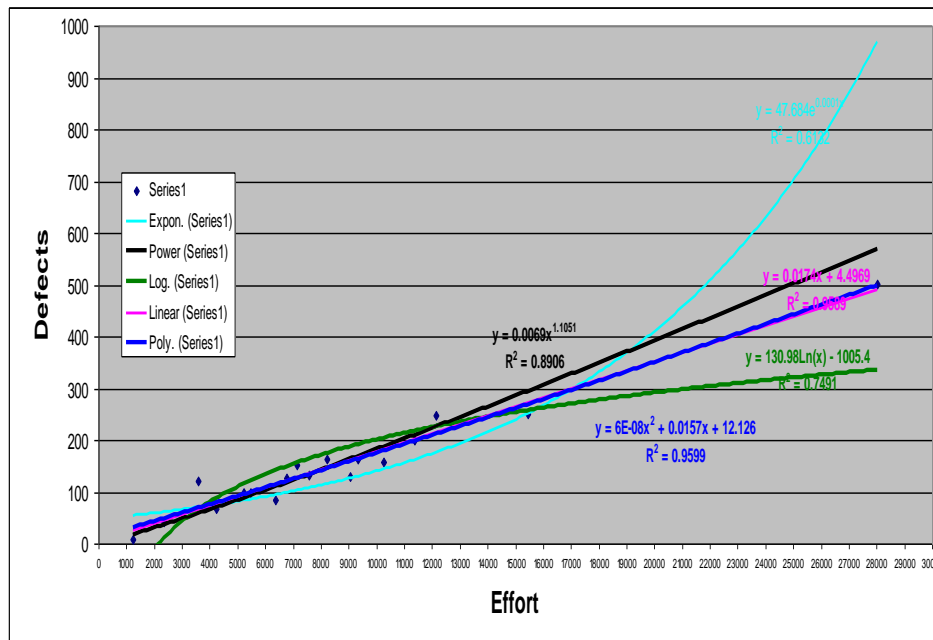
The outliers are deleted from the rest of the population.

## Computation & Selection of the Regression Curve

With the help of above data, various types of curves have been tried and they are tabulated as follows:

Type of Curve	Regression Equation of the Curve	Correlation Coefficient
Exponential	$y = 47.684e^{0.0001x}$	$R^2 = 0.6132$
Polynomial	$y = 6E-08x^2 + 0.0157x + 12.126$	$R^2 = 0.9599$
Linear	$y = 0.0174x + 4.4969$	$R^2 = 0.9589$
Logarithmic	$y = 130.98\ln(x) - 1005.4$	$R^2 = 0.7491$
Power	$y = y = 0.0069x^{1.1051}$	$R^2 = 0.8906$

## Analysis



Using the above data five types of curves are identified as described in the table above. The five curves are given different colors and the respective equation and the Correlation coefficient is given the same color. It is observed that out of all the five curves, the highest correlation coefficient is found for Polynomial equation i.e 95.99%.

## Estimating the Reliability of the Regression Curve

### Standard Error Computation

Project	Effort (x)	Defects (y)	Estimated Y using equation(defect estimate)	$y - y^{\wedge}$	$(y - y^{\wedge})^2$	Standard error = $\sqrt{\frac{\sum [(y - y^{\wedge})^2]}{\text{no of data points} - \text{no of variables}}}$	Std err *t
P1							
P2	28008	502	498.9184838	3.081516	9.495742	14.94477862	26.18325214
				0	0		
P4	3575	121	69.0203375	51.97966	2701.885		
P5	1231	9	31.54362166	-22.5436	508.2149		
P6	9042	129	158.9908658	-29.9909	899.452		
P7	11380	200	198.562264	1.437736	2.067085		
P8	8232	164	145.4343494	18.56565	344.6834		
P9	12130	247	211.395214	35.60479	1267.701		
P10	15456	250	269.1184762		0		
P11	7136	153	127.2165498	25.78345	664.7863		
P12	5234	98	95.94348536	2.056515	4.229252		
P13	4145	83	78.2333615	4.766639	22.72084		
P14	6754	126	120.900791	5.099209	26.00193		
P15	9345	164	164.0822415	-0.08224	0.006764		
P16	7564	132	134.3136458	-2.31365	5.352957		
P17	10245	159	179.2701015	-20.2701	410.877		
P18	2356	43	49.44824416	-6.44824	41.57985		
P19	4248	68	79.90233024	-11.9023	141.6655		
P20	6353	85	114.2897365	-29.2897	857.8887		
P21	3852	71	73.49267424	-2.49267	6.213425		
P22	5469	98	99.78389766	-1.7839	3.182291		
Total					3796.889		

The reliability is estimated as follows:

For a 90 % confidence level and 17 degrees of freedom the "t" value from Student T distribution is 1.752:

Upper Limit: Defect Estimate + Std error \* t

Lower Limit: Defect Estimate - Std error \* t

### Results

For a project size of 10,245 hours, the defect estimated by the regression line is 179.27. The actual value is 159 and for a reliability level of 90%

Upper limit = 205.45, Lower Limit = 153

So the Regression line is predicting the values well within the limits.

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## **A STUDY ON CREDIT RISK AND NPA MANAGEMENT PRACTICES OF INDIAN BANK**

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### **Abstract**

*Sound credit management is a prerequisite for a financial institution's stability and continuing profitability, while deteriorating credit quality is the most frequent cause of poor financial performance and condition. Banks are increasingly facing credit risk in various instruments other than loans, as credit risk encompasses both default risk and market risk. This study is an attempt to understand the various concepts of credit risk management policies of Indian Bank towards priority sector. It aims at highlighting the importance of credit risk management for banks especially towards priority sector. With increasing competition, credit risk management should be the thrust area for banks. Apart from setting acceptable levels for credit risks, a quality index for credit approvals should also be generated, since a sound credit policy will always be a competitive advantage to the banks. Therefore, credit risk policy should cover the entire gamut of an organization's operations whose ultimate 'loss factor' is quantifiable in terms of money.*

### **Introduction**

The risk arising due to failure on the part of counter party/ borrower to meet the obligations on agreed terms is known as credit risk. There is always scope for the borrower to default from his commitments for one or the other reason resulting in crystallization of credit risk to the bank. Credit risk is inherent to the business of lending funds to the operations linked closely to market risk variables. Thus credit risk is a combined outcome of Default Risk and Exposure Risk. Sound credit management is a prerequisite for a financial institution's stability and continuing profitability, while deteriorating credit quality is the most frequent cause of poor financial performance and condition. Banks are increasingly facing credit risk in lending advances to priority sector as they should lend 40% of their advances to the requirements of priority sectors than loans for non-priority sectors, as credit risk encompasses both default risk and market risk.



**Need for Study**

The bank has been issuing various types of loans to various groups of people for their upliftment. There are various deadlocks in various stages in order to recover back the loan amount from the borrower. The bank selects the right person for sanctioning the loan. But the bank fails to recover back the loan amount due to various reasons. The need for the study of the project is to know the advances that has been provided to the borrower especially to agriculture loans, as jewellery loan, educational loan and how much the bank have recovered the loan amount in various loans. And the risk involved in various loans that has been issued by the bank. The analysis has been done from the data of four years from the bank annual report as well as from the balance sheet.

**Objectives of the Study**

- To study the credit risk possibilities of Indian bank.
- To evaluate the trends in the loans and deposits of Indian Bank
- To analyze the NPA pattern of the bank.

**Analysis & Interpretation**

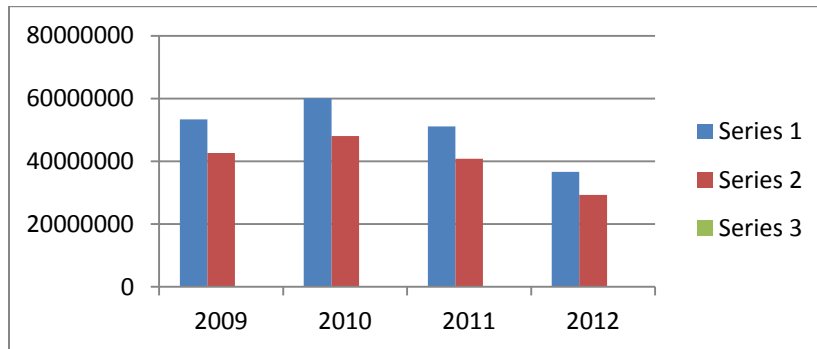
To understand about the various credit risk activities of Indian Bank and its NPA performance for the study period, the loan recovery of all priority sectors is taken into consideration.

**Advances Provided By Indian Bank from 2009-2012**

Advances are provided for the following sectors at the following interest rates:

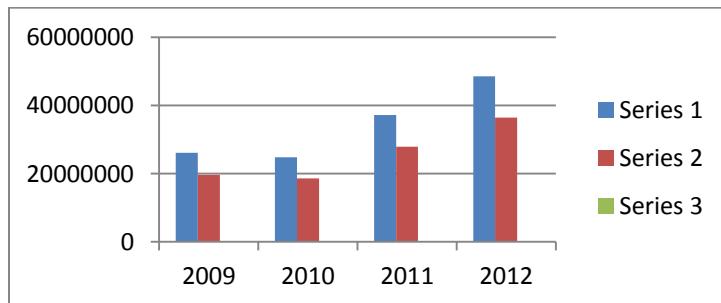
PARTICULARS	RATE OF INTEREST
AGRICULTURAL LOAN	7%
JEWEL LOAN	14.25%
HOME LOAN	10.5% OR ABOVE
VEHICLE LOAN	11.5%
EDUCATIONAL LOAN	14.5% FOR GIRLS-14.0%

### Total Advances and Repayment of Agriculture Loan From 2009-2012



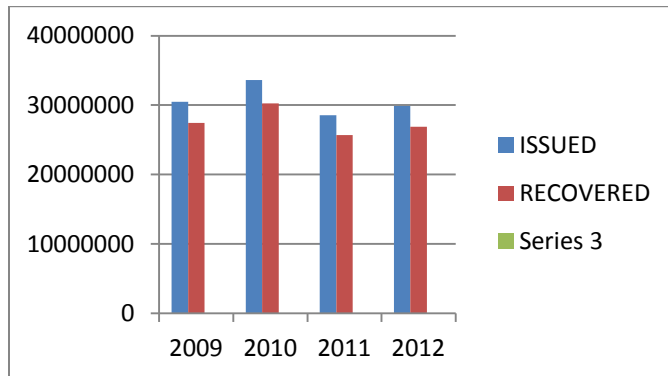
The above figure represents the scenario of recovery of Agricultural loan of 4 years. The recovery of Agricultural loan is 80%. In the year the bank has issued Rs.5,33,64,776 and had recovered Rs.4,26,91,821 and had growth over the years. Compared to the other loans the recovery of Agricultural loan is easier. And finally in the year 2012 the bank has issued Rs.3,66,08,762 and recovered Rs.2,92,87,009 this shows a apparent picture.

