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    NEED/IMPORTANCE OF THE STUDY

    STATEMENT OF THE PROBLEM

    OBJECTIVES

    HYPOTHESES

    RESEARCH METHODOLOGY

    RESULTS & DISCUSSION

    FINDINGS

    RECOMMENDATIONS/SUGGESTIONS

    CONCLUSIONS

    SCOPE FOR FURTHER RESEARCH

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    APPENDIX/ANNEXURE

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BOOKS

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

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- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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WEBSITES

- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

THE EXTENT OF THE IMPORTANCE OF PERSONALITY INDICATORS OF INDEPENDENT ENTREPRENEUR THROUGH USING GROUP ANALYTICAL HIERARCHY PROCESS

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ABSTRACT

This research begins with this question! What attributes do independent entrepreneurs have? And, How to recognize them? Their attributes are to some extent the roots of behaviors. In this research, in regards to the variety of behavioral attributes in entrepreneurs and the scholars' research in this area and all the clear – sighted view such as risk taking propensity, innovation, independence, Thinking positivity and etc, and experts' ideas, six indicators through attributes have been selected. Through using the method of group analytical hierarchy process, priorizing these attributes has been done in order to have a proper model to recognize entrepreneurs and turning other people into entrepreneurs. So, first, the extent of importance of nine independent successful entrepreneurs' ideas that have been selected as experts in measured. Then, through using even comparison and GAHP, the selected indicators have been priories and the goal of research which is to recognize and priorize the personality indicators of independent entrepreneurs has been achieved to recognize these people in the society and model their behavioral attributes in other people the comparison in this research is proportional with similar research in other countries. In all research, the indicators of innovation and risk taking propensity are the most important attributes of independent entrepreneurs and would have the first grades.

KEYWORDS
entrepreneurs, entrepreneurs' personalities, analytical hierarchy, group analytical hierarchy.

1. INTRODUCTION
According to peter F. Drucker, a entrepreneur always looks for variety and innovation and utilizes them as a chance. Innovation is a tool in the hands of a entrepreneur in which the entrepreneurs use it as an evolution and variety in improving a new business and a difference in providing services. An entrepreneur is a risky person that turns the environmental threats into chance and with creative causes advance in organization.

The entrepreneurs are the main motivator force in developing the economy and through them, finding an idea effectively turns into an economical chance. So, the most important issue is to recognize these people in society (Ghazanfary et al, 1386: 43). Entrepreneuring causes people and country full fill mend. Before a person begins a business, he should be familiar with mental attributes and personality of Entrepreneuring inorder to have a successful organization. On the basis of the achieved results of monitor international institute research, the difference in the rate of economical growth in developed countries, as a result of difference in the level of their Entrepreneuring has been expressed. These results have shown that entrepreneurs in developed countries have play a key role in developing economically and socially. (Saeedi Kia, 1380: 19). On the basis of entrepreneurs' role in economical and social growth of developed countries, finding entrepreneurs and analyzing the process of Entrepreneuring in according with cultural, social and economical term of country and criticizing the factors of success and failure would help a lot in full filling Entrepreneuring successfully, creating new job chances and exiting economical situation of single product in Iran. On the basis of the above cases, the necessity of finding entrepreneurs for advancement of developing countries such as Iran, it is obvious that this recent research is to specialize and priorize the personality indicators of these people and to achieve this, it has utilized the group analytical hierarchy process.

2. REVIEW OF THE LITERATURE
A lot of research about entrepreneurship personality attributes has been done in different countries. McClelland studies, professor of psychology in Harvard would acknowledge successfulness in most of the entrepreneurs in 1961.

Hensmark research in 2003 also shows that entrepreneurs often have special psychological attributes such as Intend independence the need to advancement and inside locus of control.

Herbert & Link surveyed 12 attributes of entrepreneurs that until 1982 were attributed to entrepreneurs in economical stability. Hasanali Aghajani and Ziba Ganjeh Khor (1389) have done a research to establish the role of entrepreneurs' psychological attributes on to the independent entrepreneurship process of Mazandaran.

In Hamid Shahband Zadeh's research (1389), personal indicators of independent entrepreneurs in according to Jennings' research have been selected and through using decision – making methods, several factors have been surveyed and a similar result to that research has been achieved.

As far as the role of entrepreneurs in economical development of countries is undeniable, but the existing results show that the educational programs in Iran have not been established inorder to raise entrepreneur ship personal attributes of students (Safaee, 1388: 139). Limited studies have been done about successful factors of entrepreneurs in Iran. In relation with personal attributes of organizational entrepreneurs, some research has been done in these years but the internal research about personal attributes of independent entrepreneurs has been a little.

Table 1 shows internal and external research about recognition and priorizing independent entrepreneurs' attributes. The first countries which performed some activities about entrepreneur ship were Germany, Britain, America and Japan (Feiz, 1386: 21).

In order to develop entrepreneur ship in Iran and reduce the rate of failure in businesses, purposeful and long time policies about eliminating the legal obstacles of entrepreneur ship and reducing the effect of external factors in entrepreneurs' failure should be done in addition to education and improvement of entrepreneur ship skills (Arasti, Gholami, 1389: 188-194).

TABLE 1: THE MOST IMPORTANT RESEARCH ABOUT INDEPENDENT ENTREPRENEURS' ATTRIBUTES			
Range	Researcher	Year	Research topic
1	David McClelland	1961	The survey of intend success personality
2	Herbert & link	1982	The survey of entrepreneurs' attributes until 1982
3	Karland et al	1984	The kinds of attributes and classification.
4	Gifford Pinchot	1985	The comparison of independent entrepreneurs with organizational ones.
5	Baden Fuller and Stopford	1994	The recognition of new indicators of entrepreneur' personality.
6	cox, Cooper & Jennings	1994	The comparison of independent entrepreneurs with organizational ones.
7	Hensmark	2003	The survey of psychological attributes.
8	Brooks R.N(Vic)	2003	The survey of five main personal model: comparative comparison among male and female entrepreneur ship.
9	Thomas	2004	classification of attributes
10	Haward	2004	The survey of effect of developing the abilities of entrepreneur shipness.
11	Christian Korunka, Hermann Frank, Manfred Lueger, Josef Mugler	2006	The survey of entrepreneur shipness of personality about recourses, environment and the process of making a living.
12	Zoo, Lynn & Lee	2007	The survey of 10 important entrepreneur shipness factors called "providing customers' services: entrepreneur shipness in sight seeing and visits.
13	Papzen, Zarafshan, Tavakoli	2008	The successful factors of rural entrepreneur ship in Mahdasht, Kermanshah.
14	Altinay & et al	2012	The effect of family history and physical conditions on to the extent of entrepreneur ship.
15	Milad Safaee	1388	Evaluation and comparison of entrepreneurship personal attributes of students of different colleges in Semnan.
16	Hasanali Aghajani & Seyyed Aliakbar Hosseinzadeh Otaghsara	1389	The model of determination of effects of personal attributes on to entrepreneurship in Mazandaran.
17	Hasanali Aghajani & Ziba GanjehKhor	1389	The establishment of the role of psychological attributes of entrepreneurs on to the independent entrepreneur shipness process in Mazandaran.
18	Hamid Shahbandarzadeh	1389	The survey of entrepreneurs personal indicators.

3. STATEMENT OF THE PROBLEM

The performed studies have not been able to specialize personal indicators of entrepreneurs clearly so far and as far as have introduced a lot of factors, but not considered priorization or besides consideration, a proper scientific method has not been utilized. Or in addition to utilizing a proper scientific method, these attributes have not been selected according to Iranian culture and society. A wrong assumption is that all who have passed entrepreneur hipness majors should research about this area. But, it has been proved in industrial countries that manager especially industrial managers are the best people for research in this way and increase the number of entrepreneurs in organization on the other side, a lot of complexity in psychological. Dimensions has caused that there aren't any introduced public attributes of carefulness, in fluency and enough value because they are mostly. Sings not cause and factor of entrepreneur hipness (Aghajani, Hosseinzadeh Otaghsara, 1389: 82).

So, in this study, the researcher is to find this question that to some extent, personal indicators on the basis of Iran's society can have an effect on to entrepreneurs personalizing?

With responding to this question, there is a proper model to turn all people to entrepreneurs in education centers and managers of industries in educational centers and managers of industries and the effectiveness of education in entrepreneur hipness will be increased.

4. CONCEPTUAL MODEL

As it is observed in chart 1 , in this research, priorizing the most important personal indicators of independent entrepreneurs in Iranian society such as creativity and innovation, risk taking propensity, tendency to the power, intend independence, inside control, thinking positive have been attributed.

CHART 1: SPECULATIVE FRAME WORK OF RESEARCH
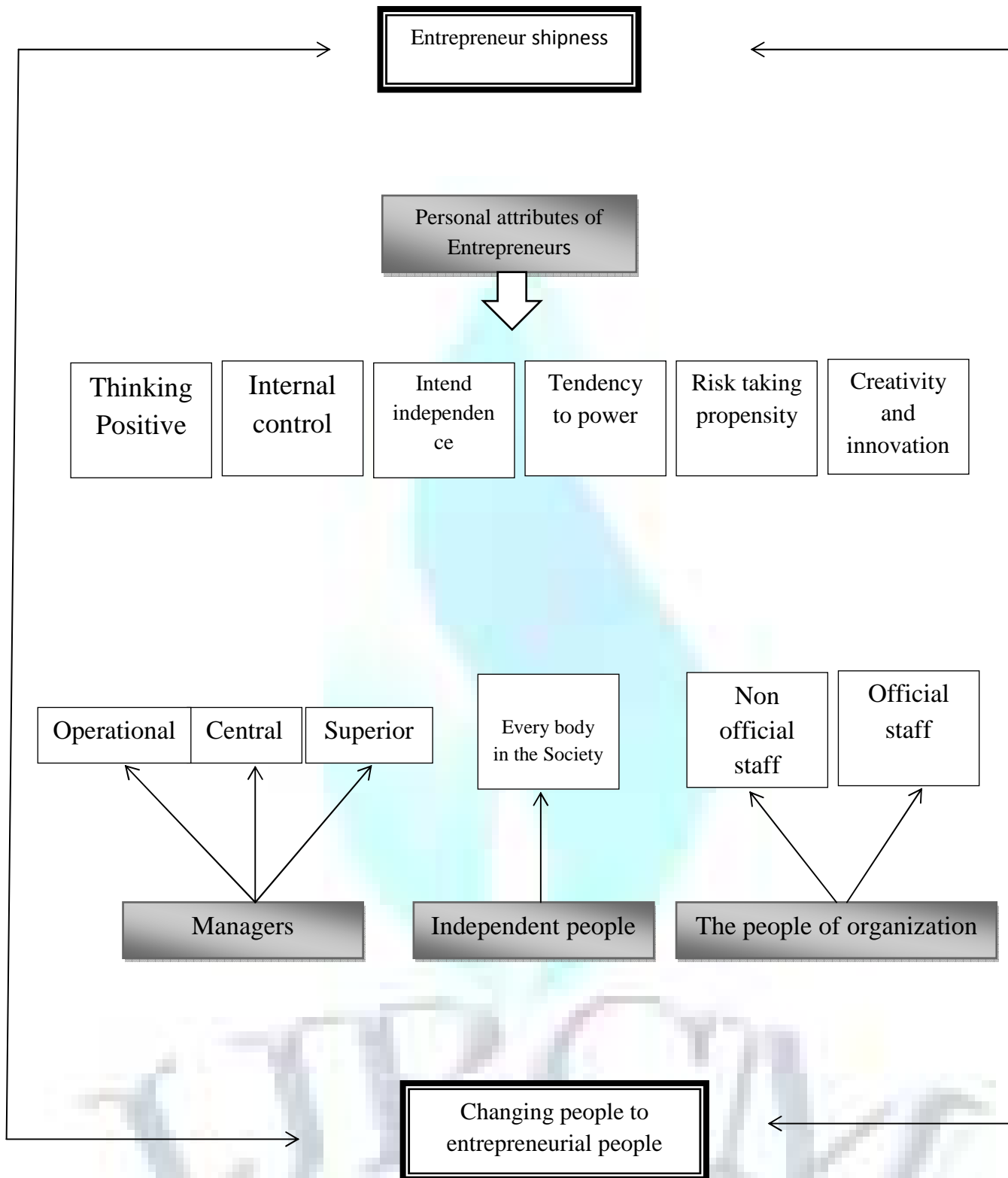
5.   METHODOLOGY

The recent research is applicable on the basis of purpose because of being performable and on the basis of nature and method is descriptive – analytical. It is descriptive because in the method of descriptive research, the researcher describes real and exact attributes of a situation and tries to report everything without interference or mental induction in order to achieve exact results (Khalili & Daneshvari, 1378: 64). And it is analytical because it has structural data.

Population and sample size: The surveyed statistical society in this research would include all entrepreneurs in Iran and this obtained sample has been ordered on the basis of a large society and nine experts have been selected on the basis of better documents to perform even comparisons. The selection of these people has been performed according to Harker research.

Gathering Data: The required information in the history of journals, books, scientific valuable sites, thesis about entrepreneurship, official and non- official statistics, organizational documents have been obtained. The other required information. Through inter view and asking questions from sample experts have been achieved.

In order to ranging indicators, even comparisons table, which has been provided by a clock, has been utilized. The obtained results of analysis of even comparisons and analytical hierarchy tables provide research data.

Method of the research: In this research, multi factor decision – making methods (HAP, GAHP) have been utilized. Multi decision- making attributes to specific decision such as evaluation, priorization and etc (Khaleghi, 1389: 123). AHP would change them into a simple form through analyzing complex problems and solve them. This method has found a lot of applications in economical and social problems and has been utilized in management issues (Ghodsipoor, 1379: 11). This method has been invented by Thomas Saati (Asgharpoor, 1383: 97).

Group analytical hierarchy is a subgroup of scoring compensative group of multi factor decision making. GAHP is a method in which would have a lot of advantages in personal and group decision making such as unification, frequency of process, judgment and consensus of opinion, give and take, syntax, conformation, complexity, bilateral dependency of components, hierarchical structure and measuring the issues (Azar, Rajabzadeh, 1381: 53).

In AHP process, after determining a proportional weight of any choice, a proportional weight of any indicators in relation to the related choice is determined through using the following formula, the single weight of any of the indicators is calculated.

Proportional weight of 1 choice × proportional weight of indicator relation to 1 choice + … + proportional weight of n choice × proportional weight of indicator relation to 1 choice = Absolute weight of indicator

In GAHP process, after determining every expert through using AHP, an even comparison among indicators by any expert is done and then these comparisons are combined and single weight of any indicator is obtained and on its basis, priorizing is done.

6. EMPIRICAL RESULTS

To specify the importance of any experts' ideas in weighting process to indicators according to a valuable factor, AHP has been utilized. Measuring the importance in this stage is done by a researcher of course, the possibility of using methods such as thinking thunder and … also existed to determine the weight of any of the expert, but because analytical hierarchy method has more value, this method has been utilized according to there total indicator correlate specialty, personal mastery and creative thinking, evaluation and importance measuring has been performed. Table 2 shows the summary of 4 matrices of AHP to determine the weight of any expert.

The related specialty is attributed to conformity and closeness of major to the required specialty.

Personal mastery is attributed to all people's skills such as mental and physical to do business. Creative thinking is attributed to expressed ideas before and during doing business. Table3 shows single weight and attributed grade to any of the experts.

TABLE 2: THE SUMMARY OF AHP MATRICES TO DETERMINE WEIGHT OF ANY EXPENSE				
row	Table title	Indicator's or choice's name	Relational weight	Disconformity rate
1	Survey of weight of main indicators	Related specialty	0.084	0.03
		Personal mastery	0.705	
		Creative thinking	0.211	
2	Survey of experts weight according to related specialty	A	0.262	0.03
		B	0.156	
		C	0.213	
		D	0.153	
		E	0.028	
		F	0.058	
		G	0.036	
		H	0.074	
		I	0.020	
3	Survey of experts' weight according to personal mastery	A	0.261	0.04
		B	0.168	
		C	0.118	
		D	0.096	
		E	0.049	
		F	0.056	
		G	0.042	
		H	0.172	
		I	0.039	
4	Survey of experts' weight according to creative thinking	A	0.316	0.03
		B	0.164	
		C	0.101	
		D	0.078	
		E	0.046	
		F	0.058	
		G	0.024	
		H	0.035	
		I	0.178	

TABLE 3: FINAL SCORING OF ANY OF THE EXPERTS		
Grade	Coefficient (wj)	Names
1	0.271	A
2	0.166	B
3	0.139	H
4	0.123	C
5	0.098	D
6	0.062	I
7	0.057	F
8	0.046	E
9	0.038	G

6-2.   DETERMINING WEIGHT OF ANY OF PERSONAL INDICATORS

Personal attributes are mental attributes of any person, which are recognized behind formats and special names. In operational definition, personal attributes of on entrepreneur attributed to grades which were given by selected experts to personal attributes such as (creativity, inside control, risk- taking propensity and etc) (Mohammadi, 1389: 8-9).