### Total Advances and Repayment of Jewel Loan From 09-12



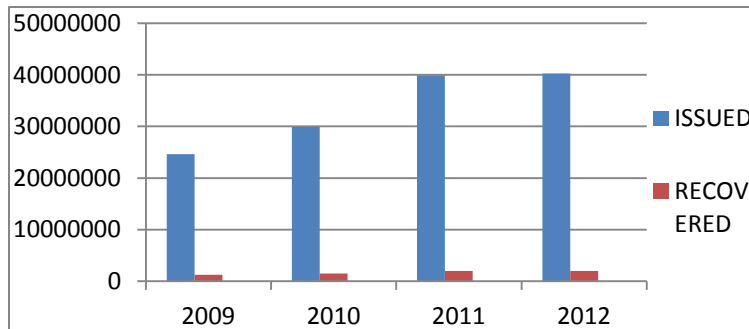
Interpretation: In the year 2009 the bank provided Rs.2,61,35,907 but the bank recovered only Rs.1,96,01,930. The bank could not recover back the remaining 25% of the jewel loan. But those jewels were remained in the bank itself. In the future the bank gone for auction sales but the bank couldn't recover back all those 25% fully.

### Total Advances and Repayment of Home Loan 09-12



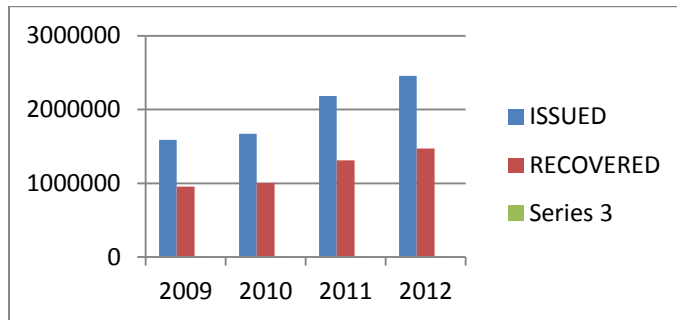
Interpretation: In 2009 the bank provided Rs.3,04,79,905 but the bank recovered 90% of the loan. In very next year the bank provided extra 20% of home loan when compared to the year 2009. In the year 2011 and 2012 the bank provided fewer amounts of home loans when compared to 2010. But still there are 10% of defaulters in repaying the loan in all the 4 years.

### Total Advances and Repayment of Education Loan 09-12



Interpretation: There is no prompt repayment in case of Educational loan because there will be more state and central government interference. The government is providing more subsidies in comparing to the other loans. In 2009 the bank provided Rs.2,46,54,799 but recovered only Rs.12,32,740 which is comparatively low.

### Total Advances and Repayment of Vehicle Loan 09-12



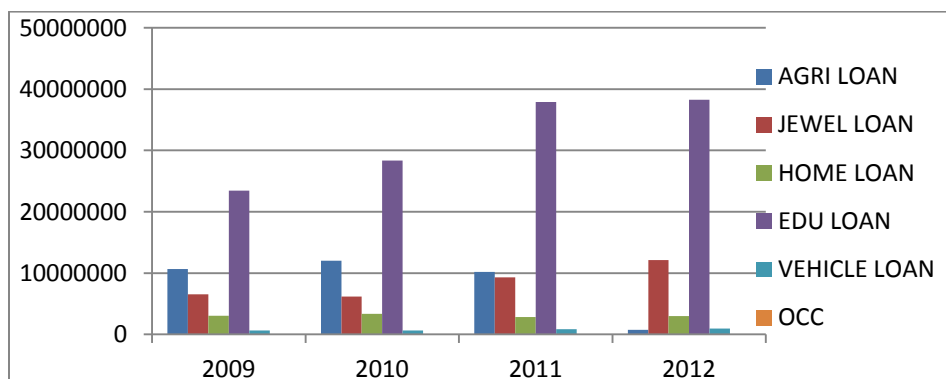
Interpretation: In the year 2009 the bank provided Rs.15,88,990 but recovered only Rs.9,53,394. Over the years the bank has provided more vehicle loans which purchasing power of the individual. In the year 2012 again provided Rs.24,54,501 and recovered Rs.14,72,700.

### Non Performing Assets (NPA)

Year 2011-12 witnessed continued thrust on prudent asset management by Indian Bank.

The level of net non performing asset has been reduced to 0.76% in the year 2012 form 0.89% in 2009. The bank performed remarkably well during 2011 and have recovered 119 crores rupees. And about Rs.590.34 crore worth NPA were sold to asset recovery companies during the financial period 2011-2012.

### NPA Analysis



Interpretation: The Non-Performing Assets of the Agricultural Loan have faced several fluctuations over the years. In case of Jewel loan, the year 2009 the bank lost Rs.6533977 but in the year 2010 it was decreased to Rs.6199990. But there was a big pitfall over the years. In case

of Education loan the bank always faced more Non Performing Assets. It has increased rapidly over the years. Finally in the year 2012 it was Rs.38253459. The vehicle loan also faced more fluctuations. In the year 2009 it was Rs.635596 but within three years it had touched Rs.981801.

### **Conclusion**

The aim of credit risk management is to reduce the Probability of loss from a credit transaction. Thus it is needed to meet the goals and objectives of the banks. It aims to strengthen and increase the efficacy of the organization, while maintaining consistency and transparency. Credit risk systems are currently experiencing one of the highest growth rates of any systems area in financial services. There is a direct correlation between market risk and credit risk and credit risk has an impact on the operational market.

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## INVESTORS' PERCEPTIONS OF MUTUAL FUND RISKS AN EMPIRICAL STUDY

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### Abstract

*The Mutual Fund Industry is a fast growing sector of the Indian Financial Markets. They have become major vehicle for mobilization of savings, especially from the small and household savers for investment in the capital market. Mutual Funds entered the Indian Capital Market in 1964 with a view to provide the retail investors the benefit of diversification of risk, assured returns, and professional management. Every type of investment, including Mutual Funds, involves risk. Risk refers to the possibility that investors will lose money (both principal and any earnings) or fail to make money on an investment. A Fund's investment objective and its holdings are influential factors in determining how risky a fund is. Reading the prospectus will help the investors to understand the risks associated with that particular Fund. The study aimed to understand and analyze investor's perceptions of such risks and expectations, and unveil some extremely valuable information to support financial decision making of Mutual Funds. The detailed analysis revealed that investors perceive risk as under performance, risks in Mutual Fund investments are medium and the returns on Fund investments are not so satisfactory.*

### Introduction

The Mutual Fund Industry is a fast growing sector of the Indian Financial Markets. They have become major vehicle for mobilization of savings, especially from the small and household savers for investment in the capital market. Mutual Funds entered the Indian Capital Market in 1964 with a view to provide the retail investors the benefit of diversification of risk, assured returns, and professional management. Since then they have grown phenomenally in terms of number, size of operation, investor base and scope. Being a part of financial markets although Mutual Funds industry is responding very fast by understanding the dynamics of investor's perceptions towards rewards, still they are continuously following this race in their endeavor to differentiate their products responding to sudden changes in the economy. Every type of investment, including Mutual Funds, involves risk. Risk refers to the possibility that investors

will lose money (both principal and any earnings) or fail to make money on an investment. A Fund's investment objective and its holdings are influential factors in determining how risky a fund is. Reading the prospectus will help the investors to understand the risks associated with that particular Fund. Thus, it is time to understand and analyze investor's perceptions of such risks and expectations, and unveil some extremely valuable information to support financial decision making of Mutual Funds.

### **Review of Literature**

A number of studies have been made on the working of Mutual Fund industry. Many of them are general topics like study of operations, growth and development of Mutual Funds, perceptual views of investors on Mutual Funds.

In this sequence, Nalini Prava Tripathy (2006)<sup>1</sup> in her empirical study "Market Timing Abilities and Mutual Fund Performance- An Empirical Investigation into Equity Linked Saving Schemes" evaluated the market timing abilities of Indian Fund managers of thirty-one tax planning schemes in India over the period December, 1995 to January, 2004 by using Jensen and Mazuy Model and Henriksson and Merton model. The study indicates that the Fund managers have not been successful in reaping returns in excess of the market; rather they are timing the market in the wrong direction. P. Hnaumantha Rao

and Vijay KR. Mishra (2007)<sup>2</sup> in their article "Mutual Fund: A Resource Mobiliser in Financial Market" made a critical study of the role performed by Mutual Funds as a financial service in Indian Financial Market. Gajendra Sidana and Debashis Acharya (2007)<sup>3</sup> in their article "Classifying Mutual Funds in India: Some Results from Clustering" made an attempt to classify hundred Mutual Funds employing cluster analysis and using a host of criteria like the 1 year annualized return, 3 year annualized return, 5 year annualized return, alpha, beta, R-squared, Sharpe's ratio, mean and standard deviation etc. S.K

Miglani (2007)<sup>4</sup> in his study made an attempt to understand the Mutual Fund industry and its implications on the common investors on one hand and its returns and performance on the other. An analysis was made on the perceptual views of investors in "Investment Decision

Making: An empirical study of perceptual View of Investors" by Yesh Pal Davar and Suveera Gill (2007)<sup>5</sup>. The results of this study suggest that investor's preferences are supposedly related to the actual performance of investments and the same is taken into account while forming an opinion about making future investment decision. In their study entitled "A study on Investors perception towards Mutual Fund investments", S. Sudalaimuthu and P. Senthil Kumar (2008)<sup>6</sup> was concentrated on highlighting the investor awareness and preference in Mutual Fund schemes, factor that influences the investor in selecting Mutual Fund scheme, the level of satisfaction on the investment of Mutual Fund, problems faced by Mutual Fund investors and the investment objectives, preference among Fund types(balanced, growth, dividend etc.). An Empirical Study of "Indian Individual Investors' Behaviour" by Syed. Tabassum Sultana (2010)<sup>7</sup> was an attempt to know the profile of the investors and also to know their characteristics so as to know their preference with respect to their investments. The study also tried to unravel the influence of demographic factors like gender and age on risk tolerance level of the investors.