After determining the importance of people's ideas inorder to providing priority of the most important personal indicators of independent entrepreneurs such as (creativity and innovation, thinking positive, inside control, intend independence, risk taking propensity and tendency to power), group analytical hierarchy process is utilized.

Holding thinking thunder meeting through web made experts more knowledgeable about the goal of the research and reduced much dispersion in ideas. Then, they were asked to express their ideas through even comparisons among different choices.

CHART 2: PROFFERING HIERARCHY PROCESS MODEL FOR THE EXTENT OF THE IMPORTANCE OF PERSONALITY INDICATORS OF ENTREPRENEUR
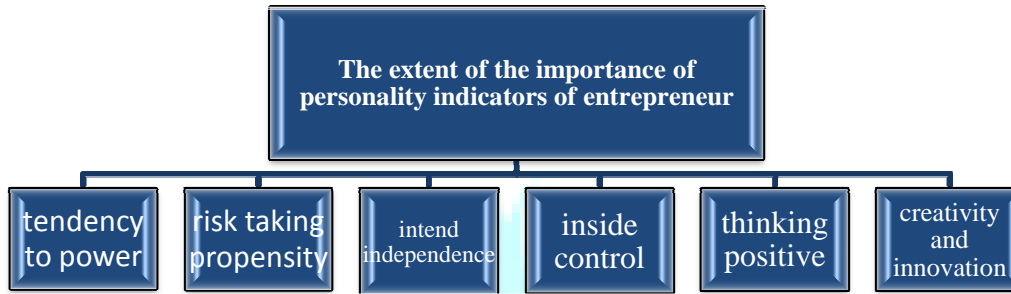
In AHP, after building hierarchy, even comparisons are performed by any of nine experts about six personal indicators in relation to each other. Showed Exampling from even comparisons are performed through one expert in Table 4 and chart 3.

TABLE 4: EVEN COMPARISONS ARE PERFORMED BY EXPERT A						
Indicator Name	tendency to power	risk taking propensity	intend independence	inside control	thinking positive	Creativity and innovation
tendency to power	1	1/2	1/4	1/4	2	1/6
risk taking propensity	2	1	1/2	1/3	4	1/4
intend independence	4	2	1	1/2	7	1/2
inside control	4	3	2	1	6	1/2
thinking positive	1/2	1/4	1/7	1/6	1	1/9
Creativity and innovation	6	4	2	2	9	1

This expert believes that creativity is superior to other indicators. This table was shown to all selected experts to collect and analyze selected entrepreneurs' ideas. After experts compared different indicators together gave it to the researcher. Researcher calculates collected even comparisons of experts about superiority of different choices through following formula and any experts' idea coefficient: for e.g. about superiority of creativity indicator to tendency to expert's power (A) , number 6 has been attributed and the other eight experts know this superiority 7, 8, 4, 4, 5, 0, 6, 4 and 2.

Now, collective superiority of these two choices is calculated through the following formula.

$$a'_{ij} = (\prod_{l=1}^{k} a_{ijl}^{w_l})^{\frac{1}{\sum_l w_l}}$$

CHART 3: THE RESULT OF EVEN COMPARISON OF EXPERT A (EXIT SOFTWARE EC)

These calculations also perform for other even comparisons inorder to abstains even comparisons including nine experts (group comparisons). Showing result the calculations in Table 5 and chart 4.

TABLE 5: ABSTAINS EVEN COMPARISONS INCLUDING NINE EXPERTS						
Indicator Name	tendency to power	risk taking propensity	intend independence	inside control	thinking positive	Creativity and innovation
tendency to power	1	0.4412	0.2482	0.2525	1.1792	0.2142
risk taking propensity	2.2665	1	0.4730	0.4506	2.6002	0.3138
intend independence	4.0290	2.1142	1	0.8878	4.6138	0.5630
inside control	3.9604	2.2193	1.1264	1	4.7456	0.6395
thinking positive	0.8480	0.3846	0.2167	0.2107	1	0.1828
Creativity and innovation	4.6685	3.1867	1.7762	1.5637	5.4705	1

CHART 4: WEIGHT OF INDICATORS (EXIT SOFTWARE EC)

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6-3.   DETERMINING PRIORITY OF ANY OF THE PERSONAL INDICATORS

In analytical hierarchy process, the extent of conformity in decision can always be calculated and whether it is good or bad can be justified. The accepted limit of incompatibility in any systems depends on the decision. But, Saati generally suggests that if decision's incompatibility maker is more than 0.1, decision- maker should revive in his judges (Ghodsipoor, 1379: 11). Incompatibility rate shows relational deviation of K is judges in relation to the group's judges. If this rate is less than 0.1 it is mentioned that people's judges are close to the group and incompatibility rate generally make person specify people whose ideas are distant from the group. In this analysis, the extent of incompatibility of decision-making matrices was calculated and because their value was less than 0.1, the compatibility of system was approved.

After determining the weight of any indicators, choices are compared together through group analytical hierarchy process and EC software and their grade specified.

CHART 5: PRIORIZING INDICATORS ON THE BASIS OF WEIGHT (EXIT SOFTWARE EC)

Overall Inconsistency = .00

Critivity&Innovation	.329
Inside control	.233
Intend independence	.217
Risking	.114
Tendency to the power	.058
Thinking positive	.050

7.   DISCUSSION AND CONCLUSION

One of the most important strategies in developing entrepreneurs' hipness in different societies is personal attributes strategy. Personal attributes strategy formed to raise entrepreneurs to string then a series of entrepreneurial personal attributes in people. The most important attributes in recent research have also been accepted such as creativity and innovation, inside control, intend to independence, risking, tendency 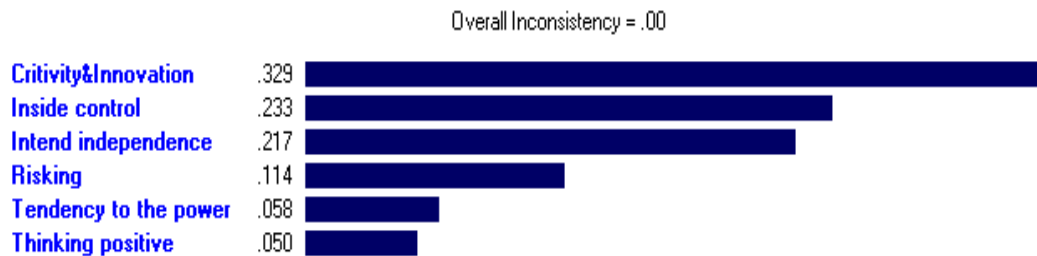to power and positive thinking. People who have these attributes can be recognized by priorizing these personal indicators. Also, a proper mode belongs to other people to be entrepreneurs and make advancement and economical development of their society.

although analytical hierarchy process is utilized broadly, through studying the topic of literature It was clear that using this method has not been performed in priorizing independent entrepreneurs' personal indicators yet. The most innovation in building a decision making model is to determine the important factors for that decision.

To answer research question, nine successful entrepreneurs' ideas with different degrees has been utilized. In this research, first, every expert's weight was determined by analytical hierarchical process and three total indicators such as personal mastery, correlate specialty and creative thinking. Then through studying topic of the literature and studying entrepreneur's cultural and social conditions in Iran and obtaining experts' ideas, six issues of entrepreneurs' personal indicators selected and after performing group analytical hierarchy process and even comparisons by any experts, weights of any of six personal indicators were determined and then priorized. The above products indicates this reality that creativity and innovation have the first grade, inside control, the second grade, intend to independence, the third grade, risking, the forth grade, tendency to power, the fifth grade and positive thinking the sixth grade all analysis has been performed by expert choice software. During performing any of these stages in this process, rate of incompatibility was surveyed and approved.

To receive entrepreneurial stand more and the rightness of this research, table 7 shows a confirmative study of the research with previous research. The most valuable research in previous years is Jennings research to priorize entrepreneurs' personal indicators.

As table shows, three indicators- tendency to success, fear of failure and tendency to welfare which were components of important personal indicators in entrepreneurs, are considered less today and indicators- inside control and positive thinking have been attracted more. So, in this research, three indicators have been omitted and two indicators, inside control and positive thinking have been studied. Of course, the main reason of differences among inside and outside researches are because of the difference in education and social conditions and cultural differences.

rang	Indicator Name	Ranking to research result	Ranking to research Jennings
TABLE 7: CONFIRMATIVE STUDY OF THE RESEARCH WITH PREVIOUS RESEARCH			
1	tendency to power	*5*	*7*
2	risk taking propensity	*4*	*3*
3	intend independence	*3*	*5*
4	Creativity and innovation	*1*	*2*
5	inside control	*2*	__
6	thinking positive	*6*	__
7	Intend success	__	*4*
8	Fray from bankrupt	__	*1*
9	Intend welfare	__	*6*

As far as this research was really performed to determine entrepreneurs' personal indicators, C and I experts used the research results and weights and grades were on company's board and in the hands of managers of the company.

Creativity and innovation are the most important factor to create entrepreneurial personality, so, thunder- thinking meetings and creating an atmosphere to utilities peoples' inside talents and create creative ideas is very important.

According to this research and similar researches in other countries, entrepreneur's personal attributes in countries are different according to cultural, social and economical conditions and on the basis of the extent of private sector activity especially in the related country. So, to create entrepreneurial culture and entrepreneurial attributes in any countries, the performed research should be utilized in the same country and other countries' researches should not be generalized.

While some of entrepreneurial attributes in people are weak, education and counseling both can both eliminate weaknesses and get people ready to enter into an entrepreneurial world and should be performed according to people's attributes.

It is better that investors and governmental organizations invest in this research according to mentioned personal indicators and governmental organizations should have more resources to develop economically and hold seminars to know entrepreneurs and train other people. As far as universities can play a key role to develop entrepreneurship, establish and create a proper atmosphere to improve entrepreneurship.

So using different methods can be applied to the results of this research and other similar researches and help develop economically.

It is preferable that al investors in suman force selection system utilize entrepreneur' factors.

Also, in this research, it is recommended to complete researches in this field on to subjects such as the following issues:

- All independent entrepreneur' personal indicators with a little importance should be classified and scored by phase logic to select more important indicators an atmosphere with less risk.
- The same as this research and through these personal attributes, phase logic should be utilized and the obtained results should be compared with the research results.
- Organizational entrepreneur' personal indicators should be recognized according to Iran's society and scored by different combinational, group analytical hierarchy and phase logic.
- In the future researches, entrepreneurs' conditions such as gender, age, number of children and etc should be studied.
- The comparison of inside researches findings with outside researches and survey of the reason of differences should be done in countries.

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ASSOCIATION OF TRAINING PRACTICES WITH JOB SATISFACTION IN PUBLIC SECTOR ORGANIZATIONS

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ABSTRACT

Focus of this study is training practices and its impact on job satisfaction of employees working in public sector of Pakistan. A sample of 205 was randomly selected from ten leading public sector organization is Pakistan. Training practices were taken as independent variable, job satisfaction was out-come variable while demographic variables were taken as confounder variables. Results show that there is strong and significant association between training practices and job satisfaction of employees. This is an original study and logistic regression is first time used in this type of studies where demographic variables are included in final analysis.

KEYWORDS
training practices, job satisfaction, PSU.

INTRODUCTION

In the present world the concept of wealth has been shifted from physical to the human capital. The human beings are seen as a resource rather than a liability for a country. Trained and developed people contribute to the economic growth of one country and one organization. On the other hand the countries with under developed and under-utilized human resource perish. Pakistan is a country with sixth largest population of the world. Underdevelopment of the economy has left negative impact over the investment on human capital. Today's market is global market. The companies are surrounded by competitors. To have a competitive advantage, it is important that companies truly influence and use work force as a competitive weapon. A strategy for radically improving workforce productivity to drive higher value for the organization has become an important focus. Companies seek to optimise their workforce through comprehensive development programmes not only to achieve business goals but to survive and thrive for years to come. To achieve this task , companies will need to invest resources to ensure that employees have the information, skills and competencies , they need to work effectively in a rapidly changing and complex environment. This includes investment in training and development as part of an overall effort to achieve cost effective and timely results. The companies need to understand training and development policies that would enhance employee satisfaction and improve performance. Simply providing training and development programmes is the key to better performance and higher productivity. Organizations need to look into the needs of employees and ensure that training and development policies are associated with both company and individual goals. Keeping in view importance of training and development for development and growth of employees and organizations, this study has focused on the training and development practices and their impact on employee's satisfaction

Training and development of the human resource of Pakistan is much neglected area of study in the country. Development is defined and understood in terms of development of economy. We forget about the development of people through education and training.

We are living in a very competitive world which has global outlet. The countries compete in economic fields in one way or other. Where highly competitive, skilled and trained people form the human resource of the organizations.

STATEMENT OF PROBLEM

Training and development is so important that the lack of learning skills may denote illiteracy. 21st Century provides a fresh opportunity to think about the kind of world we want to live in. In this regard it is also time to think about the kind of workplace we need to establish or support in Pakistan. In today's employment worn social fabric we are only beginning to address the complex human performance needs of people,globally.

One organized that has potential to help shape the kind of changing workplace of the future will be employees' organizations. The impact that this force will have on positive change in the workplace will depend a great deal on the way employees' organizations relate to other sectors in society and how well they will be able to adapt to the marketplace.A skilled labour force will be more than ever central in national economic success. In Pakistan a large part of the labour force, continues to utilize low productivity employment

This study is an effort to explore training and development practices in public sector of Pakistan and also to find out how training and development practices may contribute to the employees job satisfaction. Increased job satisfaction increases organizational commitment and organizational performance as well.

OBJECTIVES OF STUDY

The objectives of this study is to find the association of training and development with job satisfaction of employees in public sector of Pakistan.

SIGNIFICANCE OF STUDY

Training is very important for employers and employees; government is also vigorously implementing training, education and human resource development plans. Present study has focused of training and development practices in public sector of Pakistan and its association with job satisfaction. The study is significant due to uniqueness of methodology used in it. Logistic regression is used in this study and demographic variables are used in analysis as confounders to find real impact of independent variable over dependent variable after controlling confounders.

RESEARCH QUESTION

Present study explores following research question:
Is job satisfaction associated with the availability of various training components and practices in public sector organizations in Pakistan?

REVIEW OF RELATED LITERATURE

The term training is defined as "a planned process to alter attitudes, "knowledge or skill behaviour through learning experience to achieve effective performance in an activity or range of activities. Training stands for activities or deliverables designed to enable end users to learn and use new processes, procedures,

systems and other tools efficiently and effectively in the performance of their work; includes training, documentation and communications" or "the planned and organized activity of a consultant to impart skills, techniques and methodologies to employers and their employees to assist them in establishing and maintaining employment and a place of employment which is safe and healthful".(Smith, 1992).

The researchers (Barro, 1989; Buechtemann and Sooloff 1994) believe that the productivity of human resource is more important than natural resources, physical equipment's or any other form of wealth. Human capital is conceptualized as sum total of skills and knowledge acquired by people of one country. Human capital is a significant factor to explain different rates of economic growth of nations.

The job satisfaction is an important goal for organization. It has been shown that profitability, productivity, employee retention and customer satisfaction are linked to employee satisfaction. Satisfied, motivated employees will create higher customer satisfaction and in turn positively influence organizational performance. The researchers like Becker and Gerhart (1996) Becker and Huselid (1998) Wright and Boswell (2002) focused to establish link between human resource management and organizational performance. Recently some scientists focused on impact of training and development practices on employees' attitudes and behaviour at work Appelbaum et al., (2000) Ramsey et al.,(2000) Guest,(2002).Employees' satisfaction and well-being play a central role in explanatory models of training and development practices and organizational performance (Peccei , 2004).

Other behavioural theories also suggest that the impact of training and development practices on performance is mediated by employees satisfaction, commitment and well being. (Guest, 1997; Paauwe and Richardson, 1997; appelbaum et al., 2000).

However studies by Marsden and Richardson (1994) showed that the impact of training and development practices on employees' satisfaction is rather limited. Similarly some researchers like Rosenthal et al., (1997) Peccei and Rosenthal, (2001) repeated that impact itself may be dependent on other factors such as age, skill, educational composition of the workforce or on employees' individual dispositions and orientations to work, or on existing institutional arrangements.