### **Need for the Study**

In general, investments in Funds are risky, because they are exposed to economic forces or factors, which the future is uncertain. By its very nature, risk concerns the uncertain future. If investors know what happened to a Fund's returns in the past, they can predict the likely range of Fund's returns in future. The greater is this range, the more risky are Fund's prospects. Thus, investors and their advisors need more information to help them assess the risks of Mutual Funds.

Ignorance of Law is no excuse. Investors must ultimately be responsible for understanding or making predictions about the regulations and risks associated with the major market sectors, as well as the extent to which sectors are likely to move with one another. Much of this information is common to many Funds and can be most efficiently provided to investors by third parties, such as financial planners and database providers. But, most of the investors are not aware of the complete information about the risks. Various studies were made on the Mutual Funds, but the research on the investors' perceptions towards risk disclosures of



Mutual Funds was scanty. Hence, it is necessary to find out how the companies are providing information about the investments to the investors, whether that information is sufficient to educate the investors regarding the risks of Funds; and how for the investors are benefited.

### **Objectives of the Study**

The primary objective of the present study is to analyze the investors' perceptions of the Mutual Fund Risks. The following are the specific objectives of the study

- 1) To study the investors' perceptions of risk;
- 2) To study the investors' perceptions of Mutual Fund risks: and
- 3) To study the investors' satisfaction over return on Mutual Funds.

### **Hypothesis**

The following are the hypotheses set for the study

- i.  $H_0$  : The age of the investors and their perception of risk are independent
- ii.  $H_0$  : The marital status of the investors and their opinion on risks associated with Mutual Funds are independent and
- iii.  $H_0$ : The annual income of the investors and their opinion on risks associated with Mutual Funds are independent.

### **Methodology**

**Database** - The present study was conducted by gathering both Primary and Secondary data. The primary data was collected through a questionnaire and the Secondary data was collected from Journals, Books, Magazines, News Papers, and websites of various statutory and non-statutory organizations such as Association of Mutual Funds in India, Securities and Exchange Board of India.

**Sample size** - A survey was undertaken through questionnaires for the purpose of studying the above objectives. Investors who invested in Mutual Funds constitute the universe of the study. The Survey was conducted among 555 geographically dispersed investors spread over 12 urban and semi-urban areas in four districts of Rayalaseema region of Andhra Pradesh in India.

**Period of the Study** - The survey was conducted for the period of six months i.e. from September 2010 to November 2010.

**Tools of analysis** - The data drawn from various sources are analyzed with the help of statistical tools and techniques such as percentages and Chi- square tests.

$$\text{Chi-square } (\chi^2) = \sum \frac{(\text{Observed frequency} - \text{Expected Frequency})^2}{\text{Expected Frequency}}$$

## Results and Discussion

**Table 1** shows the demographics of the sample respondent investors. 90.09 per cent of the respondents were male, 39.64 per cent of the respondents were in the age group of 40-50years, 79.28 per cent of the respondents were married, 55.86 per cent of the respondents were employees and 55.86 per cent of the respondents were earning less than Rs.100000 per annum.

## Perceptions of Mutual Fund Risks

Generally speaking, risk and potential return are related. This is the risk/return trade-off. Higher risks are usually taken with the expectation of higher returns at the cost of increased volatility. While a Fund with higher risk has the potential for higher return, it also has the greater potential for losses or negative returns. The investors' perceptions of risk were shown in **Table 2**. Majority of the investors (52.25 per cent) believe Risk as under performance (low returns) which indicates the curiosity of the investors to earn income.

## Testing of Hypothesis I

From the particulars mentioned in **Table 3**, the first hypothesis was tested (Values were shown below in **Table 3**) and obtained the values as under-

**H<sub>0</sub>**: The age of the investors and their perception of risk are independent.

Calculated Value = 108.29 and Table Value 7.815 ((for 3 df, at 5 per cent level of significance). Since the calculated value of Chi-square is greater than the table value of Chi-square for 3 df at five per cent level of significance, the H<sub>0</sub> is rejected. The biggest risk of investing in a Mutual

Fund is underperformance. When an investor decides to invest in a particular Fund, he typically expects to get the return that the benchmark of the asset provides. Keeping this in mind, the investors were asked to express their opinion on risks associated with Mutual Funds and the values were depicted in **Table 4**. Majority of the investors (56.58 per cent) felt that the risks associated with Mutual Funds are medium. Interestingly, majority of the un-married investors (63.48 per cent) felt that the risks in Funds are very low. In contrast to this, most of the married investors (65 per cent) opined that the risks are medium. Majority of the investors whose age is more than 50 years (63.33 per cent) opined that risk refers to both loss of principal and as well as income. All the investors whose income is above Rs. 6 lakhs felt that the risks in Mutual Funds are low. Majority of the investors whose income is less than Rs. 1 lakh said that the risks in Mutual Funds are medium.

### Testing of Hypothesis II

From the particulars mentioned in **Table 5**, the second hypothesis was tested (Values were shown below in **Table 5**) and obtained the values as under:

$H_0$ : The marital status of the investors and their opinion on risks associated with Mutual Funds are independent.

Calculated Value = 16.5691 and Table Value 5.991 ((for 2 df, at 5 per cent level of significance). Since the calculated value of Chi-square is greater than the table value of Chi-square for 2 df at five per cent level of significance, the  $H_0$  is rejected.

### Testing of Hypothesis III

From the particulars mentioned in **Table 6**, the third hypothesis was tested (Values were shown below in **Table 6**) and obtained the values as under

$H_0$ : The annual income of the investors and their opinion on risks associated with Mutual Funds are independent.

Calculated Value = 116.19 and Table Value 9.488 ((for 4 df, at 5 per cent level of significance). Since the calculated value of Chi-square is greater than the table value of Chi-square for 4 df at five per cent level of significance, the  $H_0$  is rejected.

The most disappointing finding is that 53.15 per cent of the Fund investors are just satisfied with respect to the returns which in fact reveal their dissatisfaction over the Funds’ performance.

**Table 1 – Demographics of the sample respondents**

Particulars	Number of respondents	Percentage to total
<b>Gender</b>		
Male	500	90.09
Female	55	9.91
<b>Total</b>	<b>555</b>	<b>100.00</b>
<b>Age</b>		
Below 40 years	215	38.74
40-50 years	220	39.64
50-60 years	60	10.81
Above 60 years	60	10.81
<b>Total</b>	<b>555</b>	<b>100.00</b>
<b>Marital status</b>		
Unmarried	115	20.72
Married	440	79.28
<b>Total</b>	<b>555</b>	<b>100.00</b>
<b>Occupation</b>		
Employee	310	55.86
Business	130	23.42
Others	115	20.72
<b>Total</b>	<b>555</b>	<b>100.00</b>
<b>Annual income</b>		
Less than Rs.100000	310	55.86
Rs.100001 to Rs. 300000	195	35.14
Rs.300001 to Rs.600000	35	6.31
Rs.600001 to Rs.1000000	10	1.8
Above Rs.1000000	5	0.9
<b>Total</b>	<b>555</b>	<b>100.00</b>

Source: Survey report

**Table 2 - Investors' Perceptions of risk**

	Number of respondents	Percentage to total
Under performance (Returns)	290	52.25
Loss of principal amount	112	20.18
Loss of principal and return	153	27.57
<b>Total</b>	<b>555</b>	<b>100.00</b>

Source: Survey report

**Table 3 - Age-wise Investors' Perceptions of Risk**

Age	Under performance	Loss of Principal amount	Loss of Principal amount and Return	Total
Less than 40 years	158 (011)	37 (012)	20 (013)	<b>215</b>
40-50 years	104 (021)	42 (022)	74 (023)	<b>220</b>
50-60 years	16 (031)	23 (032)	21 (033)	<b>60</b>
More than 60 years	12 (041)	10 (042)	38 (043)	<b>60</b>
<b>Total</b>	<b>290</b>	<b>112</b>	<b>153</b>	<b>555</b>

Source: Survey Report

Values in parentheses represent the observed values.

<b>Calculated Value</b>	<b>108.29</b>
<b>Table Value</b>	<b>7.815</b>
<b>Degree of freedom</b>	<b>3</b>

**Table 4 - Investors' Opinion on Risks Associated With Mutual Funds**

Degree of risks in Mutual Funds	Number of respondents	Percentage to Total
High	136	24.50
Medium	314	56.58
Low	105	18.92
<b>Total</b>	<b>555</b>	<b>100.00</b>

Source: Survey Report

**Table 5 - Marital status-wise Opinion on Risks Associated with Mutual Funds**

<b>Marital status</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>	<b>Total</b>
Un married	24 (011)	18 (012)	73 (013)	<b>115</b>
Married	112 (021)	286 (022)	32 (023)	<b>440</b>
<b>Total</b>	<b>136</b>	<b>314</b>	<b>105</b>	<b>555</b>

Source: Survey Report

Values in parentheses represent the observed values.

<b>Calculated Value</b>	<b>16.5691</b>
<b>Table Value</b>	<b>5.991</b>
<b>Degree of freedom</b>	<b>4</b>

**Table 6 - Annual Income-wise Opinion on Risks Associated with Mutual Funds**

<b>Income level</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>	<b>Total</b>
Less than Rs. 1,00,000	83 (011)	204 (012)	23 (013)	<b>310</b>
Rs. 1,00,000 to Rs. 3,00,000	39 (021)	101 (022)	55 (023)	<b>195</b>
Rs. 3,00,000 to Rs. 6,00,000	14 (031)	9 (032)	12 (033)	<b>35</b>
Rs. 6,00,000 to 10,00,000	0 (041)	0 (042)	10 (043)	<b>10</b>
Above Rs. 10,00,000	0 (051)	0 (052)	5 (053)	<b>5</b>
<b>Total</b>	<b>136</b>	<b>314</b>	<b>105</b>	<b>555</b>

Source: Survey Report

Values in parenthesis represent the observed values.

<b>Calculated Value</b>	<b>116.19</b>
<b>Table Value</b>	<b>9.488</b>
<b>Degree of freedom</b>	<b>4</b>

**Table 7 - Investors' Satisfaction over Return on Mutual Funds**

Particulars	Highly Satisfied	Moderately Satisfied	Satisfied	Not Satisfied
Return	15	143	295	102

Source: Survey Report

### Findings of the Study

- Most of the investors opined that risk is under performance (52.25 per cent)
- 56.58 per cent of the investors felt that the risks in Mutual Funds are medium (56.58 per cent).
- Most of the unmarried investors stated that the risks in Mutual Funds are low (63.48 per cent).
- In contrast to unmarried investors, 65 per cent of married investors said that the risks in Mutual Funds are medium.
- Majority of the investors whose age is more than 60 years (63.33 per cent) opined that risk refers to both loss of principal and as well as income.
- All the investors whose annual income is above Rs. 6 lakhs felt that the risks in Mutual Funds are low.
- Majority of the investors whose annual income is less than Rs. 1 lakh said that the risks in Mutual Funds are medium.
- Most of the investors were just satisfied with respect to the return on Funds.

### Suggestions

- As majority of the respondent investors are much more anxious with the prior information pertaining to risks in investing, the Mutual Fund companies (MFCs) have to think about higher levels of disclosures in this regard.
- As majority of the investors feel the risk as under performance, Mutual Fund companies may work hard to offer the returns as expected by them.
- The MFCs may concentrate on mobilizing the resources from the investors whose annual income exceeds Rs. 6 lakhs as they feel that the risks in Mutual Funds are low.

- MFCs may concentrate on unmarried investors for their resource mobilization.
- As every investment involves risk, the MFCs may try to educate the investors about risks by conducting awareness programmes.
- The Fund Managers should precisely concentrate on portfolio construction so as to generate more returns.
- The MFCs may try to mobilise the funds from the people other than employees opening information centers in different areas of the country.

## **Conclusion**

The present study endeavored to throw a light on the investors' perceptions of Mutual Fund risks. Understanding the requirements of investors by the Mutual Fund Companies has become necessary to accelerate the required pace of growth. A detailed analysis of risk perceptions of the investors was made in this study. Survey findings of this study have got significant implications that can be adopted by the Fund companies either by adding to the existing practices or by replacing.

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## **HR AS A STRATEGIC PARTNER: A STUDY IN IT COMPANIES IN BANGALORE**

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### **Abstract**

*Rapidly changing business environment and the increasing complexity of modern organizations is leading organizations to face challenges in many areas, and one such area is role of human resource whose transition is inevitable. Articles, books, and studies argue that Human resource [HR] needs to become strategic partner as HR executives historically have not been strategic partners. The last ten years have seen an increasing call for HR to take on a role of a strategic partner where HR is a member of the senior management team and is directly involved in the major business decisions. This paper discusses about what role is HR playing in the organizations today, the major role of HR as a strategic partner and also addresses the connection between HR information systems and strategic partnering. HR people who were in a managerial level or above position with corporate-wide visibility to the HR function responded for the study. The scope of the study has been limited to managers from the IT companies in Bangalore. The organizations from which the managers responded spanned the private sector and multinational companies. The results show that, HR to become a strategic partner should be concentrating towards organization planning, design & development arenas and even HRIS partly can aid HR in becoming a strategic partner.*

### **Introduction**

Some industry commentators call the Human Resources function the last bastion of bureaucracy. Traditionally, the role of the Human Resource professional in many organizations has been to serve as the systematizing, policing arm of executive management.

Organizations, in the past, used to look only at the sales, marketing and R&D functions to foster the growth of the company. But today, they are also looking at HR for the same. Today's business environment is highly competitive and challenging. Perhaps the most important of these changes is the rapid deployment of information technology and the increasing amount of

knowledge work that organizations do. And also one more reason is the rapidly changing business environment and the increasing complexity of modern organizations.

Organizations are undergoing dynamic changes with serious implications with a question - How human resources can be managed? Any function or a business process, which cannot add value to the business, will not be acceptable to the business leaders. Thus, HR needs to develop expertise, and assist in adding value to the organization's long-term objectives. It is expected to develop programmes that help attract and retain talent, deliver compensation programmes that capture meritocracy and retain cost competitiveness.

## **Review of Literature**

### **HR as a Strategic Partner - The Changing Role**

If you walk-into any HR conference you always to get to hear some common statements like 'HR should move to board room', 'HR should be a strategic partner in company's growth', 'HR should become a business leader' etc, but why and how? All these imply that there is a need for change. HR of today cannot stay away from the changing roles, they are directly responsible for both the top and bottom line thus making them organization strategist and not mere people strategist. (Mohit Gupta 2012)

HR as function could make substantial impact on the business, with its optimal positioning HR can synthesis and create a 'Balance Scorecard', going by Kaplan & Norton's Balanced Scorecard design process that includes:

- Translating the vision into operational goals.
- Communicating the vision and link it to individual performance.
- Business planning; index setting.
- Feedback and learning, and adjusting the strategy accordingly.

The HR function has undergone a tremendous change over time. Until mid 90's, large organizations looked at the HR department, mostly to manage the paperwork around hiring and paying employees.

Over the recent years, organizations have started considering the HR function as a more strategic role in optimizing performance through adequate staffing, training and talent management. Hence, the new role of the HR is to add value to employees through various initiatives and retain them by creating interesting engagement programmes and growth related initiatives. This discussion provokes us to study, what is the major role HR as a strategic partner is playing.

The role of the HR manager must parallel the needs of his or her changing organization. Successful organizations are becoming more adaptive, resilient, quick to change direction and customer-centered. Within this environment, the HR professional becomes a strategic partner. Many HR functions have begun to play a strategic role in guiding succession management, knowledge retention, and other enterprise-wide initiatives. It acts as a backbone providing manpower, infrastructure, training (internal/external), etc.

"Increased competition, changing workforce demographics, and a shift towards knowledge-based work require organizations to place an increasingly high focus on improving the workforce strategy and new business models," added Pari Sadasivan, VP-HR, IBM India. She revealed that organizations are looking at HR to go beyond the delivery of cost-effective transactional services, and provide value added services and expertise on how to anticipate, develop and leverage talent to create true marketplace differentiation.

HR is now more customers focused, team-based, and functionally integrated. "HR professionals work with the management to analyze and devise solutions for organizational problems. They are involved in strategic planning and aligning HR with the organization's mission and strategic goals," believed Vivek Puneekar, VP-HR, HCL Infosystems.

Abhay Valsangkar, Senior Director, HR, Symantec stated, "HR plays a significant role in creating the right opportunity for the appropriate talent. It has taken centre stage as they are now the key drivers for talent management and creators of value for their company." HR has thus

become a top priority for all businesses today. The whole discussion leads to understanding what role is HR playing in the organizations today.

HR is not only dealing with people but adding value in the planning stage through its understanding of people. It is the backbone to build a culture that is helpful to change, trying to implant some dynamism into the organization. It is also acting as a bridge to integrate initiatives, watching key processes—such as new hire orientation, training, and even compensation systems. These processes help support both the present and the desired culture. Today, along with competitive salaries, employees look for value addition at their work place in terms of learning opportunities, global exposure and a clear career path.

Every organization, be it small or large, has a vision and employees have the task of meeting the goals of the company in line with the vision. This makes HR an indispensable part of the decision-making process in the organization. In today's organizations, to guarantee their viability and ability to contribute, HR managers need to think of themselves as strategic partners.

### **The Study Discusses the Following Issues**

- To understand the role of HR in organizations today.
- Whether HR is becoming more of a strategic partner.
- Is there a change in HR Focus on Various Functional Activities

### **Research Methodology**

Questionnaires were mailed to employees of medium and large companies who are into Human resource functions. The surveys were filled out by HR people who were in a higher managerial level or above position with corporate-wide visibility to the HR function. The scope of the study has been limited to managers from some companies in Bangalore. Sample taken for the study was from the organizations from which the managers responded spanned from private sector and multinational companies. A sample of 25 was taken for the study with the positions holding the job level above managerial level from medium organizations were

number of employees was between 1000 to 5000 and from large organizations with employees equal to or more than 5001.

## Analysis & Discussion

### 1. Human Resources' Role In Business Strategy of Your Organization

**Table 1- Human Resources' Role in Business Strategy**

HR Roles	% Responding
No Role	12
Implementation Role [ Putting strategies into Action ]	24
Input Role [Advice regarding the strategies]	28
Full Partner in Development & Implementation [Planning, designing, developing & implementing the strategies]	36

The results show that HR today is merely not only playing a role of implementer but also a full partner in planning, designing, developing & implementing the business strategies. These shows gone are the days when HR was only considered as an administrator but today HR plays a very important role in decision making which effect business growth.

### 2. Is HR's Strategic Partner Role Increasing?

**Table 2: Most time spent on different HR roles**

Human Resources Roles	Rate from 1 to 5 [1: Least , 5: Maximum]
Maintaining Records: Collect, track, and maintain data on employees	5
Auditing/Controlling: Ensure compliance to internal operations, regulations, and legal and union requirements	4
Human Resources Service Provider: Assist with implementation and administration of HR practices	5
Development of Human Resources Systems and Practices: Develop new HR systems and practices	5
Strategic Business Partner: Member of the management team. Involved with strategic HR planning, organizational design, and strategic change	6

To be a strategic partner, the HR employees are not only expected to deliver services, maintaining records and auditing. It also needs to be a part of the management, doing strategic HR activities planning, and contribution to organization design, strategy design, development,

and Implement. Table 2, shows that the immense amount of attention is being paid towards HR changing its role, HR in the role of strategic business partnering simply is reflected in this table.

### 3. HR as a Strategic Partner

**Tables 3 - Factors are associated with HR being a strategic partner.**

Strategic activities	% Responding
HR helps the organization accomplish business goals	24
HR participates in the process of defining business strategies	20
HR makes sure that HR strategies are aligned with business strategy	20
HR effectiveness is measured by its ability to help make strategy happen	12
HR spends time on business planning.	24

In this question, it has been tried to measure the involvement of HR as a strategic partner in different activities of business strategies that are in Table 3. The results show that HR is quite involved in planning & accomplishment of business goals.

### Changes in HR Focus on Various Functional Activities

**Table 4- Changes in HR Focus on Various Functional Activities**

HR Functions	% Responding		
	1: Greatly Decreased	2: Stayed the Same	3: Greatly Increased
Designing & Planning, Organizational Development: HR Planning, Organizational Development, Organizational Design, Strategic Planning	28	24	48
Compensation & Benefits	24	36	40
Legal & Regulatory : Employee Record Keeping, Legal Affairs, Affirmative Action, Employee Assistance	44	28	28
Employee Development: Employee Training, Management Development, Career planning, Performance Appraisal, Competency Assessment	24	28	48
Recruitment & Selection	20	36	44
Hr Information Systems	24	28	48
Union Relations	52	28	20

Table 4 reports the results from a question that addresses whether the focus of HR in various functional activities has increased or decreased. The group of activities which received the most attention was planning, organization design, and organization development. Similarly, the

attention to employee development activities, and especially to career planning and management development, has increased significantly. There has been some increase in the focus on some of the more traditional HR functional activities such as recruitment, selection, compensation and benefits. The evidence is clear that being a full strategic partner involves being increasingly active in the organization planning, design, development and also employee development activities.