A comprehensive review of related literature disclosed abundant definitions and factors that affect employees' satisfaction. Although there are many facets of the definitions of employees satisfaction, all agree that it is multidimensional concept (Locke , 1976; Rice et al., 1989; Shouksmith et al.,1990;Koustelios, 1991;Smith et al ., 1969 and Wiener, 1982) recommended that employees satisfaction is feelings or affective responses to facets of the situation or work related condition. Locke (1976) defined employees' satisfaction as a pleasurable or positive emotional state resulting from assessment of one's job or job experience. In the same way findings of the other authors like Gregson (1987), Lease(1998) Appelbaum et al., (2002) Chay and Bruvold (2003) vieweg employees satisfaction as the degree of an employee's affective orientation towards the work role occupied in the organization. In the same way Dawis and Lofquist (1984) defined employees satisfaction as the result of the worker's appraisal of the degree in which the work environment fulfils the individual's needs.

Spector (1997) noted that employees satisfaction could be measured as a global feeling about the job or as attitudes about various aspects of the job.

Rowden and Conine (2003) also recommended additional research ". . . to further understand this apparently powerful link between workplace learning and job satisfaction. If this powerful link continues to surfacein other sectors and larger companies, managers concerned with the level of job satisfaction among their employees may want to encourage more learning opportunities in the workplace."Research by Goldfarb Consultants (1999) on private and public sectors in Canada showed similar results. The study showed that the top five most important factors that influenced job satisfaction have more to do with interpersonal relationships (quality of decision makers, communication and relations between managers and employees), atmosphere at the workplace (work ethic, level of innovation and physical environment) and sense of personal achievement (personal growth opportunities and level and range of responsibility) than it has to do with attributes that can be measured. In fact, these more quantitative attributes seemed to be least important in determining an employee's level of satisfaction with their job. On the contrary, findings in a survey carried out by the Society of Human Resource Management showed that the absolute top five factors for the employees' satisfactionwere compensation/pay, benefits, job security, flexibility to balance life and work issues, and feeling safe in the work environment.

Lermusi (2006) established that meaningfulness of work and job variety are the two areas that employees value.As far as the effect of training and development policies on ES is concerned, limited literature on this shows a positive correlation. According to Lee (2000), organisations who invest in career management are more likely to increase ES. In addition, Chen et al. (2004) found that career development programmes positively influence ES, professional development and productivity. Other studies enclosed similar results. For example, there is a positive relationship between job enrichment and employee job satisfaction (Guest, 2002) and of participative work on ES (Appelbaum et al., 2000).

Based on extensive review of literature following hypothesis are made:

HYPOTHESIS

H1a: Job satisfaction is associated with the availability of various training practices in an organization.
H1b: Age plays a confounding role between training practices and job satisfaction
H1c: Gender plays a confounding role between training practices and job satisfaction
H1d: Post held plays a confounding role between training practices and job satisfaction
H1e: Salary plays a confounding role between training practices and job satisfaction
Research Model

RESEARCH MODEL
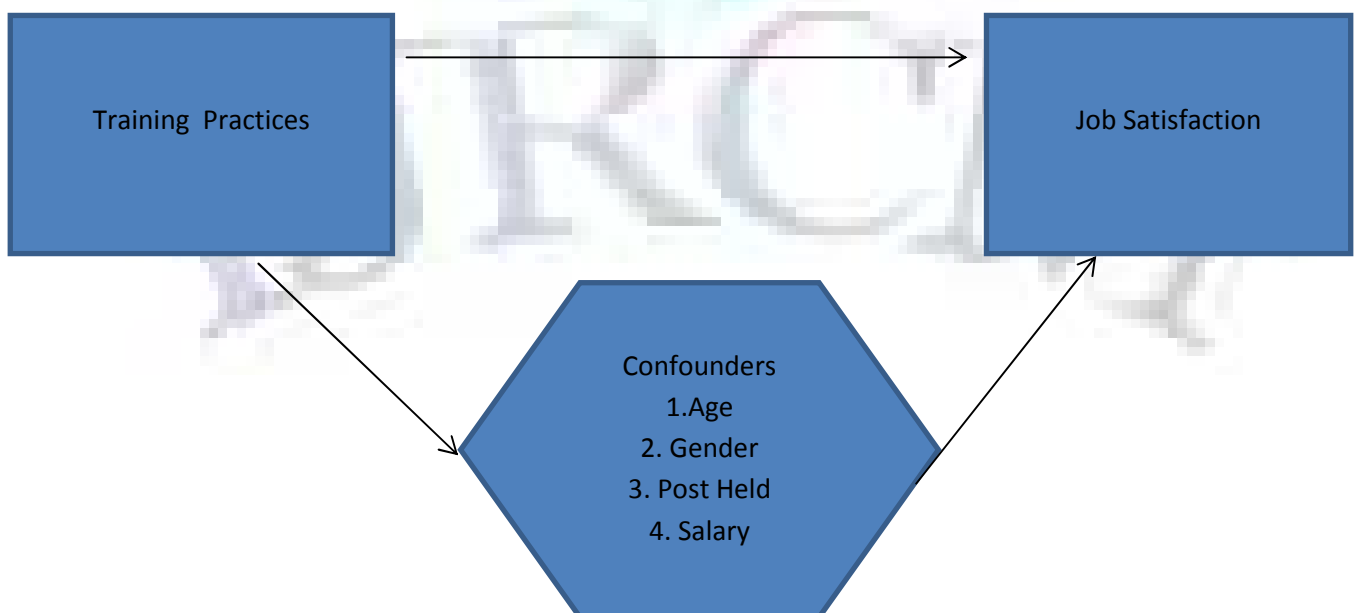
METHODOLOGY

STUDY DESIGN

A sample of 205 employees was taken from the list of public sector organizations. This is a cross sectional data as data was collected on one point in time from the respondents and representatives

DATA PREPARATION

A total of 205 questionnaires were sent to the employees of public sector organization at all levels, of which 201 questionnaires were received back, thus the response rate was 98.04 percent. The response rate for variables was 100 percent however some values were missing which are mentioned in each table below. Five questions were combined to create a variable showing training component in the public sector organizations in Pakistan. Total likert scale was five for each question. For the variables where multiple variables were combined to generate new variable value a cut point of 2.5 was used to create binary variables.

 Age group was split into three categories. The first group was categorized into the respondents belonging to age group from 22 to 29, second group included the respondents of 30 to 39 while third group included of the age group 40 and above. The post held was also categorized into three groups: Managerial, Assistants and staff members. Data was collected from different organization of public sector however, scarcity of values lead to drop this variable for advanced analysis.

DESCRIPTIVE STATISTICS

First of all simple frequency tables, percentages graphs and charts were generated to explain various variables.

UNIVARATE ANALYSIS

The main outcome variable was employees' satisfaction. Five hypotheses were tested to see impact of various aspects of satisfaction. Training practice was taken as exposure variable which was tested to see the association with the outcome variable.

First association between outcome (job satisfaction) was tested using chi square with exposure variables one by one, then the association between outcome and other variables such as age, gender, monthly income was tested. In the end the association between exposure variable and all other variables was checked. Variables which were found associated both with outcome and exposure variable were taken as possible confounders. In first hypothesis exposure variable was training. In this hypothesis Gender and age were found to be confounders while post and salary were not the confounders.

Mantel-Haenszel methods was used to check the interaction and adjusted ORs were also calculated.

MULTIVARIATE ANALYSIS (LOGISTIC REGRESSION)

The variables which were found to be confounders were added in final model for hypothesis testing. Therefore, model of the log odds of satisfaction were created checking various aspects of job satisfaction. Likelihood ratio test was applied to check whether the exposure variables were independently associated with the outcome variable or not after adjusting for other variables i.e. age, gender salary and post held.

Data analysis was carried out by using Stata version 10 (Stata Co-operative, College Station, TX). Data entry was done in Microsoft excel.

RESULTS

DESCRIPTIVE RESULTS

Individual level data was available for 201 respondents. Baseline information is provided in (table 2.1). 89.05 % (179) were males while only 10.95 % (22) were females. The respondents from the age group 22-29 were 31.84%(64), from the age group 30-39 were 47.76% (96) while 40 and above were 20.4%(41). The respondents were categorized into three layers of posts, managers including mid managers, their assistants and staff.20.9% of respondents belonged to managers or mid managers post, 6.16% were assistants while 11.94% were staff members. Salary slot was such that 21.54% (42 had the salary from 5000 to 10000, 60% (117) respondents earned 10000 to 20000 per month while 18.40% (36)earned a salary of 20000 to 40000 per month. A total of ten organizations participated in the survey . The names of each organization is kept anonymous.

TABLE 1: BASELINE DATA SUMMARY OF 201 EMPLOYEES			
Age group			
	22-29	64	(31.84%)
	30-39	96	(47.76%)
	=>40+	41	(20.4%)
Gender			
	Female	22	(10.95%)
	Male	179	(89.05%)
Post held			
	Managers/Mid Managers	42	(20.9%)
	Assistants	135	(67.16%)
	Staff	24	(11.94%)
Salary slot*			
	5000-10000	42	(21.54%)
	10000-20000	117	(60%)
	20000-40000	36	(18.46%)
Organization**			
	A	21	(10.71%)
	B	15	(7.65%)
	C	33	(16.84%)
	D	9	(4.59%)
	E	32	(16.33%)
	F	9	(4.59%)
	G	10	(5.1%)
	H	55	(28.06%)
	I	9	(4.59%)
	J	3	(1.53%)
* 5 missing values			
** 4 missing values			

The following table (2) provides the analysis of satisfaction among the respondents for the job and training in descriptive statistics of percentages and frequencies for all six questions. For the first question that does company do the good job of providing the training or skill building needed to improve the respondent's job performance?, 11.44% (23) strongly agreed ,14.43%(29) agreed ,19.9% remained neutral while 46.77% (94) disagreed and 7.46% (15) strongly disagreed.

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The second question was about training component i.e. are the training schedules convenient and meet the needs of respondents? For this question a total of 4.48% (9) respondents strongly agrees, 27.30% (55) agreed, 4.97 % (10) remained neutral,36.81% (74) disagreed while 29.36% (53) strongly disagreed. Question number three to five were also related with training components and details can be seen from the table below.

TABLE 2: HOW MUCH EMPLOYEES ARE SATISFIED WITH VARIABLES THAT CONTRIBUTE TO THEIR SATISFACTION IN THEIR ORGANIZATION?										
Q.No		Strongly agree		Agree		Neutral		Disagree		Strongly disagree
1	The company does a good job of providing the training/skill building I need to improve my job performance									
	23	(11.44%)	29	(14.43%)	40	(19.9%)	94	(46.77%)	15	(7.46%)
2	Training schedules are convenient and meet my needs.									
	9	(4.48%)	55	(27.36%)	10	(4.97%)	74	(36.81 %)	53	(29.36 %)
3	Training schedules meet my needs									
	29	(14.43%)	46	(22.89%)	19	(9.45%)	59	(29.35%)	48	(23.88%)
4	I am given the training and support I need to carry my job effectively									
	22	(10.95%)	35	(17.41%)	44	(21.89%)	71	(35.32%)	29	(14.43%)
5	I am given the real opportunities to improve my skills in this company									
	33	(16.42%)	32	(15.92%)	5	(2.49%)	48	(23.88%)	83	(41.29%)
6	I am satisfied with my job									
	30	(14.93%)	56	(27.86%)	19	(9.45%)	38	(18.91%)	58	(28.86%)

The last question was related with the job satisfaction, for this question 14.93% (30) respondent strongly satisfied,27 .86% (56) satisfied,9.45% (19) remained neutral ,18.91%(38)reported dissatisfaction, while 28.86% (58) remained strongly dissatisfied. In the next pages this has been explaining with the graphical charts i.e. pie charts so that it could be easily understood that how many agree, strongly agree, remain neutral, disagree or strongly disagree for each answer.

TABLE 3: MULTIVARIATE ANALYSIS (LOGISTIC REGRESSION)

Type of dependent variables		Satisfaction	Crude OR, 95%CI		p-value
Exposure variables for various hypothesis	Training components (Q1-Q5)				
	No	32(21.92%)	1		
	Yes	54 (98.18%)	192.4	(11.9 - 310.9)	<0.001
Possible confounders	Age group				
	22- 29	18 (28.13)	1		P<0.001
	30- 39	40 (41.67)	1.48	(.28-1.09)	
	40 +	28 (68.29%)	2.42	(0.07-0.46)	
	Gender				
	Male	75(41.90%)	1		0.469
	Female	11(50%)	1.34	(0.60-3.38	
	Post				
	Manager	4(9.52%)	1	2.48-50.87	<0.001
	Assistants	69 (51.11%)	5.37	(0.47-2.71)	
	Staff	13(54.17%)	5.69		
	Salary Range				
	5000-10000	33 (78.57%)	1		<0.001
	10000-20000	42 (35.90%)	0.46	0.97-4.40	
	20000-40000	11 (30.56%)	0.39	(0.76-5.51)	

OR= Odds ratio, CI

Table 3 provides the information about crude association of job satisfaction, exposure variables and socio-economic variables. Training component was found to be strongly associated with job satisfaction as p – value <0.001. 86 out of 201 were satisfied with their job. Among 86 , 54 (98.18%) were responded that training component(Q1-Q5) is related to satisfaction. In other words, odd of satisfaction in employees who reported availability of training component in the organization was 192.4 time higher than those who did not report availability of training.
In this way first hypothesis (H1) is accepted. However, the confidence interval was very wide ranging from (11.9-310.9). There is trend over age for satisfaction. Satisfaction of job appears to increase with the age. Odds of satisfaction in age group 30-39 was 1.48 the odds of satisfaction in age group 22-29. It means that employees in age group 30-39 were 48% more likely to be satisfied compared to age 20-29. Odds Ratio for age group 45 and above was RR=2.42. Employees in this age group are 2.42 time more likely to be satisfied with job compared to base line age group(20-29). Satisfaction was not a function of Gender . Odds Ratio (OR) for satisfaction was 1.13 but this difference was result of chance as p value=0.47. Higher post seem to be related to low level of satisfaction. Higher level of salary is also inversely related to satisfaction. In salary slot 10,000-20,000 OR=0.46. This difference does not appear to be statistically significant because Confidence interval contains the null value.
As mentioned above the crude OR was 192.4, 95% CI (11.9-310.9) and it was strongly associated with satisfaction in an organization. Rate adjusted provided in table 4.1 suggests that AOR for effect of training components on Satisfaction increased from 192.4 to 822.89 and association becomes even stronger p-value<0.0001. Rate adjusted for satisfaction in employees who said that training components are present in organization was 822.89 compared to who did not report availability of training component in organization after adjusting for age and Gender. So H1b and H1c also accepted and H1 d and H1 e are rejected. Please table 2.4 for tabulation depiction.

TABLE 4: OR OF SATISFACTION IN THOSE EMPLOYEES WHO REPORTED POSITIVE RESPONSES FOR TRAINING(LOGISTIC REGRESSION ANALYSIS)				
Crude				
	OR	95 % CI		P value
Training components (Q1-Q5)	192.40	11.9	310.9	<0.001
Adjusted OR				
Training components	822.89	74.13	9134.64	<0.0001
Age	3.57	1.71	7.43	=0.001
Gender	0.15	0.06	0.38	<0.0001

Post held and salary were not found to be confounders using likelihood ratio test (LRT)
Therefore, they were dropped from final model

DISCUSSION

As far as the training and development practices in public sector organizations in Pakistan are concerned, it is imperative that public sector organizations provide the training or skill building needed to improve job satisfaction of employees. Improved job satisfaction would translate to higher productivity and organization's profit. Majority of the respondents in this study do not agree that they are being given the training needed or the improvement of their job performance.

The training schedules should also be convenient and should not interfere with the smooth running of training programs. Thus, it is necessary to have good-programed plan before developing a training program schedule. The scheduling of training sessions need to be coordinated with the employees to ensure compatibility with business operation as well as maximum learning potential. Moreover, appropriate scheduling helps employees to balance their work schedules with family life and is beneficial to unit productivity and employee moral. For example, if a training is scheduled on off days the attendants may not take keen interest in that training. While the findings of this research suggest that training, schedules do not meet the needs of the employees in public sector organizations

As for the employee, satisfaction with the opportunities for training and development is concerned, more opportunities should be provided to employees to improve their skills, to work with up to date technologies and for career growth. Respondents in public sector organizations emphasized they are not given a real opportunity to improve their skills with up to date technologies. Lack of job related skills and outdated technologies would hinder the efficiency and can cause unnecessary wastage of resources. Some times it can be more costly than providing training. The employees who have the ability to work with up to date technologies will not hesitate to leave if there is lack of such technologies in the company.

Training also allows employees to take a break from monotonous routine work and an opportunity for social interaction. It not only can motivate the employees but also may improve theieinter personal skill. Lock (1976) noted mentally challenging tasks while Agho et al (199) indicated working with friendly people as determinants of employee's satisfaction with job. In the same way Goldfarb Consultants (1999) and Spector (1997) revealed the importance of interpersonal relations on employees' job satisfaction.