### **Conclusion**

In conclusion HR as strategic partner is gaining momentum as being one of the best way yet in making human resources as the most important asset in an organization. "Being a strategic partner" is understood as a long-term relationship to achieve defined objectives common to all partners. In the context of strategic human resource management, the HR function and activities are intended to ensure the organization's financial success.

Industry consultants and those in the halls of academia, and HR leaders themselves have been Instrumental in crafting a new role for HR – that of a strategic business partner, the role, where they contribute to the company's ongoing success. The results show that the greatest benefits occur when HR is a strategic business partner that fully participates in both the development and implementation of strategy.

The results also show that there has been increase in HR playing a role of Strategic Business Partner: Member of the management team- Involved with strategic HR planning, organizational design, and strategic change in the actual practices in the HR organization and in the way in which HR spends its time. The need of the hour is that HR cannot stay back; it has to change itself and play a dual role in business today.



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## **STUDY OF FACTORS CRITICAL IN SELECTION OF HUMAN RESOURCE FOR NEW PRODUCT DEVELOPMENT**

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### **Abstract**

*The customer expectations from an auto industry has created competitive pressure and enriched the industry with attitude, knowledge, flexibility and speed for new challenges and changes. Processes are being streamlined and automated, and work teams are reorganized and redeployed for higher productivity on quality, delivery time and cost. New Product development management has been a major component of competitive strategy to enhance organizational productivity and profitability. The factors that are critical for selecting the human resource for new product development in automobile industry is listed and established as important for new product development in automobile industry, mainly Original Equipment Manufacturers (OEM). A framework has been provided for the factors and link established between factors and Managing Excellence of Engineers (E2) in selected automobile industry.*

### **Introduction**

In life, it is usually easier to say no than yes. But in product development the opposite is more likely true — it's hard to turn down a major customer asking you to add more features to your product or asking you a new model product. Despite substantial prior research on new product success, there are still high failure rates. Organizations are shifting away from a company with rigid and preplanned activities to one that is able to react quickly and appropriately to changes. Improving performance in new product development has become one of the critical issues for gaining competitive advantages for companies. Providing quick and quality responses to new product development events requires the coordination of multiple functions across the enterprise.

### **Supply Chain of Indian Automobile Industry**

The supply chain of automotive industry in India is very similar to the supply chain of the automotive industry in Europe and America. The supply chain is supported by three tiers. The Automakers/Vehicle Manufacturers/Original Equipment Manufacturers (OEMs) work to

understand and fulfill wants and needs of consumers. They play a key role in supply chain of the automotive industry.

### **New Product Development Professionals**

The new product development professionals are the one who are supposed to possess multi faceted qualities with engineering qualification. Their roles and responsibilities is spread, either partial or full, from concept design, detailed design, product development, process development, process and product validation and mass production of a new product. The organization gets the benefit of demonstrating their skill to the external world – the customer as well as competitors. The ability of being customer centric rolls out new and unique featured automobiles they were passionately dreaming within them.

### **Motivation and Problem Statement**

In the present scenario there is a dearth for factors in the selection of development professionals for automobile new product development. There is a scantiness of research in understanding the factors and its impact in bringing out excellence in development engineers. The research is an attempt to ascertain the factors and show its collective energy in heaving out engineer's excellence.

### **Literature Review**

Reducing cycle time and first to market in NPD and commercialization are key to success and profitability. Takeyuki (1995) explained that target cost management is concerned with simultaneously achieving a target cost alongside the planning, development and detailed design of new products. David (2006) stated that the basic premise of sustainable business development from a technology perspective is that leading change involves proactive development of new technologies, improving existing ones, creating new products and processes, and improving existing ones.

David (2008) stated that the management of technology, technological change, and innovation are essential determinants for NPD effectiveness. Alan (2005) indicated the creative intelligence differs from what is normally considered general intelligence. Creativity focuses on how we think and our strong desire to achieve something new or different.

Rathan Ready (2005) referred leadership as "the art or process of influencing people so that they will strive willingly and enthusiastically toward the achievement of group goals". Graeme Salaman, and John (1947) explain the importance of innovation.

Innovation is increasingly identified as the critical factor in economic competitiveness. Sense of Purpose – Edward (1986) has clearly stressed that "a strong sense of purpose is one of the most important aspects of thinking skill". Edward de bono, who coined the term "lateral thinking", says richness is what matters, richness in thinking, thinking laterally and turning problems around and look at them from a fresh perspective.

Team building and team working is key to success of any organisation which are into new product development. It has become a key strategy for success as expressed by Bill (1994). Tony, Mare, and Robert (2006) give their point on learning to act and learning to learn. Learning to act is type of learning takes the current strategic objectives as given and does not question them.

### **The Advent of Factors**

The detailed literature survey resulted in a substantial number of factors elaborated by various authors in their papers published on new product development. These factors were listed after conscientious study and understanding - Techno commercial, Interpersonal, Lateral proactive thinking, Innovation, Cross functional working, supplier integration, Leadership, Creativity and Continuous learning. These factors evolve together to bring out the inherent talents embedded in the engineers and is collectively termed as E2 - Excellence in Engineers.

Variables that predict other variables

Interpersonal skill

- Continuous learning
- Techno commercial skill
- Creativity
- Lateral proactive thinking

Variables that are predicted by other variables

- Innovation
- Leadership
- Supplier integrating skill
- Cross functional working
- Managing Excellence in engineers –E2

### Model

The understanding of the existing factors and their practices in new product development has been taken as the basis for development of the conceptual model. This is being supported with twenty two years of experience of the researcher in automobile industry with fundamentals in process engineering and development of new product. Apart from nine independent factors a dependent factor was derived as Managing Excellence in Engineers (E2). Using these factors a frame work developed shown in Figure 1.

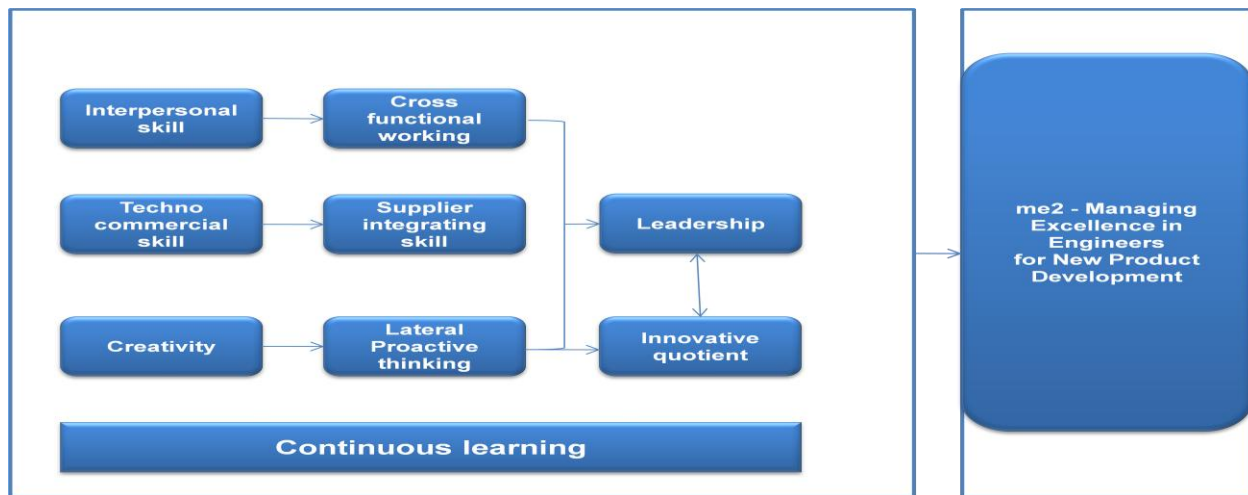


Figure 1 Frame Work

### Objective of the Study

To identify the factors, its relations and its impact that brings out excellence in engineers involved in automobile new product development.

### Scope of Study

The Scope of this study is constrained with nine factors. The study has been conducted in India with automobile organizations listed in Automotive Components Manufacturers Association of India 2011 (ACMA). The study is limited to the development professionals in

automobile new product development with involvement from conceptual design till the responsibility of handing over the new product developed for mass production as shown in Figure 2 in conjunction with APQP (advanced product quality planning) as system framed by GM, Ford and Chrysler.

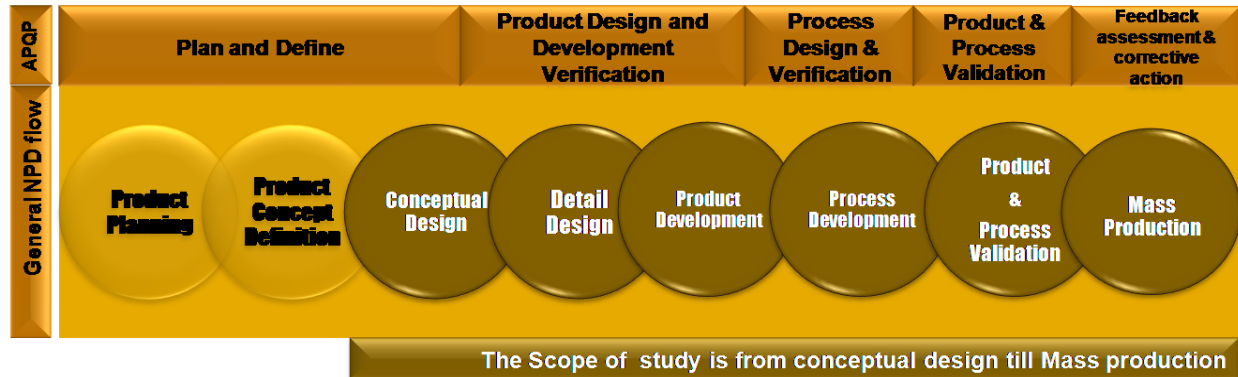


Figure 2 Scope of the study with general flow of new product development

## Hypothesis

Hypotheses were developed in line with the objective.

There exists no significant relationship between factors that brings out excellence in engineers.

## Research Methodology

**Study Area** The development and design professionals in Original Equipment Manufacturer originated in India has been the core of the study.

**Research Design** The research design selected is cross sectional design based on descriptive methodology leading to conclusions.

**Instrument Development** The instrument for this research is a questionnaire prepared with 9 sections with 5 points scale Engineers.

**Sampling Design - Type of Population – finite universe:** In this study the plan is to cover automobile industries in India.

**Sample size determination** - The data is predominantly scaled continuous data. The alpha level of 0.05 with margin of error is 0.03 provided 118 as sample size from Cochran (1977) sample size formula for continuous data. Nevertheless for an increased reliability of the data, the sample size was targeted for 500.

## Content Validity

Expert in the area of new product development were mailed with the questionnaire with the above explained clarity and relevance scale. These experts are in the field of new product development in development and also in design. The questionnaire was checked for its clarity and relevance with 17 experts. The ratio was checked for both clarity and relevance and found satisfying the conditions.

## Pilot Survey

The pilot survey was conducted with 70 respondents and checked for its reliability. The Cronbach alpha test which was found to be 0.969 for overall data and 0.770 to 0.941 for each factors, indicating its suitability for confirmatory factor analysis. The results were found to be acceptable and the survey was continued for the balance samples coverage.

## Confirmatory Factor Analysis

In the confirmatory factor analysis the values of P, GFI, NFI, RFI, CFI, RMR and RMSEA were found statistically significant as shown in Table 1.

FACTORS	Chi-square value	P value	GFI	NFI	RFI	CFI	RMR	RMSEA	Cronbach reliability (alpha)
Interpersonal Skill	16.290	0.131	0.991	0.962	0.928	0.987	0.006	0.031	0.792
Techno Commercial Skill	20.207	0.124	0.990	0.950	0.900	0.983	0.008	0.030	0.778
Innovation	0.134	0.715	1.000	0.999	0.996	1.000	0.001	0.000	0.813
Creativity	2.130	0.345	0.998	0.966	0.899	0.998	0.005	0.011	0.941
Lateral Proactive thinking	21.164	0.098	0.990	0.957	0.913	0.984	0.008	0.032	0.835
Leadership	1.381	0.710	0.999	0.995	0.982	1.000	0.002	0.000	0.821
Continuous Learning	22.056	0.141	0.989	0.925	0.868	0.977	0.007	0.027	0.822
Supplier Integration skill	27.421	0.052	0.986	0.924	0.875	0.969	0.009	0.035	0.837
Cross functional working	22.998	0.149	0.989	0.949	0.915	0.986	0.007	0.026	0.867
Excellence in engineers	14.705	0.326	0.991	0.933	0.892	0.991	0.007	0.016	0.770

Table 1 – Results of Confirmatory factor analysis for Pilot study with Cronbach alpha

The above Table 1 with the values of Chi-square, P value, GFI, NFI, RFI, CFI, RMR and RMSEA were found statistically significant.

### **Convergent Validity**

Convergent validity shows that the assessment is related to what it should theoretically be related to. Richard and Lyn (1982) defined Convergent validity as "the degrees to which two or more attempts to measure the same concept are in agreement". Convergence was assessed through the calculation of the average variance extracted scores. Fornell and Larcker (1981) in their evaluation has stated that AVE score greater than value 0.50 support convergent validity. The convergent validity shows the average variance extracted (AVE) for all the variables which were ranging from 0.50 and above. The convergent validity has been found apparent.

### **Discriminant Validity**

Richard and Lyn (1982) defined discriminant validity as "the degrees to which measures of distinct concepts differ". It is important for the model fit as it ascertains two or more constructs are separate and distinct from one another. If constructs are separate and distinct from one another, then it can be established whether or not a predictive or casual relationship exists between them. Fornell and Larcker (1981) provided a method for assessing the discriminant validity of two or more factors. AVE of each construct with the shared variance between constructs is compared. If the AVE for each construct is greater than its shared variance with any other construct the discriminant validity is supported. The results of the Discriminant validity were found satisfying the requirement for all the factors.

### **Research Findings – Observations and Analysis**

The respondents were approached directly in person, through e-mails, through references, directly by friends. A total of 1580 respondents were contacted and the received 528 responses, out of which 504 were found with full completion of questionnaires.

The adoption of the factors in induction greatly enhances the quality of new automobile. These factors comprise acceleration of innovation, escalation of globalization and



driving intensified business competition. The identified factors when profiled in new product development engineer will enable the organization to develop a flexible and competent workforce to take advantage of new business and technological opportunities. The need to employ the best and most motivated individuals to drive and execute the organization's vision will spiral endless products benefiting the customer and the society.

This study was not targeted to check the status and reject development professionals during induction. Many respondents had given very favorable opinions about the factors listed in the study. The level of the factors in engineers, when getting identified, enable the organization to position the engineers in a new product team. The need based training can be planned for the professionals.

### **Ranking of the Independent Variables**

It was observed that majority of the participants (74.03%) felt the importance of listed factors for automobile new product development. Around 75.74% of the respondents have rated 5 for cross functional working identifying it as an important factor followed by continuous learning with 74.97%. The supplier integrating skill has been with 72.9% 5 rating, the lowest in the list. The Table 2 shows the ranking of the independent variables.

CFW	CL	TCS	LEA	IPS	INN	LPT	CRE	SIS
75.74%	74.97%	74.86%	74.13%	73.81%	73.53%	73.19%	73.16%	72.87%

Table 2 Ranking of variables

## Conclusion

This research has identified and united the critical factors and presented with a model which showcase the importance of each factors and also the relation between them. The statistical tests supported the importance with significant results.

## Applicative Value

There has been demanding growth for an automobile in the society. To fulfill the requirement there is always a demand of the best team – a team consisting of engineers who has to breathe automobile. On the evolution to identify the solution it was few key factors which has been critical and has to be consolidated to have a leap of success in development of automobile.

All the factors which have been identified are essence of various qualities which lie in a human. The juxtaposition of these factors and its level, when getting identified, determines the team's performance in developing new product in automobile industry. We have to surpass the unsurpassed.

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## **CUSTOMER DELIGHT: A STUDY ON THE ROLE OF E-CHANNELS OF CRM IN BANKS AT SOUTH CHENNAI**

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### **Abstract**

*The Indian Banking Industry relies on the CRM activities to increase the customer delight and thereby retaining the loyal customers. The era of globalization & privatization had let a long way of race to all the banks to compete with each other and to gain competitive advantage. The trend nowadays is only with the context of the survival of the fittest. So the tremendous advancement in information technology had produced a paradigm shift in the field of CRM in Indian banking sector. The e-Channels of CRM & e-CRM plays a major role for the improving customer delight and it takes banks to a new milestone. The study mainly concentrates on analyzing the customers of few banks from Chennai both public and private with a sample size of 160 respondents. The results have been drawn from the data collected through the questionnaire and Interview schedule. The questionnaire is designed to identify the factors that create customer delight among the customers. The research concludes with the findings of different levels of CRM activities and their contributions towards the factors influencing customer delight. This also suggests few necessary factors which can improve the customer retention process of banks.*

### **Introduction**

CRM is a distinctive competency of each bank which makes them move ahead to their competitive advantage. In this current electronic era of banking the ordinary customer service may not make the customers stick on to a particular service provider for a longer time. They always expect some specific or unique services from their banks. If these unique services are not upto mark or if they are not matching up with the expectations then the banks can't retain their customers. The retention will be done only with the unique CRM activities, which always creates loyal customers which in turn creates Customer delight.

## **Literature Review**

According to Patterson (1997) Customer Delight involves going beyond satisfaction to delivering what can be best described as a pleasurable experience for the client. The delighted customer is more valuable for the company as it will help the organization to compete with the competitors in best fashion.

According to Paul (2000), the customer delight generates more positive word of mouth for the company. After being only satisfied with a firm product or services does not necessarily mean that customer will prefer the company or reject it but it is just simple expression of acceptance. According to Syed Hasan (2011) currently banks are concentrating on satisfying the customers from their services, but in today's fast moving world, customers only can't be satisfied in just one single way in order to remain loyal to their bank. The reason is that banks are providing the homogenous services. When a single bank comes with a unique service, its competitive advantage life time shortens as all others follow the suit.

There were several studies which show the relationship between customer satisfaction and customer loyalty, customer retention & customer delight. All these concepts bring a thin linking line for connecting both customer delight and CRM activities of Banks. Bloemer and Lemnink (1992), Sharma and Patterson (2000) highlighted that there is always a link between Customer satisfaction and Customer Delight, and to some extent upon other factors such as the level of competition, switching barriers, proprietary technology and the features of individual customers. The relationship between these 2 key constructs is considered to be very crucial for the concept of Customer Delight. Satisfaction of the customers has an impact on the loyalty and that leads to the influencing the purchase intention of the customer.

According to Branes (2002) Indeed the impact of Customer satisfaction on the retention varies in relation to the industry, product or service, environment etc. In fact, in certain conditions, a customer might be less than satisfied with a service supplier, but still continue to deal with it because the costs of switching is perceived to be very high. Thus there comes the need for the loyalty programmes and training the employees towards the CRM activities for retaining your

customers and improving the business relationship with the customers in full swing. The E-channels in CRM always creates a way to improve the business and retain the delighted customers.

### **Objectives of the study**

- ❖ To study and analyze the various e-CRM factors which influences the customer delight.
- ❖ To suggest few quality enhancement services which improve the CRM activities in banks.

### **Research Methodology**

The study is an exploratory research design, which is a basis of all researches. This study may pay way for the further improvements in the area of e-CRM and the electronic channels use in CRM. The study was conducted with the data collected from the customers of few branches of banks such as ICICI, HDFC, IOB, and IDBI located in south Chennai. The data collection was done with the help of Questionnaire method which was carried out by Interview schedule. The questionnaire was designed with a structured manner to study few demographic factors of the customers and the factors of CRM and the influence of the e-channels which creates Customer Delight. The questionnaire was designed with 5 point likert scales. The sampling technique used was Convenience sampling. The sample size taken for the study is 160. The respondents were selected equally among the 4 different banks.

The few important factors taken into consideration for the study were as follows.