It is obvious that employees would like to have equal access to job related training opportunities that would help them improve their skills and enhance their development and growth. Respondents in public sector organization did not agree that they are being provided equal access to job related training opportunities. If the employees are denied equal opportunity in training it may demoralize them. The employees may view it as unfair organization's practice. As there is emphasis on lie long learning and emphasis on self- development, perhaps many employees would like to go for training.

Increasingly, high performing organizations today are recognizing the need to use best training and development practices to enhance their competitive advantage. Training and development is an essential element of every business if the value and potential of its people is to be connected and grown. Many studies have highlighted clear links between well designed training and development initiatives and the bottom line within the business. The image of an industry and of individual employers is also influenced by the extent and quality of staff training and development. Potential employees in such an open labor market will assess the track record of prospective employers in this vital area. Career progression and development is an increasingly attractive or even basic requirement for many such employees. In today's business climate where all industries are experiencing staff and skills shortages, companies are faced with stiff internal and external competition for quality employees. Each employer who invests seriously in the area of Training and Development will reap the benefits of an enriched working environment with higher levels of staff retention as well as increased productivity and performance.

SUMMARY AND CONCLUSION

In the present research public sector organizations were in focus with its training and development practices. The research was made at organizational level. The association of training components were tested with outcome variable; job satisfaction. Age , gender , salary, post held were found confounder variable. The logistic regression was used for the analysis. The results indicate that there is strong association of training and development practices with job satisfaction in public sector of Pakistan.

The first hypothesis, i.e. is job satisfaction associated with the availability of various training components in an organization?, was tested and found strongly associated with the out come variable , job satisfaction. Some socio economic factors i.e. age and gender were found confounders in the final analysis of the logistic regression while salary and post held was not found confounders and were dropped from the final analysis. Hypothesis are showing strong evidence of association with the out come variable that is job satisfaction.

The odd ratios (OR) are quite big , these are in three digits figures which means if these training variables are applied in public sector organizations in Pakistan , they can significantly increase job satisfaction at public sector at all levels.

LIMITATIONS

1. The data was mainly collected from public sector so the results cannot be generalized for private sector.
2. Hypothesis were tested with small sample size so the results should be used with caution.
3. **Cut point p-value less than .05 is used as an indicator to reject null hypothesis and for testing hypothesis. It means one out of twenty results can show** association by chance which is type one error. Many research questions are tested in this research therefor roll of chance cannot be overruled.

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STUDYING THE RELATIONSHIP BETWEEN SOCIAL CAPITAL AND TALENT MANAGEMENT IN IRAN STATE MANAGEMENT TRAINING CENTER (SMTC)

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ABSTRACT

In a world full of competition, one thing which guarantees the competitiveness of firms and organizations among each other is having human resources with talent; especially in managerial levels. But the challenge that organizations are facing today at country level, is attracting, evaluating, developing, retaining talents. The main purpose of this paper is to study the role of social capital in improving talents management for decreasing challenges and shortcomings as well as improving performance in State Management Training Center. The method of the research from the aim point of view is applied and from collecting data point of view is descriptive- correlative. This research is based on the collected data through questionnaire in the 2nd half of the year of 1391 and has a research population containing 121 persons of all the staff of State Management Training Center. For data analysis, the structural equation method and mean test have been used. In this paper with the used of inferential statistics including Kolmogorov - Smirnov test, Pearson's correlation test, regression analysis and t-test the data have been analyzed and the hypotheses have been tested. In general, the level of talents management in State Management Training Center of Tehran is high and has been evaluated to be more than average. And the level of social capital is also more than the average level. The findings of the research indicate that there is a significant relationship between social capital and talents management in State Management Training Center and with improvement of social capital the level of talent management can be improved.

KEYWORDS
human capital-talent-talents management-social capital.

INTRODUCTION

In the organizations of the new millennium, so much emphasis has been put on intangible assets such as commercial name, innovation, creativeness, entrepreneurship and knowledge capitals. These key sources have the capability to present the organization as an ideal one, disregard of its industry. Such organizations are based on their individuals and only with placing appropriate individuals in appropriate positions, will step toward surpassing their competitors.

Human resources, today are considered as the main capital of organizations and clearly it can be seen that humans, are the main factor of the survival of organizations in the competition. With environments to become more complicated and diversity of cultures and jobs in organization, gradually the role of human resources are also changed. Today organization are in need of creative, flexible and responsive forces and on the other hand detecting, attracting and retaining these elites has become more difficult than before in organizations.

According to Wikipedia, talent management was first coined by McKinsey company in the middle of 1990s and it is a professional term in management field which has become common recently among organizations [2]. Talent management is one of the most important and even most "essential" topics of human resource management in global level [3] and still is one of the most critical issues in most of organizations [4].

Today's organizations are facing so many challenges regarding to their human resources. Mocha (2004), estimates that 17% of all employees are leaving their current jobs. This number in 60% more in young managers comparing to the same number in managers with more experience. In addition, outsourcing of the

important processes in organizations, has decreased the loyalty and trust among the employer and employees dramatically; in such a way that this loyalty decrease is interpreted as "The Devastating tsunami waves resulting from exit of employees" [5].

It is interesting that in such favorable conditions, talented individuals will have more job options in front of them. To some extent this is due to great changes caused in values of work force and specifically talents. Employees attitude toward their job has been challenged and more than ever they are focusing on their aim of work and creating balance between work and personal life. Individuals with more potential capabilities try to bargain for better contracts with their employers and as soon as their expectations will not be met, they will change their organization. under such circumstances it is necessary to implement a correct planning for successful management of valuable human resources and talents' of organization.

Organizations should use talent management proportionate to their structure and culture. In fact that there is no universal definition for talent management and providing an accurate definition of it would be difficult due to frequency of theories and hypotheses presented by expert author throughout the world [6].

One of the way with which the talented individuals can be retained in an organization, is creation of high integrity and solidarity among work force of the organization. This topic is expressed in the field of management, social and political sciences; under the topic of social capital.

Social capital is rather a new concept which is having a more significant role in organizations and societies comparing to human capital and physical capital. The concept of social capital refers to connections among the members of a network as a source of value and with creation of norms and mutual trust it can lead to realization of the members goals. In the absence of social capital, other capitals of an organization including human capital which is at the top of the talents capitals of an organization, will lose their efficiencies and threading cultural-economic development path would become difficult and unlevel [7].

In this paper we are aiming to point out to the importance of talent management and social capital in today organizations by providing concepts, definitions, several valid models in these regards. Specifically the emphasis of this paper is on studying the relationship between talent management and social capital in State Management Training Center of Tehran.

In the field of talents management, so many researches have been performed in other countries, which haven't been used in this paper. Studying the backgrounds of the research by the author in Iran indicate the attention of researchers to the topic of talent management, which is mentioned below.

1. Development and reconstruction industry of Iran Organization has implemented a plan with the name of "future managers with an approach of talent assessment and manager's succession" in four companies of Iran Khodro, Saipa, Arak Wagon Manufacturing Co., Tabriz Tractor Manufacturing Co., [8]. However this plan mainly deals with succession planning and doesn't have any direct approach for talent management.
2. There is another research paper with the subject of studying the current situation and developing talent assessment indicators in the field of track and field. In this study, variables such as current situation of talent assessment in Iran and the world, necessity of a pattern for talent assessment, the most appropriate organization for finding, attracting and developing talents have been studied [9].
3. The subject of another paper, is "evaluation and selection of managerial talents in Tehran Electricity Co.,". This study first has determined the necessary characteristics for acquiring managerial positions in the company with the use of interview and questionnaire. Then it has used IQ test and personality test of Edwards and managerial skills for testing the above stated characteristics. The final conclusion of the research is selection of potential and talented individuals for managerial positions [10].

In the field of social capital also a variety of researches have been performed in Iran and other countries. In this paper we will mention some of the researches performed in Iran.

1. Seyed Naghavi (2004) in his PhD thesis with the topic of "studying the damages of social capital in cultural and educational organizations of Iran and presenting an optimized pattern" studies the damages of social capital in ministry of education, ministry of research and technology sciences and ministry of culture and Islamic guidance and concludes on superiority of social capital in ministry of education among other ministries [11].
2. In another research paper with the topic of "effect of social capital on improvement of organizational obligation" which is performed in national Iranian oil refinement and distribution company, the researcher has divided social capital into three dimensions of structural, cognitive and communicational and organizational obligation into three dimensions of emotional ,normative and continuous. The findings indicate that social capital is influential on organizational improvement, especially the dimension of emotional obligation [12].

In general we cannot refer to a research or a paper in Iran that have directly studied the relationship between social capital and talent management. However, in other countries researches have study the relationship between these two concepts theoretically but not empirically.

TALENT MANAGEMENT AND ITS DIMENSIONS

Strategic innovative, creative, flexible, responsible, responsive and norm breaker human forces are consistent with today organizations. Due to fast environmental changes, organizations are in need of individuals who can change the norms and structures parallel to the current needs and possess self-controlling and self-management characteristics. These individuals are always after opportunities around themselves and with evaluating their strengths and weaknesses changes the limitations and threats of the environment into opportunity. They are individuals with extra talent for performing their job and create value in their works.

The term, talent has been defined with different dimensions in organizations by theorists and experts. In this section we present some of these definitions. In fact each organization will determine individuals with talent in line with its specific culture and structure. Talent is a set of individual's capabilities including skill, knowledge and potential for growth and development [13]. Talent management also like the term of talent doesn't have a clear meaning in the view of so many authors such as Storey and different definitions have been provided for it. For example, [14], considers different definitions for talent management from different people and studies it by three dimensions. 1st is the development process of new employees by the means of interview, recruiting and making them familiar with the organization in such way that new individuals can get in line with the organization culture. 2nd is regarding the development and retaining of the current employees in organization and the 3rd is attraction of individuals with high potentials and skills for working in the organization [2]. For talent management 5 factors has been considered (attraction, detection, development, using, involving) which helps us to manage employees with talent [15].

IMPORTANCE OF TALENT MANAGEMENT

Most of the organizations of today due to reasons such as: decrease of available talents, weak positions for retaining prominent talents, increase of employees overturn, weak human resources strategies such as service compensation and benefits are facing talents crisis [16]. Fagley, due to high competition and lack of employees with high skills and capabilities, expresses the development and retaining talented employees as one of the priorities of today's organizations [17]. With studying the literature of the field of talent management and relevant models [18,19,20] the dimensions of talent management can be divided into (attraction, discovering and evaluating, developing and retaining talents).

FIGURE 1: TALENT MANAGEMENT DIMENSIONS
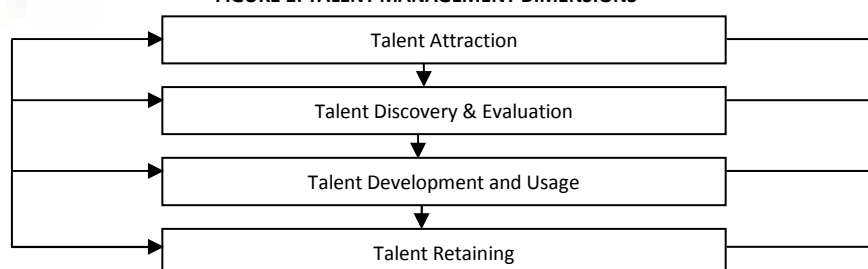
Talent Attraction: the main concern of talent management, is finding individuals who have the potential to become a talented employee, so that they can be appointed to right places at right time. With the current shortage in efficient workforce, rarity of real talents [21] and the growing expectations of employees, this has become even more difficult.

In recent decades, factors influencing talents attraction from labor market are: lack of qualified workforce and rarity of talents, flattening and downsizing of organizations, the changing nature of jobs and the change of psychological contracts between employers and employees.

Strategies for attracting human resources with the aim of getting appropriate employees who are possessing high levels of qualifications, skills, knowledge and necessary potentials for taking future trainings are developed and implemented. Efficient discovery of employees is achieved through developing strategies of attraction of the most qualified forces to organization.

These strategies should encompass the best methods of accurate definition of human resources requirement of organization from the point of view of skills and qualifications and should cover the following activities:

Define skills and qualifications requirements: ideally, this should be performed with applying a set of systematic evaluation of skills and qualifications.

Analysis and evaluation of influential factors on decision making of individuals for joining the organization. these factors include:

Commercial brand of the employer and the reputation of the organization, enough and good salary and benefits, job and promotion opportunities, opportunity to use the individual's skills or acquiring new skills, opportunity to use up to date technology and acquiring high levels of training [22].

Talents Assessment: the importance of assessment process from long ago, has had the attention of both academic scholars and professional practitioners (those who deal with the business of the organization). Today due to development and evolution of this process, a special security and stability has been appeared in quantity capacity and ranking important indicators. In addition, web technologies have also provided the ability to store and usage of web browsers and search engines, emails and data bases technologies by human resource experts and have provided necessary tools for collection, analysis and evaluation a great amount of data related to talents and even other employees [23].

Laff (2005) believes that with presence of new technologies, talent management doesn't belong to top levels of an organization any more. It is because an organization can assess all its employees for talents [1].

In spite of great importance of the correct talent assessment process, the findings of a research indicate that 74% of the organizations under the study, are facing problem in providing a correct definition for talents. One of the reasons of this, is that there are different definitions which have been presented for talent. Some believes that the most important indicator of talent is the rate of the profitability of the talented person. Some other, emphasize on the talented person's ability to learn. For example, "a potentially talented individual is one who can learn from his experiences" [24,25]. Some other yet, think talents as a specific group of employees who are having distinctive needs, motivations and behavior comparing to normal employees. These individuals normally advances in lower ages comparing to their other colleagues and are considered future managerial pool of the organization. [15].

Appointing talents: Cunnigham (2007) presents the general approach of using process in talent management system which should be considered at the time of human forces attraction in this way: either individuals should be matched with jobs or jobs should be matched with individuals. Matching individuals with jobs can be defined precisely in this way: if jobs and specific work roles which have been agreed upon already exist, it is individuals who should be matched with these jobs [4].

In this case, the processes of assessing employees, selection, appointing and promoting are mainly based on finding and assessing proper individuals, recruiting them, appointing them to proper positions and later one promoting them. In this case, promotions, selections and decisions are strategic which are made based on the level of the learning of the individual and his development.

Talents Development: talent development refers to improving the performance of those individuals who are having high performance and it consist an important part of the talent management system [26]. Organizations with development mechanisms, have the ability to absorb best customers and employees and hence would achieve a good competitive advantage [6] and can retain their human capital.

Some of the most important approaches of talent development include training via different methods such as mentoring, master-apprentice, management of tasks, promotion, job rotation and succession planning in organizations.

Retaining talents: retaining talents is the last stage in talents management system, however we shouldn't consider it separated from previous stages. In other words, processes of finding, assessing, development and retaining are all combined under the concept of talents management [11].

Retaining talents refers to a set of efforts which the employer makes in order to retain and keep his intended employees in the organization and through them achieve the organizational goals. Having a retaining program and plan will protect managers against an abrupt loss of their multiple individuals and human capitals. In addition it will be efficient as well in decreasing the expenses of employees' turnover and increases cooperation and stability of workforce [27]. In the domain of talents development, we should establish a balance between organizational development needs with personal development of individuals. Since structural reconstruction and downsizing organizations on one side and changing the training pyramid of the workforce on the other hand, decrease the vertical and forward growth of talents, therefore it is necessary to establish a balance between personal development needs of individuals and organizational development needs in order to retain more talents in the organization.

Retaining strategies, are based on analysis of the staying or leaving intentions of key employees, which their turnover is having so much of expenses for the organization. The study performed by Gallup on 80,000 managers concludes that the main drives of employees for remaining in the organization in unknown. The most part of the drives depends on the way their direct supervisor deal with them regarding their performance reports [28].

Retaining strategies should consider all the factors and domains which can lead to lack of satisfaction and obligation in employees. These domains include: payment, job description, performance evaluation, training, job development, group integrity, problems between employees and their managers and supervisors, selection, promotion, exaggeration about increase of benefits and job opportunities.

The findings of Brandt & Kull (2007) indicate that most of the reasons for employees to leave their work and organization in directly related to organizational culture and issues such as perceived feeling from culture or organization reputation or lack of support and encourage from the side of managers or lack of getting feedback which results in employees to get feeling of uselessness in the organization. In the mentioned research, talented individuals have named service compensation as the least important reason for leaving their organization [1].

In multiple researches [29, 26] it has been indicated that weak management is the 1st reason for employees to leave their organizations. These studies emphasize on improving the relationship between culture and communication as a solution. Other studies also indicate the existence of a kind of coexistence relationship between human resource management and organizational culture. Therefore an organization can use this relationship as a strong factor for its success in talents retaining [30]. The most important factors in talents retaining in an organizations include: employee motivation, awarding, cooperation and retaining right individuals in the organization.