- e-CRM creates good relationship between the employees and the customers.
- e-CRM channels are fulfilling the customer's requirements in this electronic age.
- e-CRM improves service quality of the banks.
- e-CRM is necessary for sustaining in this competitive market.
- e-CRM helps in managing the transformations in banks.
- Preference of the customers in terms of the traditional banking, fully computerized and partly computerized banks.
- Employee behavior in both traditional and e-banks.
- Reasons for shifting from traditional banking to e-banking.

- Ranking the preferences for the different types of functions of e-CRM.

The data from the above factors were analyzed with SPSS, the tools used were Percentage and ranking analysis and Chi square method. The data were undertaken by Cronbach alpha reliability test and the alpha value is 0.62.

## Results and Discussion

Among 160 respondents, the findings of the study from the percentage analysis were listed below.

- Maximum respondents were male, graduates and they belong to the service sector professionals. Majority of the respondents are of the age group of above 30 yrs and their income level is above 2 lakhs per annum.
- Majority of the customers strongly agree that e-CRM creates good relationship between the employees and the customers.
- Majority of the customers agree that e-CRM channels are fulfilling the customers requirements in this electronic age.
- Majority of the customers strongly agree that e-CRM improves service quality of the banks.
- Majority of the customers agree that e-CRM is necessary for sustaining in this competitive market.
- Majority of the customers neither agree nor disagree that e-CRM helps in managing the transformations in banks.
- 43% of the respondents prefer for a fully computerized bank.
- 64% of the respondents agree that the employee's behavior is good in e-banks.
- The respondents ranked the reason for shifting to e-banking as follows.

Reasons	Rank
Speedy transactions	1
Makes work easier	2
Customized solution	3
Immediate response	4
Better quality of product & service	5

- The ranks provided on the customer preference of functions provided by e-CRM are as listed below.

Reasons	Rank
Cash withdrawal	1
Fund transfer	2
Online solutions	3
Bill & Loan payments	4
Deposits	5
Balance inquiry	6

From the chi square analysis made there were few findings which are listed below.

- There is no significant difference between gender and the factor stating that the "e-CRM creates good relationship between the employees and the customers".
- There is no significant difference between the education and the factor stating that the "e-CRM improves service quality of the banks"
- There is significant difference between the age and the preference towards the necessity of fully computerized banks.
- There is significant difference between the gender and the good behavior patterns of the employees of banks with e-CRM.
- There is no significant difference between the age and the necessity of e-CRM in banks of this competitive world.

## Conclusion

The study concludes that there is a heavy need for the e-channels of CRM practices in Indian Banks. Customers prefer e-banks rather than traditional banks. This is the reason why customers shift from traditional to e-banks. The e channels of CRM create customer delight and thereby retain the customers. The Customers suggested to improve the CRM activities in terms of training for staff or employees, customer counseling and education. They also suggested that the e-channels of CRM related to grievance handling can be also improved. This exploratory study will be a road map for the future areas of research.



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## **BRAND AWARENESS OF BIG BAZAAR HYPERMARKET AND ITS COMPETITORS, HYDERABAD**

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### **Abstract**

*The case examines in detail the changing dynamics in the Indian retailing industry in this 21<sup>st</sup> century, driven by the growth of organized retailing sector and increased personal consumption of customers on account of increased exposure to foreign goods and growth in nuclear families and rising incomes. The article focuses on retailing formats in India. Retail revolt is extensive throughout India. Organized retailing has grown with growth of supermarket, malls, multiplexes, and hypermarkets, the consumer is being revealed to a new kind of shopping knowledge and services which is gently and surely redefining customer expectations from shopping. The purpose of this paper is to study the retail industry in India.*

### **Introduction**

The last decade has witnessed dynamism in Indian retail sector. Retailing has emerged as one of the most important sectors of Indian economy beyond the 90s. A brand, in short, can be defined as a seller's promise to provide consistently a unique set of characteristics, advantages, and services to the buyers/consumers. It is a name, term sign, symbol or a combination of all these planned to differentiate organizations and the goods/services of one seller or group of sellers from those of competitors. Brand awareness is the probability that consumers are familiar about the life and availability of the product. It is the degree to which consumers precisely associate the brand with the specific product. Brand awareness, as one of the fundamental dimensions of brand equity, is often considered to be a prerequisite of consumers' buying decision, as it represents the main factor for including a brand in the consideration set. Brand awareness can also influence consumers' perceived risk assessment and their confidence in the purchase decision, due to familiarity with the brand and its characteristics. On the other hand, brand awareness can be depicted into at least two facets – unaided (brand recall) and aided (brand recognition) – each of the two facets having its more or less effective influence on buying decision and perceived risk management. Big Bazaar is a chain of hypermarket in India.

As of June 2, 2012 there are 214 stores across 90 cities and towns in India covering around 16 million sq.ft. of retail space. Big Bazaar is designed as an agglomeration of bazaars or Indian markets with clusters offering a wide range of merchandise including fashion and apparels, food products, general merchandise, furniture, electronics, books, fast food and leisure and entertainment sections. Big Bazaar was launched in September, 2001 with the opening of its first four stores in Calcutta, Indore, Bangalore and Hyderabad in 22 days. Within a span of ten years, there are now 161 big bazaar stores in 90 cities and towns across India. By September 2012 big bazaar will have two more stores in north east namely silchar and jorhat in assam. Big bazaar was started by kishore biyani, the group ceo and managing director of pantaloon retail India. Though big bazaar was launched purely as a fashion format including apparel, cosmetics, accessory and general merchandise, over the years big bazaar has included a wide range of products and service offerings under their retail chain. the current formats includes big bazaar, food bazaar, electronic bazaar and furniture bazaar.

### **Review of Literature**

**Mehrabian and Russell (1974)** note that the response that retail store atmosphere elicits from consumers varies along three key areas of pleasantness, arousal, and dominance. This results, in turn, influences behavior, with superior likelihood of purchase in more settings that are enjoyable and in setting of intermediate arousal level.

**Milliman (1982); Eroglu and Machleit; Grewal et al. (2003)** different of a retailer's in-store setting, e.g., color, music and crowding, can influence consumer's perceptions of a store's ambiance, whether or not they visit a store, how greatly time they spend in it, and how much money they pay out there.

**Baker et al.(2002)** Find that store environment factors, particularly physical intend perceptions, significantly affect consumers' perceptions of merchandise price, merchandise quality, and employee service quality.

### **Objectives of the Study**

- To study about the Brand awareness of Big Bazaar and its competitors.
- To know the Preference levels of customers for Big Bazaar when compared to Spencer's and D-Mart.

### **Research Design**

The research design applied for the study is described as descriptive research study. The descriptive research study is used for defining and analyzing the research problem effectively. It mainly concerned with describing the essential characteristics of a particular individual or group or situation. Descriptive research includes surveys and fact-finding enquires of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present.

### **Sample Design**

Due to time and resource constraints the sample size is restricted to 150.

Sampling unit	: customer of food bazaar
Sample size	: 150(big bazaar-50, spencer's-50, d-mart-50)
Sample method	: convenience sampling method
Statistical tool	: chi-square test, percentage analysis.

### **Data Collection**

Data refers to information or facts. It includes numerical figures, non-numerical figures, Descriptive fact, quantitative and qualitative information. The task of data collection begins after research problem has been defined and research design in chalked out. While deciding about the method of data collection to be used for study, the researcher needs to focus on two types of data viz., primary data and secondary data. The primary data are those that are collected through questionnaire and direct personal interview. All the questionnaires were collected through personal contact from the respondents. It is collected a fresh and for the first time and thus happen to be original in character. Secondary data, on the other hand, is those which have already been collected by someone else and which already have been passed

through the statistical process. Secondary data pertaining to this study was obtained from company documents, websites etc. The study is based on the primary data. The relevant secondary data collected from various journals, books, and websites.

## **RETAIL TRADE FORMATS**

The retail trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise. Retailers are therefore organized to sell merchandise in small quantities to the general public.

This sector comprises two main types of retailers:

- Store retailers
- Non store retailers

### **Store Retailers**

Operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers. In general, retail stores have extensive displays of merchandise and use mass-media advertising to attract customer. They typically sell merchandise to the general public for personal or household consumption, but some also serve business and institutional clients. These include establishments such as office supply stores, computer and software stores, building materials dealers, plumbing supply stores and electrical supply stores. Catalog showrooms, gasoline service stations, automotive dealers and mobile home dealers are treated as store retailers. In addition to retailing merchandise, some types of store retailers are also engaged in the provision of after-sales services, such as repair and installation. For example, new automobile dealers, electronics and appliance stores, musical instrument and supplies stores often provide repair services. As a general rule, establishments engaged in retailing merchandise and providing after-sales services are classified in this sector.

### **Non Store Retailers**

Non-store retailers, like store retailers, are organized to serve the general public, but their retailing methods differ. The establishments of this subsector reach customers and

market merchandise with methods, such as the broadcasting of "infomercials," the broadcasting and publishing of direct-response advertising, the publishing of paper and electronic catalogs, door-to-door solicitation, in-home demonstration, selling from portable stall (street vendors, except food) and distribution through vending machines. Establishments engaged in the direct sale (non-store) of products, such as home heating oil dealers and home delivery newspaper routes included here.

### **Shopping mall**

Malls are upcoming trend in retail market. The concept is based on constructing centrally air-conditioned malls and renting the floor space out to individual shops. Malls inspire fashion-based shopping, as distinct from the need-based shopping inspired by super-markets and discount stores.

### **Hyper markets**

The hypermarket combines supermarket, discount and warehouse retailing principles. Its product assortment goes beyond routinely purchased goods and includes furniture, large and small appliances, clothing and many items. The basic approach is bulk display and minimum handling by store personnel, with discounts offered to customers who are willing to carry heavy appliance and furniture out of the store.

### **Specialty stores**

Specialty stores, as the name implies, are ones that carry a narrow product line with deep assortment within that line.

### **Department stores**

A department store carries several product lines, invariably all that is required by a typical household. These lines include food, clothing, appliances and other household goods, home furnishings, gifts and curios.

### **Super markets**

This is large, low cost, low margin, high volume, self-service operation designed to serve the customer's need for food, laundry and household maintenance products.

### **Convenience stores**

There are generally food stores that are much smaller in size than supermarkets. They are conveniently located near residential areas and have long hours of operations, seven days a week, and carry a limited line of high turnover convenience products.