SOCIAL CAPITAL AND ITS DIMENSIONS

What adds to so many ambiguities of the social capital theory, is multiple definitions in different fields by different people. In reviewing the literature of the subject we face a mass of definitions which have been presented in different fields. Below some of the definitions have been presented:

Social capital contains personal network of an individual and his selected inherent attachments [2].

Social capital refers to individuals capabilities for working with each other, for achieving common goals in groups and organizations [31]

TABLE 1: A SET OF DEFINITIONS OF SOCIAL CAPITAL PUBLISHED BY GLOBAL DATABASE

Bourdien: a set of potential or real sources gained by membership in a reliable network of rather institutionalized mutual relationships.
Putnam: the main elements of social capital are trust, norms and networks which can improve social efficiency by facilitating Coordinated actions.
Grootaert & Van Bastelaer: structures, relationships, attitudes and values which govern the interactions between individuals and helps with the social and economic development.
Bebbington: relationship in which individuals invest which creates in turn a flow of interests for them.
Fafchamps: a network of relevant social phenomenon (especially the role that the interpersonal relationships, club membership and social networks play in efficient social exchanges.
Robison & siles: the feelings of sympathy, worry, empathy, trust and coercion of an individual to another individual or a group to another group.
Ostrom: social capital includes common knowledge, perception, norms, regulations and expectations about interaction patterns that a group of individuals brings with themselves in dealing with social complex issues and situations which requires collective and group actions. Individuals should find some ways for empowerment of expectations and mutual trust for overcoming their short term undesirable temptations.

There is no clear concession regarding the dimensions of social capital. Here it has tried to study and review the opinions and point of views of different experts regarding social capital.

Nahapit and Goshal also in 1998 consider three dimensions for social capital: cognitive , structural and communicational dimensions [7].

1- Cognitive dimension of social capital: this dimension contains the commonality rate of employees in a social network regarding a perspective or the common perception among them; like communicational dimension, this dimension deals with the nature of communication among the individuals of an organization [32] and contains the following items; language, common codes as well as common narratives [33].

Cognitive dimension of social capital of Nahapit and Goshal (1998) has been defined as the source providing common representation, interpretation and meaning systems among sections [34].

In other words this dimension refers to sources which provides meaning systems of common interpretations for groups. They also express that common meanings such as common values and goals are developed due to continuous cooperation in the process of giving meaning parallel to creation of common perceptions by groups [7].

2- structural dimension of social capital: this dimension refers to communications between actors who are constantly sharing information. Nahapit and Goshal (1998) infer that having such information lead to improvement of the ability of the organization to attract (analysis) and integration of knowledge which in turn creates a competitive advantage for the organization [35].

Structural dimension of social capital includes patterns of connections inside a network and combinations of organizing a network as well as organizational proportion [33].

Structural dimension of social capital is resulted from the structural form, diversity, centralization and the role of participants in the network [7].

3- Communicational dimension of social capital: this dimension contains the nature of communications in an organization. in other words, while structural dimension focuses on the issue that whether the employees of an organization are at all connected to each other or not, the communicational dimension focuses on the nature and quality of this connection (for example, whether these communications can be defined by trust, intimacy, love and the like of these or not?) [32]. this dimension includes, trust, norms, obligations and identification [33].

Communicational dimension refers to personal relationships which are developed through interactions, i.e. the extent to which trust, an obligation and mutual relationship exists among the members of a group [7].

Nahapit and Gosha (1998) state that an organization can present an institutional environment which is constructive for development of social capital. They also state that combination and sharing of knowledge can be facilitated when individuals are in connection with each other (structural capital), when individuals are having positive and strong connections with each other (communicational capital) and when individuals have the capability to perceive and apply knowledge (cognitive capital) [36].

TABLE 2: PRESENTED DIMENSIONS FOR SOCIAL CAPITAL FROM DIFFERENT SCHOLARS POINT OF VIEW

Scholars	Dimensions
Coleman	Obligations, information channels, trust, norms and effective sanctions
Portes	Norms
Putnam	Trust, norms, network connections
Lina & Van Bourn	Dependency and trust
Laurence Lock Lee	Quality and structural networks
Nahapit & Goshal	Structural, communicational and cognitive
Bourdien	Size of group or network, volume of capital each member of the network has
Islam et al.,	Structural, cognitive, vertical and horizontal
Kenedy research group	Trust, political cooperation, civil cooperation and leadership, informal social connections, volunteering spirit and forgiveness, religious cooperation, justice in civil cooperation, diversity in communications and friendships

RESEARCH ANALYTICAL MODEL

For studying social capital the dimensions of Nahapit and Goshal (communicational, cognitive and structural) have been used. The 4 dimensions of talents management discussed earlier (attraction system, assessment, development and appointment, retaining talents) have been used as well and the research model has been developed as below.

FIGURE 2: RESEARCH ANALYTICAL MODEL
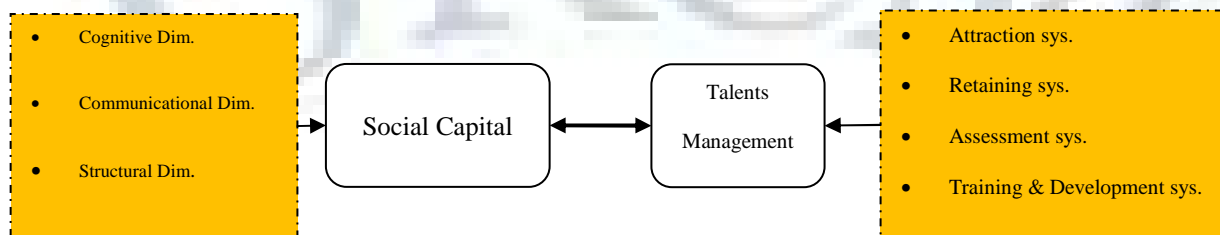
RESEARCH METHOD

The current research is applied paper from aim point of view and from the point of view of research method is descriptive – correlation. This research has one main hypothesis and 4 secondary hypotheses as following:

Main Hypothesis:

There is a significant relationship between social capital and talents management in State Management Training Center of Tehran.

Secondary Hypotheses:
1. *There is a significant relationship between social capital and talents attraction in State Management Training Center of Tehran.*
2. *There is a significant relationship between social capital and talents assessment in State Management Training Center of Tehran.*
3. *There is a significant relationship between social capital and development and use of talents in State Management Training Center of Tehran.*
4. *There is a significant relationship between social capital and retaining talents in State Management Training Center of Tehran.*

The research population are employees of State Management Training Center of Tehran. The total number of employees are 121 persons.

In this study, for collecting data a questionnaire has been used. With the use of SPSS software Ver. 18, a scale for talents management and social capital have been developed. It should be mentioned that in developing all the scales and their localization with conditions of the country, standard scales have been used. In designing the questions of the questionnaire, it has been tried that questions would be clear and simple. The variable of talents management consists of 9 dimensions and 4 elements and 28 questions and the variable of social capital consists of 6 dimensions, 3 elements and 15 questions. In general all 28 questions related to talents management are designed based on five point Likert scale (1-strongly disagree and 5- strongly agree) and as well as the 15 questions related to social capital.

Each dimension and element questions of talents management and social capital have been presented in table 3:

TABLE 3: DIMENSIONS AND INDICATORS OF TALENTS MANAGEMENT AND SOCIAL CAPITAL AND THEIR RELEVANT QUESTIONS IN THE QUESTIONNAIRE

Item	Variable	Element	dimension	Questions
1	Talents management	Attracting the talents	Finding employee	1-4
2			Selection	5-7
3			Appointing	8-9
4		Assessment of talents	Performance management	10-12
5			Assessment centers	13-14
6		Development and training of talents	Development and training	15-19
7			Career management	20-22
8		Retaining talents	Compensation	23-26
9			Discipline	27-28
10	Social capital	Structural dimension	Network connection	10-11
11			Network arrangements	6 & 3
12			Network stability	7-9
13		Cognitive dimension	Common goals	4-5
14			Common culture	1-2
15		Communicational dimension	trust	12-15

For testing the validity (content validity) of questionnaires the opinion of experts, professors, human resource experts have been used and its validity is confirmed and is acceptable. But for testing the reliability of the used instrument, coefficient of Cronbach's Alpha has been used. The calculated coefficient of Cronbach's Alpha for both the questionnaires in this study, for talents management variable and social capital variable is 0.891 and 0.831 respectively and due to the fact that both of these coefficients are a value bigger than the obtained coefficient of Cronbach's Alpha equal to 0.7, therefore both questionnaires are having a proper reliability.

For analysis of the obtained data inferential statistics methods have been sued. This study is testing the hypotheses and analyzing data with the use of inferential statistics including Kolmogorov - Smirnov test, Pearson's correlation test, regression analysis and t-test.

FINDINGS

For testing the data to be normal or abnormal, the Kolmogorov - Smirnov test has been used and the result indicate that research data are normal, hence Parametric tests have been used to data analysis.

The results of tables 4 and 6 indicate that the obtained data from respondents are normal.

TABLE 4: TESTING NORMALITY (KOLMOGOROV - SMIRNOV TEST) FOR TALENTS MANAGEMENT DIMENSIONS

Variable	Sig (significance level)	α (error value)	Hypothesis confirmation	result
Talents attraction	0.213	0.05	H0	Normal
Talents assessment	0.110	0.05	H0	Normal
Talents development	0.334	0.05	H0	Normal
Retaining talents	0.129	0.05	H0	Normal
Talents management	0.268	0.05	H0	Normal

TABLE 5: TESTING NORMALITY (KOLMOGOROV - SMIRNOV TEST) FOR SOCIAL CAPITAL DIMENSIONS

Variable	Sig (significance level)	α (error value)	Hypothesis confirmation	result
Communicational dimension	0.334	0.05	H0	Normal
Cognitive dimension	0.431	0.05	H0	Normal
Structural dimension	0.332	0.05	H0	Normal
The whole social capital questionnaire	0.543	0.05	H0	Normal

Therefore; since all the data are normal, we should use parametric tests. Hence, for normal variables the one-sample student t-test is used and for correlation test, the Pearson's coefficient correlation is used.

- One-sample t-test for talents management dimensions

TABLE 6: RESULTS OF T-TEST FOR TALENTS MANAGEMENT DIMENSIONS WITH A MEAN OF 3

Variable	T-value	Free degree	P (significance level)
Talents attraction	3.125	120	0.003
Talent assessment	3.243	120	0.000
Talents development	3.113	120	0.006
Retaining talents	3.089	120	0.031
Quality of working life	3.475	120	0.050

Based on the obtained results for one-sample t-test, it can be said that the dimensions of talents attraction, talents development, talents assessment and retaining talents don't have any significant difference with the mean value; therefore it is indicated that these variables stands above the mean value. In general, the status of talents management in State Management Training Center of Tehran evaluated high and above the average.

- One-sample t-test for social capital dimensions

TABLE 7: RESULTS OF T-TEST FOR SOCIAL CAPITAL DIMENSIONS WITH A MEAN OF 3

Variable	T-value	Free degree	P (significance level)
Structural dimension	3.023	120	0.001
Cognitive dimension	3.412	120	0.006
Communicational dimension	3.20	120	0.062
Social capital	3.531	120	0.000

Based on the obtained results for one-sample t-test, it can be said that the structural, cognitive and communicational dimensions don't have any significant difference with the mean value; therefore it is indicated that these three variables stands above the mean value. In general, with studying the status of social capital based on the table information, the status of talents management in State Management Training Center of Tehran is concluded to be high and above the average.

TABLE 8: CORRELATION TEST RESULTS

Variables	sig	Error value	results	Coefficient correlation value
Social capital and talent attraction	0.030	0.05	Existence of relationship	0.183
Social capital and talent assessment	0.035	0.05	Existence of relationship	0.144
Social capital and talent application	0.046	0.05	Existence of relationship	0.112
Social capital and talent retaining	0.024	0.05	Existence of relationship	0.108
Social capital and talent management	0.038	0.05	Existence of relationship	0.179

Since the calculated correlation in 0.05 level for the test s of two intervals are bigger than the critical value, therefore; the null hypothesis (H0) indicating non-existence of a significant relationship between two variables of social capital and talent management dimensions is rejected and it is concluded that a direct and significant relationship exists between them.

How much is the share of each of the variables of attraction, assessment, development, applying and retaining of talents in predicting the social capital of employees?

For the purpose of evaluating the share of each of the independent variables (attraction, assessment, development, applying and retaining) in variances of the dependent variable of social capital of employees we use multiple linear regression.

TABLE 9: RESULTS OF REGRESSION ANALYSIS FOR FIXED VALUE

Sig	T-statistics	Standard coefficient	Non-standard coefficient
0.912	-	7.654	0.000

Since the value of significance level is equal to 0.000 and smaller than error vale (0.05) (the absolute value of t-statistics is bigger than the value of 1.96) and hence with a certainty of 95% we will conclude hypothesis 1 and therefore the fixed value remains in the model. And the value of this fixed value is equal to 0.912.

TABLE 10: RESULTS FOR REGRESSION ANALYSIS FOR TALENT MANAGEMENT VARIABLES

variable	Sig. level	t-statistic	Standard coefficient	Non-standard coefficient (ß)
Talent attraction	0.000	7.001	0.330	0.211
Talent assessment	0.041	2.049	0.095	0.083
Talent development	0.000	7.980	0.334	0.413
Retaining talent	0.000	4.492	0.228	0.122

Since in the four variables of talent management, the value of significance level is smaller than the error value which is equal to 0.05, (absolute value of t-statistics is bigger than 1.96) with certainty of 95% it can be stated that variables of attraction, assessment, development, applying and retaining have effect. Therefore these variables remain in the model and their coefficient value have been presented in table. Therefore the final equation would be as following:

$Y = 0.912 + 0.211x_1 + 0.083x_2 + 0.413x_3 + 0.122x_4$

As per the findings of the study, there is a direct and significant relationship between social capital and talent management in State Management Training Center. In other words, with increasing and improving the level of social capital, the talent management can be implemented in a more desirable way in the hospital.

DISCUSSION

The findings of the study indicate that there is a significant relationship between social capital and talent management in State Management Training Center of Tehran. In this study, opposite to the study of Firozabadi (36), no significant difference was observed in respect of social capital among the opinion of respondents with different educational levels. In different studies [26,29], it have been stated that weak management is the first reason for employees leaving their organizations. These studies emphasize on improving the relationship between culture and communications as a solution. Other studies also indicate the existence of a coexistence relationship between human resources management and organizational culture. The current study also indicate a relationship between communications as a part of social capital and coexistence of human resource management, therefore; the findings of the current study is in line with the mentioned studies.

Cooperation and creation of trust are two of the elements of social capital which are having an effective role in attraction, development and training, retaining of talents, feeling of self-respect, self-belief, creating love and passion, culminating personality and social growth of individuals through improvement of social capital and social connections.

CONCLUSION

Improvement of the level of social capital in State Management Training Center of Tehran, will result in promotion of cooperation, sympathy and trust and will increase the cooperation between organization individuals especially talented and potential individuals and would empower the moral and individual's communication and interactions. Presence of positive social capital in organization plays a valuable role in creating trust and reliability in individual's life. Social capital in "small, average, large" levels emphasizes the personal and internetwork, norms, informal values, obligation, mutual trust to common norms and values, feeling of belonging, social integrity, trusting the organization members, cooperation, social cooperation in the organization.

Below are a few suggestions, provided for the purpose of improvement of social capital and talent management status in State Management Training Center of Tehran.

Encouraging and forming specialized groups and communities in organizations; encouraging the creation and improvement of social networks is one of the fundamental ways to increase social capital. Individuals will have a common identity in terms of social organizations and the requirements for group cooperation will get improved among them. Establishment of such groups is also possible in organizations. Establishment of specialized groups and communities in organizations with voluntary cooperation of talented and potential individuals, can increase social capital in them and prevent talents from leaving the organizations.

Respecting morals; managers who respect and apply moral principles in their performances and organizational decisions, shape relationships which lead to creation of trust. Hence it is recommended that managers should be pioneers for improving trust in organizations.

Increasing trust among the members of groups and organization departments; one of the important actions for increasing social capital is the amount of effort an organization makes to create trust among the group members and departments of the organization. In fact, trust is only shaped gradually with creation of

continuous relationships and communications among individuals. Hence it is recommended to create opportunity for employees to get to know each other in a proper way which in turn provides the requirements for creating networks based on trust.

Training of Employees and talented individuals; one of the most important approaches for creation of social capital in organizations is training programs. Having general classes especially communication classes for employees, plays the main role in creation of social capital. Creation of social capital requires change of behavior and attitude. Comprehensive training programs, is a desirable pattern for individuals who intent to observe, discover, learn and implement new behaviors. Therefore one of the responsibilities of mangers is to provide continuous opportunities for both inside and outside organization training.

Trying to provide physiological safety and security needs of talented and elite individuals by organization. So that based on hierarchy Maslow needs, individuals can achieved self-prosperity.

Creating an environment in which the self-opening of talented and potential individuals can be increased, because it can lead to improvement of their communication with others. And this in turn would create the necessities for development of social capital in the organization and would also increase organizational obligation and commitment of specialized and talented individuals to the organization.

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CONTEMPLATIVE SCRUTINY OF THE ADEQUACY OF HERZBERG'S MOTIVATION-HYGIENE THEORY: A VERDICT OF JOB SATISFACTION IN THE MID LEVEL MANAGER IN TELECOMMUNICATION INDUSTRY

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ABSTRACT

It is an explorative approach to determine the intensity of job satisfaction by concern of Herzberg two-factor theory. Job satisfaction is allied with salary, job-related trauma, empowerment, company and administrative strategy, triumph, personal growth, relationship with others, and the overall functioning circumstance. The sample size is 200 for the purpose of determining the adequacy of Herzberg two factor theories, a stratified random sampling method used to ascertain the satisfaction in the managerial level in telecommunication sector in/ Bangladesh. The result illustrated that hygiene factor making prevailing over ensuring job satisfaction, it designate that hygiene factor endow with job satisfaction that may frequently affects a person's physical health, mental health and social life and also it is ascertain that always motivating factor doesn't contain satisfaction especially in case of work itself, recognition. Therefore, satisfaction and dissatisfaction cannot be deliberate on the same continuum because employee job satisfaction is associated with affirmative employee actions.

KEYWORDS

Empowerment, Herzberg-two factor, Job satisfaction.

INTRODUCTION

This paper explores the effect of motivational variables on the job satisfaction in telecommunication sector in Bangladesh. Due to the privatization and trade liberalization telecommunication sector proliferate in our country. Motivation is an internal force, reliant on the needs that drive a person to accomplish job satisfaction. Motivation is a needs-satisfying process, which means that when a person's needs are satisfied by certain factors, the person will wield superior effort toward attaining organizational goals. Job satisfaction is an arousing response accompanying actions or thoughts relating to work, whereas motivation is the process that activates behavior. As satisfaction is an attitude, it is possible for a worker to be satisfied with his job but not be motivated. Hence, motivation and satisfaction are not synonymous with each other. Satisfied workers will be much more productive and be retained within the organization for a longer period, in contrast to dissatisfied workers not only perform better but also provide better service to customers, which could result in improving customer satisfaction. According to Dawson (2005), employee satisfaction is associated with positive employee behavior. It is undeniable that satisfied workers generate customers who are satisfied and loyal. Lease workers who will be less useful and who will have a greater tendency to quit their jobs.

REVIEW OF LITERATURE

Motivation and satisfaction are very similar and that, in many cases, they are considered to be synonymous terms. According to Hersey and Blanchard (1988), motivation and satisfaction are quite different from each another in terms of reward and performance. He pointed out that motivation is influenced by forward-looking perceptions about the relationship between performance and rewards, whereas satisfaction involves how people feel about the rewards they have received. In other words, motivation is a consequence of expectations of the future while satisfaction is a consequence of past events (Carr, 2005).

Huselid (1995) believes that if workers are not motivated, turnover will increase and employees will become frustrated and unproductive. Various other researchers who have investigated motivation and job satisfaction support this statement (Maidani, 1991; Tietjen & Myers, 1998; Robbins, 2001; Parsons & Broadbridge, 2006). Job satisfaction is an emotional response accompanying actions or thoughts relating to work, whereas motivation is the process that activates behavior. As satisfaction is an attitude, it is possible for a worker to be satisfied with his job but not be motivated. Hence, motivation and satisfaction are not synonymous with each other. It is vital to clarify the distinction between the concepts so that it is easier to understand that motivation leads to satisfaction, which ultimately leads to enhanced performance.

According to Robbins (2001), motivation is a needs-satisfying process, which means that when a person's needs are satisfied by certain factors, the person will exert superior effort toward attaining organizational goals. Theories of motivation can be used to explain the behavior and attitude of employees (Rowley, 1996; Weaver, 1998). The theories include content theories, based on the assumption that people have individual needs, which motivate their actions.

Theorists such as Maslow (1954), McClelland (1961), Herzberg (1966) and Alderfer (1969) are renowned for their works in this field. Herzberg's motivation-hygiene theory, also known as the two-factor theory, has received widespread attention as having a practical approach toward motivating employees. In 1959, Herzberg published his analysis of the feelings of 200 engineers and accountants from over nine companies in the United States. These professionals were asked to describe experiences in which they felt either extremely bad or exceptionally good about their jobs and to rate their feelings on these experiences. Responses about good feelings are generally related to job content (motivators), whereas responses about bad feelings are associated with job context (hygiene factor). Motivators involve factors built into the job itself, such as achievement, recognition, responsibility and advancement. Hygiene factors are extrinsic to the job, such as interpersonal relationships, salary, supervision and company policy (Herzberg, 1966). Job satisfaction is associated with salary, occupational stress,

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empowerment, company and administrative policy, achievement, personal growth, relationship with others, and the overall working condition. It has been argued that an increase in job satisfaction increases worker productivity (Wright & Cropanzano, 1997; Shikdar & Das, 2003).

As mentioned by Dunnette, Campbell and Hakel (1967) and Robbins (2001), job satisfaction is an emotional state in which a person perceives various features of his/her work or the work environment. Herzberg perceived motivational and hygiene factors to be separated into two dimensions affecting separate aspects of job satisfaction. This belief differed from the traditional approach of viewing job satisfaction and dissatisfaction as opposite ends of the same continuum (Herzberg, 1966). Hygiene factors prevent dissatisfaction but they do not lead to satisfaction. On the other hand, motivators are the real factors that motivate employees at work. Locke (1976) indicated that job satisfaction most commonly affects a person's physical health, mental health and social life.

According to Dawson (2005), employee satisfaction is associated with positive employee behavior. It is undeniable that satisfied workers generate customers who are satisfied and loyal. The two-factor theory was tested by many other researchers, who showed very different results. Some research has shown that some of the factors declared by Herzberg (1966) as hygiene factors are actually motivators. The results of Herzberg's theory can vary if the test is conducted in different industries. The differences are due to the intensity of the labour requirement and the duration of employment (Nave, 1968).

Under Herzberg's (1966) theory, workers who are satisfied with both motivation and hygiene factors would be top performers, and those who are dissatisfied with both factors would be poor performers. Christopher (2005) found no support for this, and his research concluded that Herzberg's results prove accurate only under his original methodology.

Shipley and Kiely (1986) agreed that the two-factor theory was a good starting point for managers but is not recommended for strict implementation due to the over-simplification of the theory. Fatehi-Sedeh, Derakhshan, and Manoochehri (1987) also argued that the two-factory theory is an over-simplification of job satisfaction and cannot be used as a reliable model.

Overall job satisfaction was related to age and educational level, and that levels of intrinsic and extrinsic job satisfaction were not the same for different occupational groups – findings that contradicted Herzberg's findings (Schroder, 2008).

OBJECTIVES

The main objective of this paper is to determine the adequacy of Herzberg Two-factor theory in the Mid-level manager in telecommunication sector.

There are also substitute objectives regarding the Contemplative Scrutiny of the Adequacy of Herzberg's Motivation- Hygiene Theory:

- To evaluate whether the factors in the motivation (achievement, advancement and so on) always promote satisfaction.
- To determinate the acceptability of the component of hygiene factors (Company policy, work security) provides any kind of satisfaction of the employees in the work places.
- To make an overall assessment of the perceptibility of the two factor theory of Herzberg.

RESEARCH METHODOLOGY

The study is base on the applicability of Herzberg two factor (motivation –hygiene) theory in telecommunication sector .Primary data have been used to make a conspicuous assumption about the current scenario in Bangladesh. We accumulate the different database on the questionnaires from the different Telecommunication Company (Grammen Phone, Bangla Link, Airtel, Robi, City cell, Teletalk) among the mid level managers. The sample size consists of 200 that are equally distributed among the different telecommunication company. The employees were asked to rate statements about questions in a likert scale from 1 to 5, where 1 means, strongly agree; and 5 indicates the strongly disagree with the statement. The questions are largely based on extensive study of literature review. In this case a stratified random sampling method was applied such stratification was enacted from the dimension of Herzberg two-factor theory.

DATA COLLECTION

Before sending the questionnaires to the targeted organizations a pilot survey was conducted in three organizations from the selected sector so that validity of the formulated questions could be checked. The questionnaire for the pilot survey included 71 questions and the respondents were also asked to evaluate the language and the understanding of the statements and the length and the depth of the questionnaire. A pilot study was carried out among 8 experience people. The pilot study helped to revise the questionnaire and prepare it for the final survey.

DATA ANALYSIS

In this research the independent variable is motivating and hygiene factor and the dependent variable is job satisfaction. For the purpose of accomplishing the research work, we use different statistical tools like, factor analysis, correlation; regression analysis is made to determinate the scenario.

RESEARCH DESIGN

The research design mentioned that the independent variables are motivating and hygiene factor and job satisfaction is the dependent variable.
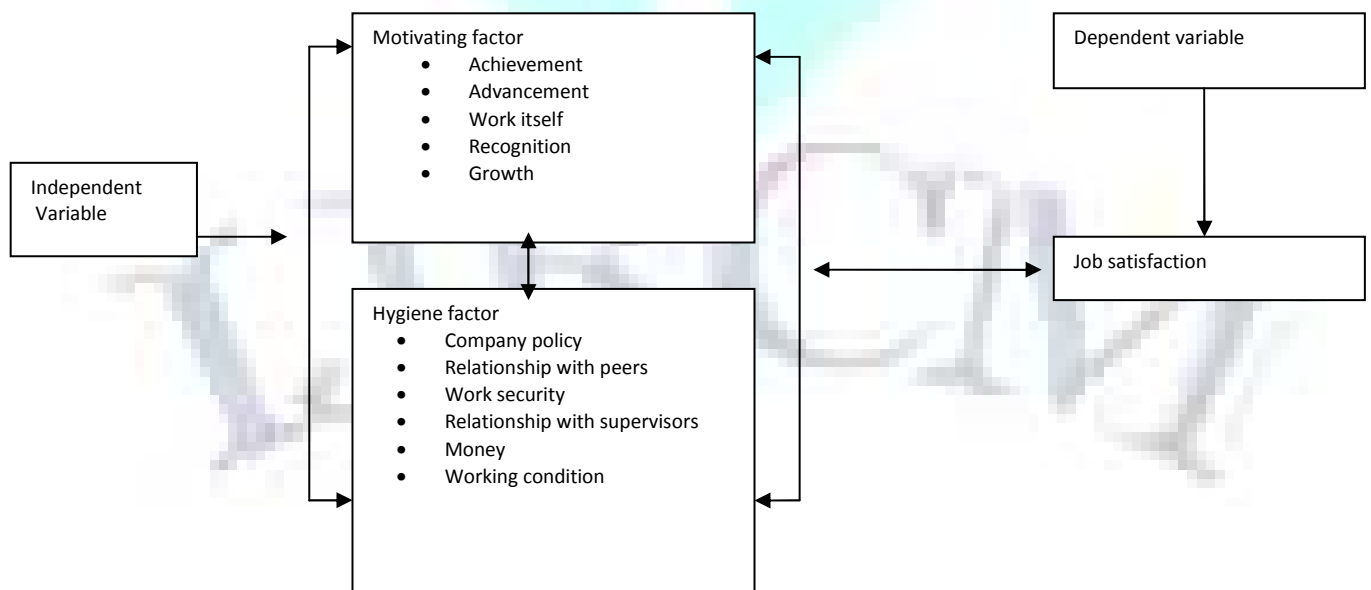
Source: Authors'

For conducting the research there is different independent variables that are very precisely illustrated here very distinctively. In this research there are two major independent variables (Motivating and Hygiene factor) that considerate different components that are denoted as independent variables too, that are interpreted here in the following diagram.

INDEPENDENT VARIABLES
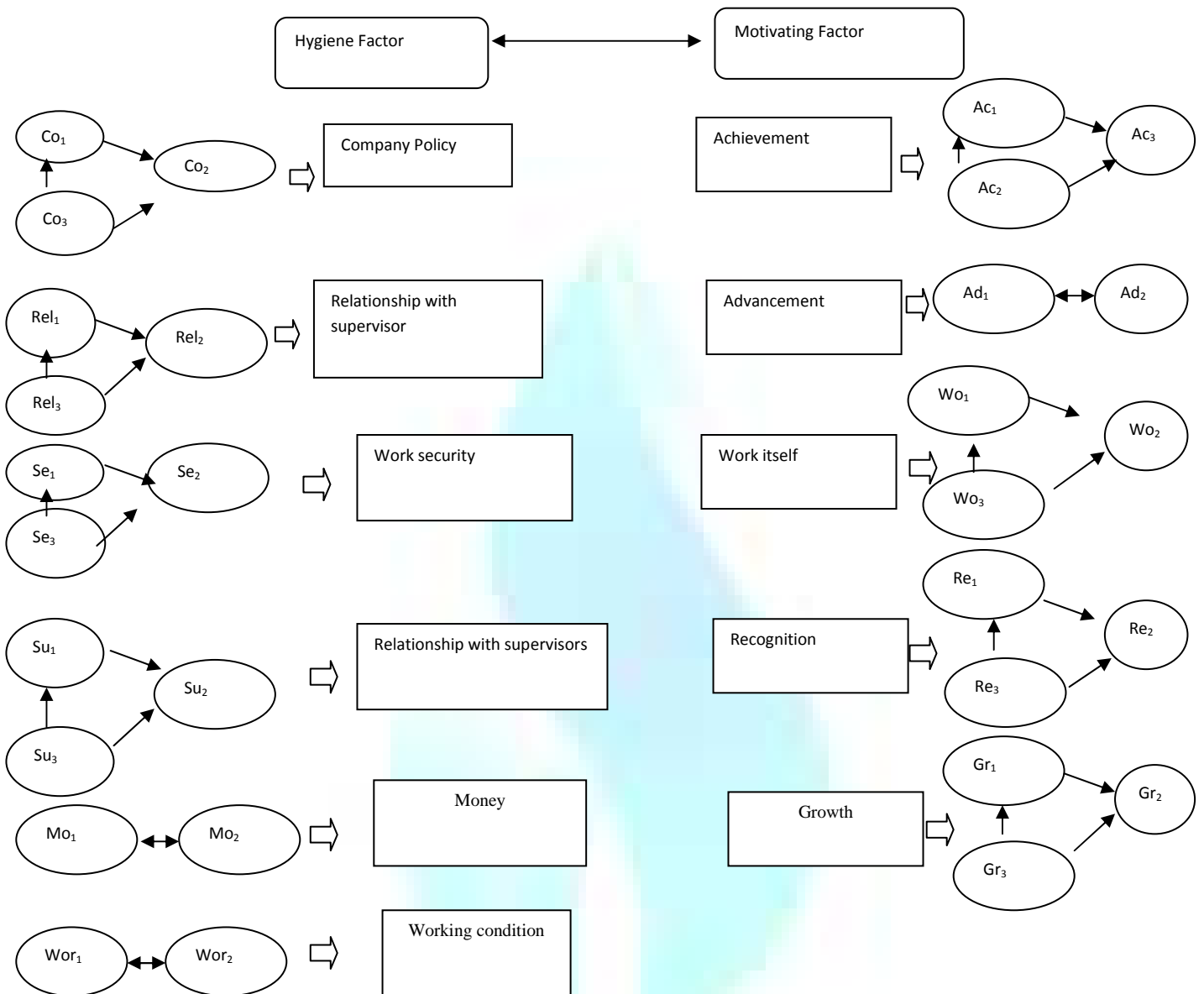
Source: Author's

HYPOTHESES DELOPMENT

H_1= Companies are highly recognizes the achievement of the individuals that are highly appreciable and this positive recognizes influence job satisfaction.

H_2= Enormous opportunities leads to advancing career of an individual that allow discovering the multidimensional skills and that scope make satisfaction in the job.

H_3= Challenging and difficult tasks makes to be thrill of an individual and that allow to enrich the satisfaction level in the job related tasks.

H_4= High recognition forcing of an individual to achieve job satisfaction

H_5= Company assist to expand the career growth of an individual and allow to gain job satisfaction. H_6= Company policy assists to achieve job satisfaction of an individual.

H_7= In an organization amicable peer relation helps to gain job satisfaction of an individual.

H_8= Job security has a constructive association with the job satisfaction of an individual.

H_9= Supportive and substantial relationship with the respective supervisors of an individual helps to gain job satisfaction.

H_{10}= Money encouraged job satisfaction of an individual.

H_{11}= Working condition in a particular organization promote job satisfaction of an individual.