### **Future Retail**

The retails businesses of Future Group in India are divided into three main categories:

#### **Future value retail limited**

The leading retail formats under this include:

- Pantaloons stores
- Big bazaar
- Central
- Food bazaar
- Home town
- E zone
- Depot
- Health & Beauty Malls
- Online retail through future bazaar.com

#### **Joint ventures with international brands**

- Indus League Clothing that owns leading apparel brands like Indigo Nation, Scullers and Urban Yoga.
- Galaxy Entertainment Limited that operates Bowling Co, Sports Bar, F123 and Brew Bar
- French retailer ETAM group, US-based stationary products retailer, staples and UK-based Lee Cooper.
- Franchisee of international brands like Marks & Spencer, Next, Debenhams and Guess in India.

**Indian Joint Venture Partners:**

- Manipal Healthcare
- Talwalkar's
- Blue Foods
- Liberty Shoes.

**Results**

**CHI SQUARE TEST:**

Null hypothesis (Ho): The performance of hypermarket is independent of their gender.

Alternate Hypothesis (H1): The preference of hypermarket is dependent of their gender.

Degree of freedom =  $(3-1) (2-1)=2@0.05$

Calculated chi square value=2.01

Table value of chi square for 2 degree of freedom at 0.05=5.991

The computed value of chi square (2.01) is less than the table value (5.991) the null hypothesis is accepted.

Conclude that there is no relationship between gender and preference of hypermarket. The calculated value of 2.01 is less than the table value of 5.991 at 5% level of significance. Hence, the null hypothesis is accepted. Thus, preference of hypermarket is independent of their gender.

**Findings**

- BIG BAZAAR has good brand awareness (92%) among the consumers while D-MART has least awareness (64%).
- News papers are playing crucial role in creating awareness of big bazaar (33%). Spencer's (36%).
- Low prices (34%) and quality (37%) are the considerable factors in choosing hyper market
- SPENCER'S is expensive when compared to D-Mart & Big bazaar
- SPENCER'S offers good quality of products when compared to big bazaar and D-Mart
- SPENCER'S offers wide range of products compared to Big Bazaar and D-Mart.



- The service & store ambiance of Big Bazaar is better than Spencer's & D-MART
- Big Bazaar has greater acceptance (45%) among the consumers in comparison to Spencer's (27%) and D-Mart (28%).
- The chi-square test proves that there is no relationship between gender and preference of hypermarket (Calculated chi-square value=2.01, Table value=5.991@ 0.05)

### **Suggestions**

- The company should try to improve communication to the customers through news papers in order to create awareness of promotions and existence of hypermarket.
- It is recommended to maintain good quality products and ensure wider availability with moderate price.
- Big bazaar need to increase the range of products to attract more customers.

### **Conclusion**

Indies retailing industry is essentially owner manned small shops account for more than 90%. In 2010, lager format convince stores and supermarkets accounted for about 4 % of the industry, and there were present only in large urban centers. Hypermarket customer quality is important indicator for selection of hypermarket shop. Perceived quality may be reflected of advanced technology, shop atmosphere, product, service etc. These findings may be still rational since the brand image; brand awareness, brand association and brand loyalty are not perceived as importance factors building brand equity. This shows of perceived quality in creating awareness and brand image in the hypermarkets.

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## STORE INTERIOR ATMOSPHERICS AND IMPULSIVE BUYING BEHAVIOUR

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### Abstract

*The study investigates the interior atmospheric factors that influence the impulse buying behavior in a retail outlet. A descriptive research is done with a sample of 150 among selected supermarkets in in Chennai. The elements of interior atmospherics are music, store display, shop density, temperature etc. Result shows that the commonly purchased products by impulse are chocolates, snacks and beauty care products. The study identified various factors that influence impulse buying in instore environment.*

### Introduction

Retailing is gaining importance globally as it undergoes dynamic changes as a result of changing customer taste and preference . Customers make planned and impulse purchases in retail outlets.

A planned purchase is characterized by deliberate, thoughtful search and evaluation that normally results in rational, accurate and better decisions .Contrary to a planned purchase, impulse buying is a spontaneous and immediate purchase where the consumer is not actively looking for a product and has no prior plans to purchase. Impulse buying behavior studies have attracted academic researcher attention because there appears to be a contradiction between what people say and what people do. While literature and consumers themselves claim that impulsive buying behavior is normatively wrong, a substantial volume of purchases across a broad range of categories could be classified as impulsive. Marketers and retailers tend to exploit these impulses which are tied to the basic want for instant gratification. For instance a shopper in a supermarket might not specifically be shopping for chocolates However, candy, gum, mints and chocolate are prominently displayed at the checkout aisles to trigger impulse buyers to buy what they might not have otherwise considered .Alternatively, impulse buying can occur when a potential consumer spots something related to a product that stirs a

particular passion in them, such as seeing a certain country's flag on the cover of a certain products. Sale items are displayed in much the same fashion

Impulse buying disrupts the normal decision making models in consumers' brains. The logical sequence of the consumers' actions is replaced with an irrational moment of self gratification. Impulse items appeal to the emotional side of consumers. Some items bought on impulse are not considered functional or necessary in the consumers' lives. Preventing impulse buying involves techniques such as setting budgets before shopping and taking time out before the purchase is made

### **Impulse Buying Behaviour**

Impulse buying definitions range from simply unplanned purchasing (e.g., du Pont studies 1945-1965) to the three-part definition where impulse buying as an unplanned purchase that is characterized by 1) relatively rapid decision-making (Rook 1987; Rook and Hoch 1985), 2) being hedonically complex and more emotional than rational (Bayley and Nancarrow 1998; Rook 1987; Rook and Hoch 1985), and 3) not including the purchase of a simple reminder item such as buying a gift for someone that fulfills a planned task (Beatty and Ferrell 1998). Rook further described impulse buying as an intense, exciting urge to buy without regard to the consequences of the purchase decision.

Many previous studies have investigated the antecedents of impulse buying, ranging from mood states and emotions (e.g., Rook and Gardner 1993), product category (Bellenger et al. 1978), in-store influences (McGoldrick 1982), the individual difference variables (Beatty and Ferrell 1998; Rook and Fisher 1995), to demographics (e.g., Dittmar et al. 1995). In addition, the literature also suggests the impact of product types that are associated with self-identity (Dittmar et al. 1995; Lee and Kacen 2000).

Impulse buying occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately.

Conceptual Definition states that Impulse buying is defined as a buying action undertaken without the problem having been previously recognized or a buying intention formed prior to entering the store

### **Kinds of Impulse Buying**

Impulse buying is influenced by economic, personality, time, location and even cultural factors. These vary from different shoppers considering purchase of same item but also for same shopper buying same item at different buying situation. This results in different kinds of Impulse buying. The following are various kinds of Impulse Buying Identified.

#### **Pure impulse buying**

This is pure Impulse purchase which can be distinguished from normal purchase pattern.

#### **Reminder impulse buying**

Reminder Impulses purchase occurs when a shopper sees an item and get reminds that the stock of it at home is exhausted or low or recalls an advertisement or any other information which make them purchase.

#### **Suggestion impulse buying**

Suggestive impulse purchase occurs when shopper's sees a product for the first time and relishes the need to buy

#### **Planned impulse buying**

A shopper enters the store with the expectations and intention of making some purchases on the basis of price specials, coupons, and the like.

### **Internal Atmospheric as determinants of Impulse Buying Behaviour in a Retail Store**

There are various determinants for Impulse Buying behavior in Retail Store The determinants are Lighting , Promotion , Price , accessibility , Visibility of the store , assortments , window displays , sales person etc. This research investigates how elements of Internal Atmospheric influence impulse buying behavior.

It is constituted by micro variables which are specific to particular shopping situations and confined to a specific geographic space. Factors such as in-store background music, store display, scent, instore of the idea that an increase or decrease in the amount spent for an essential item on a given shopping trip would increase or decrease the amount that is perceived to be available to spend on other goods, producing a congruent spillover effect. Arkes et al. (1994) as cited by Janakiraman et al. (2006) acknowledged that the unexpected price discount results in higher expressions of willingness to pay for unrelated discretionary items.

### Research Methodology

Samples of 150 respondents were randomly selected in a selected Supermarket. A Structured Questionnaire was given to respondent. To standardize responses; a close ended questionnaire was used. Using this close ended questionnaire also ensured easy analysis of data. The first part of the questionnaire were aimed at assessing material that were impulsively purchased .The second section contained 9 items to measure the likelihood of impulsive buying in retail supermarkets as a result of the various interior atmospheric factors on a five point Likert scale.

### Result and Discussions

The sample consists of 90 percent female respondents aged between 30-40. 55 percent respondents earn on average Rs 20,000 per month 76 percent of respondent do impulse buying behaviour. The products that are purchased on impulse in supermarket are ranked as follows chocolates, snacks, beauty products and compact disk; the determinants of Interior Atmospherics that influence the impulse buying are as follows

S.No.	Determinants	Weighted Average	Ranks
1.	Shop Density/Crowding	4.5	1
2	Window Display	4.3	2
3.	Advertisement	4.0	3
4	Background Music	2.0	9
5	Sales Person	3	6
6	Coupons	3.3	4
7	Temperature	2.1	8
8	Price	3.2	5
9	Scent	2.2	7

The study sought to investigate the relationship between the interior atmospherics and impulsive buying. Unlike much of the previous research studies that focused on the influence of single variables on impulsive buying, this study identifies various interior factors the influence of impulse buying. It is found that Crowding /Shop Density, Window display followed by advertisement influence impulse buying behavior

### **Limitation and Direction for further Research**

Although the study focused mainly on supermarket consumers, it was not specific on any particular products that are likely to be mainly bought on impulse as a result of the in-store environment. In that regard, the study fails to account for the possible differences elasticity of different products to different promotional strategies. A research that comparatively investigates-store environment induced impulsive buying across different and specific product ranges; portfolios or brand categories can have an important contribution to the understanding of consumer impulse buying and may contribute to the knowledge of retailing strategies.

### **Conclusion**

The Study investigates the factors of interior atmospherics and impulse buying behavior in selected supermarket in Chennai city. Majority of the shoppers buy on impulse. The Shop density and window display induces buying behavior among the shoppers. It is recommended that the Retailers should focus on provide space for the shoppers to walk around by reducing shop density. The store must have legible and impressive displays to increase the probability of Sales. Advertisements may be designed to emphasize the non-economic rewards of impulse buying. The presence of environmental stimulation variables such as scent and sound or attractive store displays may moderate the choice of search strategies and making impulse purchases. Researchers also suggest that consumers engage multipurpose shopping trips and they shift back and forth between epistemic and hedonic search strategies throughout their shopping experience

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