RESULTS & DISCUSSION

For the purpose of accomplishing this research work we make different statistical analysis to see that motivating factor (achievement, advancement, work itself, recognition and growth) influence to attain job satisfaction or even hygiene factor (company policy, relationship with the peers, work security, relationship with supervisors, working condition) assists to gain job satisfaction of a manager in telecommunication

The total variance explained section presents the number of common factors extracted the eigenvalues associated with these factors, the percentages of total variance accounted for by each factor and the cumulative percentages of total variance accounted for by the factor. Using the criterion of retaining only factors with eigenvalues of 1 or greater, eleven factors were retained for rotation. These nine factors accounted for 33.934%, 13.287%, 9.274%, 6.936%, 5.391%, 5.038%, 4.538%, 3.883%, 3.426%, 2.562% and 2.138% of the total variance respectively for total of 90.858.

TABLE NO. 1: TOTAL VARIANCE EXPLAINED

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.537	33.934	33.934	11.537	33.934	33.934	5.730	16.853	16.853
2	4.518	13.287	47.221	4.518	13.287	47.221	3.851	11.327	28.181
3	3.306	9.724	56.945	3.306	9.724	56.945	3.620	10.646	38.826
4	2.358	6.936	63.881	2.358	6.936	63.881	3.115	9.161	47.987
5	1.833	5.391	69.272	1.833	5.391	69.272	2.991	8.796	56.784
6	1.713	5.038	74.310	1.713	5.038	74.310	2.933	8.627	65.410
7	1.543	4.538	78.849	1.543	4.538	78.849	2.503	7.363	72.773
8	1.320	3.883	82.732	1.320	3.883	82.732	2.329	6.849	79.622
9	1.165	3.426	86.158	1.165	3.426	86.158	2.222	6.536	86.158
10	1.072	2.582	88.740	1.072	2.562	88.720	2.132	5.875	92.033
11	1.025	2.354	91.094	1.025	2.138	90.858	2.051	5.632	97.665
12	.601	1.768	92.862						
13	.592	1.741	94.603						
14	.480	1.411	96.014						
15	.430	1.263	97.277						
16	.283	.832	98.109						
17	.192	.564	98.673						
18	.171	.504	99.177						
19	.128	.378	99.555						
20	.080	.234	99.789						
21	.042	.124	99.913						
22	.030	.087	100.000						
23	1.087E-15	3.197E-15	100.000						
24	7.576E-16	2.228E-15	100.000						
25	4.482E-16	1.318E-15	100.000						
26	2.929E-16	8.616E-16	100.000						
27	1.684E-16	4.953E-16	100.000						
28	5.557E-17	1.634E-16	100.000						
29	-2.586E-17	-7.605E-17	100.000						
30	-3.116E-16	-9.166E-16	100.000						
31	-4.156E-16	-1.222E-15	100.000						
32	-5.828E-16	-1.714E-15	100.000						
33	-9.811E-16	-2.886E-15	100.000						
34	-1.845E-15	-5.426E-15	100.000						

Extraction Method: Principal Component Analysis

From table (1: Total Variance) we revealed that this 34 variables are categories in to the 11 variables, like achievement, advancement, work itself, recognition, growth, company policy, relationship with peers, work security, relationship with supervisors, money and working condition.

TABLE NO. 2: COMPONENT MATRIX

	Component										
	1	2	3	4	5	6	7	8	9	10	11
Ac1	.307	-.493	.325	.410	-.373	.325	.079	-.240	.058	-.032	.049
Ac2	.650	-.162	.388	.227	.166	.035	.037	.268	.071	.767	.022
Ac3	.454	.532	.089	-.058	.039	-.089	-.193	.323	.397	.573	.044
Ad1	.648	.175	.521	.209	.023	-.082	-.273	-.155	-.067	.720	-.158
Ad2	.732	-.359	-.121	-.032	.031	-.303	-.114	.089	-.208	.316	-.487
Wo1	.767	-.392	.384	.059	-.148	-.132	-.055	.098	.063	.136	-.125
Wo2	.573	-.135	.397	-.265	-.477	-.061	.188	-.013	.266	.229	-.051
Wo3	.720	-.092	.291	-.022	-.295	-.211	.352	.140	-.139	-.179	-.158
Re1	.440	.376	.051	.267	.316	.455	.192	.277	-.043	.161	.345
Re2	.507	.507	.263	-.157	.186	.087	-.401	.068	-.296	.065	.087
Re3	.300	.299	.577	-.274	.229	.213	.141	.018	-.469	.413	.223
Gr1	.589	-.210	-.163	-.377	-.179	.045	.269	.261	.016	.512	.052
Gr2	.692	-.122	-.153	-.355	.161	-.271	.005	.263	-.062	.061	-.221
Gr3	.665	.179	-.417	.043	.159	-.403	.082	-.104	.111	.263	-.543
Co1	.837	-.191	.216	-.085	.098	-.097	-.056	-.171	-.072	.577	-.056
Co2	.844	-.238	-.163	-.198	-.068	-.051	-.110	-.122	.138	.031	-.061
Co3	.814	-.069	-.128	-.249	.169	-.057	-.229	-.129	.018	-.148	-.057
Rel1	.561	.373	.363	.280	-.327	-.174	-.261	-.175	.066	-.477	-.114
Rel2	.535	.564	-.216	.119	.100	-.104	.239	-.372	-.084	-.295	-.144
Rl3	.373	.747	.014	-.052	.275	-.123	.120	-.179	.190	.132	-.123
Se1	.155	-.325	.471	.374	.396	-.041	.447	.107	.207	.471	-.031
Se2	.257	-.784	.242	-.076	.302	-.087	-.040	.050	-.058	.442	-.027
Se3	.556	-.447	-.122	-.030	.083	.151	-.355	.004	-.237	-.162	.131
Su1	.742	.385	-.017	-.066	.008	.419	-.018	-.158	.003	-.288	.441
Su2	.820	.128	.040	-.084	-.175	.340	.168	-.157	.046	.055	.335
Su3	.571	.352	.043	-.488	.081	.179	.162	.042	.282	.063	.179
Mo1	.184	.036	.208	.698	.272	-.234	-.250	.010	.187	0.05	-.224
Mo2	.529	-.190	-.498	.086	-.033	.408	-.323	-.025	.221	.032	.328
Wor1	.323	.531	-.260	.273	-.484	-.179	-.108	.320	-.047	.432	-.159
Wor2	.347	.408	-.256	.507	-.215	.066	.216	.295	-.336	0.04	.076

TABLE NO. 3: ROTATED COMPONENT MATRIX

	Component										
	1	2	3	4	5	6	7	8	9	10	11
Ac1	-.033	.630	.402	-.029	-.139	-.467	-.021	.250	.249	.231	.121
Ac2	.407	.321	.155	.250	-.078	.140	.108	.280	.534	.331	.231
Ac3	.118	.122	.037	.130	.013	.801	.242	.248	.016	.220	.142
Ad1	.255	.382	.046	.469	.113	.121	.033	.638	.084	.429	.041
Ad2	.844	.182	.157	.028	.187	-.073	.098	.115	.051	.118	.561
Wo1	.617	.620	.132	.097	-.065	.004	.000	.286	.267	.088	.311
Wo2	.256	.894	-.009	.036	-.014	.206	-.042	-.034	.024	.022	.012
Wo3	.467	.678	-.105	.193	.200	.007	.291	-.026	.234	.171	0.32
Re1	-.068	-.066	.364	.506	.084	.291	.369	.006	.454	.546	0.43
Re2	.258	-.028	.025	.747	.024	.351	.138	.311	-.198	.657	0.13
Re3	.073	.161	-.223	.904	.014	.038	-.038	-.067	.141	.904	0.564
Gr1	.524	.396	.199	.030	.057	.182	.136	-.451	.059	.044	.421
Gr2	.795	.106	.051	.110	.180	.307	.052	-.156	.054	.110	.412
Gr3	.471	.013	.175	-.108	.671	.332	.175	.113	.012	-.162	.320
Co1	.609	.415	.214	.320	.259	.051	-.136	.227	.127	.440	.124
Co2	.646	.401	.441	.021	.252	.191	-.081	.047	-.073	.221	.083
Co3	.654	.172	.374	.235	.284	.269	-.134	.117	-.102	.235	.0512
Rel1	.064	.502	.014	.234	.182	.209	.261	.653	-.147	.265	.0123
Rel2	-.014	.081	.156	.295	.804	.230	.235	.113	-.053	.283	.012
Rl3	-.130	-.008	-.036	.334	.573	.620	.071	.164	.016	.362	.005
Se1	.029	.177	-.083	-.001	.029	-.082	-.164	.145	.900	-.071	.012
Se2	.601	.099	.061	-.028	-.202	-.304	-.432	.032	.395	-.028	.543
Se3	.643	.040	.471	.173	-.098	-.202	-.061	.116	-.050	.773	.312
Su1	.084	.292	.532	.549	.289	.340	.150	.050	-.060	.669	.125
Su2	.192	.565	.496	.390	.285	.204	.132	-.053	.034	.410	.322
Su3	.149	.321	.189	.347	.205	.663	-.079	-.257	.000	.223	.910
Mo1	.036	-.120	.051	-.099	.073	.043	.114	.767	.393	-.087	.0123
Mo2	.290	.016	.869	-.101	-.004	.139	.074	.048	-.125	-.215	.023
Wor1	.050	.134	.017	-.063	.124	.294	.820	.191	-.276	-.010	.412
Wor2	-.010	-.002	.152	.168	.251	-.035	.880	.051	.113	.146	.123

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 20 iterations.

From the table no: 3 rotated component matrix we reveled that in the motivating factor, in the achievement segment the highest value is satisfaction of jobs that provides the feeling of accomplishment (0.407). In the advancement segment, learning new skills for the advancement of career makes to ensure job satisfaction, has the highest value (0.844). Manifold varieties of tasks in the work have the highest value (0.617) which influences the employees to thing beyond his expectation in the ground of work itself. Recognition from the superior leads to make inspiration for accomplishment the challenging tasks that assist to get satisfaction. From the rotated matrix we see that in the recognition segment the second variable (managers always thanks for accomplishing the assign tasks in well directive way) has the highest value 0.258. In the growth segment, job allows expanding and furnishing the growth of an individual has the highest value (0.795).

In the hygiene factor, an employee has desirable anticipation about the mission and vision of the organization has the highest value (0.654) in the field of company policy. Friendly and congenial relationship helps for an individual to nourish the capabilities that leads to gain job satisfaction and from the rotated matrix we see that understanding and urgency of the essences of colleagues is an inevitable for ensuring satisfaction has the highest value in the segment of relationship with the peers influence to accelerate the performance of an individual and obtain the value 0.130. Comfortable location establish the feeling of an individual to be devoted of an organization and from the matrix we see that the highest value in the region of work security is 0.643 which indicates that employees feel secure if their work location is very comfortable and lucrative. Satisfying relationship with the supervisors helps to attain mental satisfaction of a particular personal and the value of this variable in the segment of relationship with the supervisors is the highest (0.192). The salary structure allows the employees to gain the satisfaction and has the highest value (0.290) in the segment of money. Pleasant and appreciable working condition influences the individuals to gain the satisfaction and has attained the highest value (0.050) in the segment of working condition. So from the analysis we can postulates that the overall 34 variables are constitute with in 11 variables.

CRONBACH ALPHA

From the factor: 1 (Achievement) the second variables (Ac$_2$) [satisfaction of jobs because it gives the feeling of accomplishment] has the value, α=0.80, from factor: 2 (Advancement) the second variables (Ad$_2$), [The jobs allow me to learn new skills for career advancement] has the value, α=0.73, from factor 3 (work itself) the first variables (Wo$_1$) [the job is thrilling and have a lot of varieties in tasks that I do] has the value, α=0.75, Factor: 4 (Recognition) the first variable (Re$_1$), [feel appreciated when I achieve or complete a tasks] has the value, α=0.71, From factor:5 (Growth) the first variables, (Gr$_1$),[proud to work in my company because I feel I have grown as a person] has the value, α=0.71. In the hygiene Factor, factor: 6 (Company policy) the first variable [The attitude of the administration is very accommodating in my company] has the value, α=0.76, from factor: 7 [Relationship with peers] the first variable (Re$_1$) has the value of α=0.71, from factor:8 Work security(Se) the first variable (Se$_3$) has the value of α=0.69, from factor: 9 (Relationship with supervisors) the second variable (Su$_2$) has the value of α=0.65, from factor: 10 (Money), the second variable (Mo$_2$) has the value of α=0.71, factor: 11 (Working condition), the second variable has the value (Wor$_1$) has the value of α= 0.69.

[From the discussion we revealed that the reliability of the scale is satisfactory, as the majority of the variables have alpha coefficient above 0.7. Alpha coefficient of 0.6 and above is considered good for research]

TABLE NO. 4: CORRELATIONS ANALYSIS

	JO	AC	AD	WO	RE	GR	CO	REL	SE	SU	MO	WOR
JO												
AC	-.114(*)											
AD	.098	-.109(*)										
WO	-.006	.149(**)	.289(**)									
RE	-.110(*)	.014	.073	-.006								
GR	.124(*)	-.020	-.076	-.311(**)	.075							
CO	.425(**)	-.348(**)	.012	-.413(**)	.014	.045						
REL	-.040	.077	-.795(**)	-.357(**)	-.098	.057	.210(**)					
SE	.235(**)	-.060	.379(**)	.059	.498(**)	-.158(**)	.251(**)	-.383(**)				
SU	.027	.359(**)	-.106(*)	.186(**)	-.048	.347(**)	-.172(**)	.264(**)	-.391(**)			
MO	.448(**)	-.177(**)	-.023	-.474(**)	.177(**)	-.047	.725(**)	.083	.306(**)	-.227(**)		
WOR	.243(**)	.145(**)	-.068	.337(**)	-.308(**)	-.512(**)	.067	.152(**)	-.035	-.072	.027	

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

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

From the table no: 4 present the correlation matrix of the motivational factors and job satisfaction. Achievement (r=0.114), recognition (r = 0.110), growth (r=0.124) correlated in a statistically significant manner with job satisfaction at the 0.05 level. As far as hygiene factors are concerned, company policy (r = 0.017), work security (r=.235), money (r = 0.448), and working conditions (r = 0.243) were significantly and positively associated with satisfaction at the 0.01 level

TABLE NO. 5: REGRESSION ANALYSIS

		Analysis of variance				
R	0.699					
R square	0.488					
Adjusted R Square	0.474					
Std. Error of the Estimate	0.356					
F=33.772 (P=0.000)						
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	-.470	.279		-1.685	.093
	AC	-.087	.033	-.118	-2.672	.008
	AD	-.034	.073	-.033	-.473	.637
	WO	.234	.058	.238	4.003	.000
	RE	-.427	.070	-.293	-6.115	.000
	GR	.370	.046	.394	7.958	.000
	CO	.017	.062	.018	.276	.783
	REL	-.031	.083	-.031	-.378	.705
	SE	.309	.052	.327	5.973	.000
	SU	.133	.048	.151	2.757	.006
	MO	.361	.044	.525	8.292	.000
	WOR	.302	.052	.300	5.813	.000

a Dependent Variable: JOB

Significance level 0.0

Regression analysis was conducted to determine the relationship between Herzberg's two-factor theory and job satisfaction in the telecommunication sector in Bangladesh. The results suggested that 69.9% of the variance in job satisfaction in Bangladesh could be explained by Herzberg's motivational and hygiene factors. The F-ratio of 33.772 (p = 0.00) indicated that the regression model of work motivation and satisfaction on the motivational variables assessed was statistically significant. The results also revealed that the value of motivating factor (AC and AD) are 0.08 and 0.637 which indicates that p>α but in the rest of the variable in the motivating factor revealed that p<α. In the case of hygiene factor like Company policy , relationship with the peers , relationship with supervisors the value are 0.783 ,0.705 and 0.06 which indicates that p>α but rest of the variable is p<α .

TABLE NO. 6: HYPOTHESIS

Factor	Component	Hypothesis	P value	Status	Correcting approach
Motivating factor	Achievements	1	.058	Accept	Satisfaction
	Advancement	2	.152	Accept	Satisfaction
	Work itself	3	0.000	Reject	Dissatisfaction
	Recognition	4	.000	Reject	Dissatisfaction
	Growth	5	.403	Accept	Satisfaction
Hygiene factor	Company policy	6	0.000	Reject	Dissatisfaction
	Relationship with peers	7	.001	Reject	Dissatisfaction
	Work security	8	.245	Accept	Satisfaction
	Relationship with supervisors	9	.559	Accept	Satisfaction
	Money	10	.000	Reject	Dissatisfaction
	Working condition	11	.148	Accept	Satisfaction

* Significance level 0.05

From the table: 6 we determinate from the hypothesis we see that the existing model of Herzberg two-factor theory have some inapplicability that makes the question of justifying of this model.

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FIGURE 1: REVERSE TWO-FACTOR MODEL
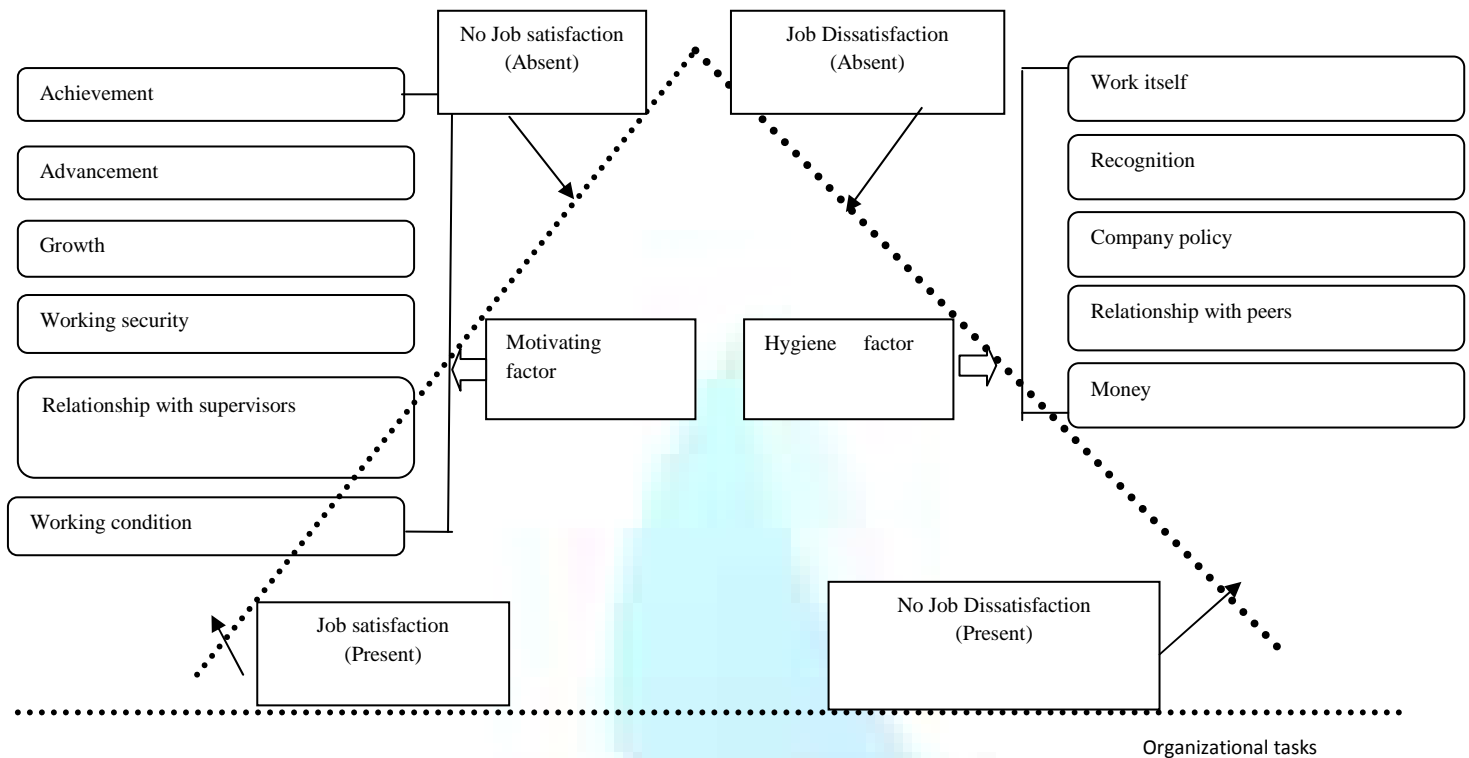
Source: Authors'

FINDINGS

The main finding of the research is that always motivating factor doesn't lead to job satisfaction and on the other hand hygiene factor don't leads dissatisfaction. Job satisfaction is associated with salary, occupational stress, empowerment, company and administrative policy, achievement, personal growth, relationship with others, and the overall working condition. It has been argued that an increase in job satisfaction increases worker productivity. From the hypothesis we see that achievement, advancement and growth leads job satisfaction in the case of managers of different telecommunication company, but on the other hand recognition and work itself doesn't consequence job satisfaction. Motivating factor may vary from organization to organization and it can differentiate on the base of psychology, mental and social phenomena. On the other hand work security, relationship with supervisor and working condition promote job satisfaction that we revealed from the extensive research work because safety, secure and supportive atmosphere energizing of an individual in an organization and trustworthy relationship with the leaders assist to strengthening productivity of an individual to obtain job satisfaction. It is to be noted that both motivating and hygiene factor has an association to accomplish job satisfaction. Job satisfaction is connected to life satisfaction, whereby people who are satisfied with their jobs will tend to be happy with their lives as well, and vice versa.

CONCLUSION AND RECOMMENDATION

Job satisfaction is an emotional response accompanying actions or thoughts relating to work, whereas motivation is the process that activates behavior. So that the particular company develops a well-built organization culture, empowerment and participative approach, recognition and congenial company policy, recognition and career assist to accomplish the organizational goals quite efficiently and effectively. The results revealed that that the employees can be concurrently intrinsically and extrinsically motivated. With that in mind, the top level should use a mixture of methods – including monetary rewards, praise and recognition – to effectively motivate workers and promote job satisfaction. So that it is an inevitable duties for the organization to highly deliberate on salary, personal growth, stress, working condition, work security and so on and that significance on accelerate productivity of an individual that ensure job satisfaction.

SCOPE OF FURTHER RESEARCH

In future we try to explore the different factors of motivations such as leadership styles and employee confidence to see whether they could result in any increased variance in motivation and satisfaction. Because leadership approach (exploitative authoritative, benevolent authoritative, supportive and participative) in an organization assist to strengthen the confidence level of the employees in an organization, so that it is postulate that leadership style would be a motivational factor to proliferate the confidence of an individual and ultimately could resulting to fabricate job satisfaction.

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PLANNING AND MANAGING A SCHEDULED SERVICE

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ABSTRACT

This paper titled planning and managing a liner vessel service is presented to deal with a common problem faced by carriers in liner shipping which is of thoughtful design of the schedule of calls to ports and proper utilization of vessel capacity for available cargo in the route by way of matching vessel capacity to available cargo in the service routes. To this purpose, computational method of selecting the number of vessels required in a fleet is presented. Factors envisaged to pose difficulties in the schedule preparation were identified as well as discussion on other shipping markets for in depth understanding of transportation system model. It is hoped that shipping companies and new entrants will find this work a great value for their shipping operations hence the inclusion of methods of determining vessel size and speed characteristics.

KEYWORDS

Planning Scheduled Service, Deliberate, Vessel Characteristics, Utilization.

INTRODUCTION

BACKGROUND INFORMATION

hip-scheduling deals with assigning sailing times to a fleet of ships, as well as optimally the amount and type of cargo that each ship carries. Ship scheduling is a problem with significant world impact, as the majority of the world's international trade is transported by sea, so even a small improvement in schedule efficiency can have significant benefits to the shipping industry, Christainsen etal (2004).Scheduled service is a deliberate and carefully planned service decision aimed at satisfying present and future transport demands with minimum feet size. Deristieriotis (1983) is of the assertion that scheduling derives its importance from two different considerations:

(1)Inefficient scheduling results in under utilization of available resources (vessels, crews, etc.). The obvious, symptom here is the sailing of vessels with near empty capacities as a result, operating costs increase, and this reduces the competitiveness or effectiveness of the organization. (2)Poor scheduling frequently creates delays in the movement of cargoes through the route. This calls for expediting measures which again increase costs, upset previous plans, and delay other cargoes or consignments, which its late delivery results in unhappy customers Relaieva (2011).

Even though overall capacity may have been assigned to minimize the total cost from alternating periods of cargo boom (high demands) and slump (low demand), incompetent scheduling can aggregate the problem beyond any reasonable limit in terms of service costs and service levels. In all cases, the effectiveness of scheduling decisions requires adequate considerations of the interactions that exist with other decision systems responsible for forecasting demand, planning, availability of transport capacity and maintenance. The specific form of a schedule is affected by the short-term capacity provided in the overall plan and by the requirements to keep the schedule in good working order, Dervitsiotis (1981).

PROBLEM STATEMENT

Ronen (1982) in his work opined that the continuous growth of the world population and of its standard of living, combined with depletion of local resources, increases the dependence of the world economy on international trade. He emphasized that although international seaborne shipping is the major artery of international trade, relatively little research has been done in the quantitative aspect of designing and managing seaborne shipping systems. Korsvik, *et al* (2011), in their contribution further expatiated that we also see several trends like population growth, increasing standard of living, rapid industrialization, exhaustion of local resources, road congestion and elimination of trade barriers that contribute to the continuing growth in maritime transportation all compound scheduling problem and as result obviates the need for meaningful scheduling problem, Ronen (1982) noted that when a ship costs millions of dollars and its daily operating expenses are tens of thousands of dollars, large benefits may be expected from improving its scheduling process. He added that several explanations follow for the low attention drawn by ship scheduling problem:

(1) Low visibility. In the U.S.A. the minor source of research in quantitative methods, ships are a minor transportation mode: most cargo is moved by truck or rail. Moreover, numerous organizations operate fleets of trucks, but very few operate ships. Actually most of them are more dependent on ocean shipping.

(2) Ship scheduling problems are less structured than standard vehicle scheduling problems. In ship scheduling there is a much larger variety in problem structures and operating environments.

(3) In ship operation there is much more uncertainty. Ship may be delayed due to weather conditions, mechanical problems and strikes (both on board and on shore), and usually very little slack is built into their schedule, due to their high costs, Levy *et al* (1977), studied schedule performance of merchant ships, and found a probability of 0.3 of meeting a planned quarterly schedule (about 3 voyages). Thus, medium term schedules are used as guidelines and are changed very often.

(4) The shipping market is volatile, international, capital intensive and relatively free- without barriers to entry or regulation of rates. Thus, ship-owners take advantage of different national laws and regulations and therefore, capital investment decisions have a much larger effect on the bottom line than operational decision, affirmed Korsivic (2011).

(5) The ocean shipping industry has a long tradition. Ships have been around for thousands of years and therefore the industry is conservative and not open to new ideas, observed by Ronen (1982). Ronen further inferred that most quantitative models originated in vertically integrated organizations where ocean shipping is just one component of the business.

SHIP SCHEDULING BACKGROUND

Several terms must be clarified before proceeding. The term shipping in this article means moving of cargoes by ships. 'Routing' usually has a special meaning in shipping. It usually means weaker routing, i.e., closing a path in the sea between two ports of call in orderly sequences of ports of call to ships. 'Scheduling' is routing with times (or time windows) attached to the calls of the ships in the ports. Short term will mean up to several weeks forward, medium term up to several months, and long is beyond medium term.

MODES OF OPERATION

There are three general modes of operation in shipping: liner, tramp and industrial, Lawrence (1972). Ronen (1982), opined that these modes are not well defined or mutually exclusive. He explained that a ship may be easily transferred from one mode to another and an operator can operate ships in several modes at the same time. He emphasised that a liner operation resembles a busline-it publishes time tables and competes for cargo. In a further contribution Gilman *et al* (1977) made it clear that the schedule of liner ships affects the demand for their services (cargo available). Ronen (1982), is of the opinion that liners usually

operate in closed routes and often no voyage origin or destination can be defined because they may load and discharged cargo in each port of call and may never be empty. He added that a liner may be scheduled to call in a particular port more than once in a single voyage.

Tramp operation resembles a taxi-cab operation. Bausch *et al* (1998) supported this statement by emphasizing that the ships are sent where cargoes are available and usually the cargo is a whole shipload with a single origin and one or more destinations. Liner and tramp operations are common in shipping companies. Ronen is of the view that the objectives of liner and tramp operations are usually to maximize profits per time unit.

Industrial operation is similar to private truck fleet operation, Ronen (1982), but in transport parlance it is an Own-account operation. The owner of the cargo controls the fleet of ships. The ships may be owned or chartered. The primary purpose of an industrial operation is usually to assure transportation services for the organization's cargo and to reduce costs, Christiansen *et al* (2004), Ordinarily, such are sized below the organization's basic continuing requirements and fluctuations in fleet capacity needs are met by charters from other owners. Ronen still maintained that the objective of an industrial operation is usually to provide the required transportation service at minimal cost. Packard (1980), explained that ships can be chartered easily (in and out) on an international exchange, and can be bought or sold on the international market. But Bausch (1988), argued that an operator can change the size of his fleet relatively easily, adding that this process requires time.

At this point it may be informative and worthwhile to point out the major differences between standard vehicle routing and scheduling problems:

1. Ships are different from each other in their operating characteristics (capacity, speed) as well as their cost structure, Gilman *et al,* (1977).
2. The scheduling environment depends, to a large extent, on the mode of operation of the ships.
3. Ships do not necessarily return to their origin.
4. Higher uncertainty is involved in scheduling ships, (more resources of uncertainty and much longer voyages).
5. Ships are operated around the clock whereas vehicles are usually not operated during the night (except over the road, vehicles such as moving trucks). Thus ships do not have planned idle periods which absorb delays in operation.
6. Destination of ships may be changed at sea.

LINER OPERATION

Having touched extensively on scheduling problems and characteristics of vessels, we discuss liner operation. Liner operation's revenues depend on be quality of services (frequency, regularity, transit time, reliability, cheapness and so on) and therefore the availability of cargoes (revenues) depends on the routing and scheduling decisions, Faulks (2011). Ronen (1982) iterated that in liner operation, the operator's objective will be to maximize profits per time unit and not minimize costs, He added that due to the large role of uncertainty in liner operation, which stems from a relatively large number of ports of calls in a voyage and from cargo availability, the major modelling methods have been simulation and heuristic decision rules.

Datz (1968) suggested a simple calculative procedure for scheduling liners and estimating the financial results of a schedule. Neuhop (1974), gave a general discussion on the selection of ports of call for liners. Olson et al (1969), presented a deterministic simulation model used in a liner company, operating between U.S. west coast and Hawaii, for evaluating scheduling decisions. Kysland (1969) developed a more stochastic simulation model for planning purposes. His model uses linear programming in a sub-problem to determine the optimal number of ships for providing a specified service frequency. Fagerholt (2004), developed a computer-based future research. In another successful endevour, Kelareva (2011), derived the "Dynamic Under-Keel Clearance (DUKC) Optimer Ship Scheduling System, where it was emphasized that ship scheduling deals with assigning sailing times to a fleet of ships, as well as optionally the amount and type of cargo that each ship carries. Kelareva further opined that ship scheduling is a problem with significant real-world impact, as the majority of the world's international crude is transported by sea, so even a small improvement in schedule efficiency can have significant benefit to the shipping industry. Christiansen *et al* (2004), are of the opinion that one consideration in ship scheduling is that most ports have restriction on the draft of ships that are able to safely enter the ports. Draft is the distance between the water line and the ships keel, and it is a function of the amount of cargo loaded onto the ship. Ships with a deep draft risk running aground when entering or leaving the port, therefore, most ports restrict the draft developmental contribution, Almogy and Levin took a more pragmatic approach to a narrower problem. They built a stochastic model to decide what cargoes should be selected out of the available cargoes in order to maximize profit per time unit. Their objective function was linear and separable and they outlined the solution method but did not provide any example. Nemhauser and Yu (1972), discussed a model for rail service which may be applicable to liners. They used dynamic programming to find the optimal frequency of service which maximizes profit over the planning horizon when the demand for the service is a function of its frequency and timing.

Exiting work on liner scheduling by Boffey *et al* (1979) where they built an interactive computer programme, which used heuristics to schedule container ships over the North Atlantic. Their article provides a good description of a realistic ship scheduling problem environment. They used a greedy heuristic to generate schedules, but reported that managers prefer the package without the heuristic part, where schedules are generated manually and the model is a calculative one, Ronen (1982).

OBJECTIVES

To ensure a smooth service through the various ports, scheduling system must perform the following activities:

1. Loading. This involves matching the capacity requirements of cargoes or customers available (or expected) to the existing fleet size. This is accomplished by assigning vessels to specific ports, Kersvik et al (2011).
2. Sequencing: This enables the assignment of port priorities so that we can determine the sequence in which ports will be visited.
3. Dispatching: This refers to the dates the ship will sail and arrive.
4. Controlling schedule performance by:
5. Reviewing the status of demands as they operate through the route.
6. Rearranging the sequencing of ports.
7. Updating schedules. This is done as needed to reflect current operating conditions and/ or revised priorities.
8. The complexity of these tasks can be handled systematically with graphic displays or computer printouts that assist management in the evaluation and control of schedule performance.

FIGURE 1: ELEMENTS OF THE SCHEDULING SYSTEM

Constraints   Decision variables

1. Handling rate at each port of call.
2. Tide
3. Required maintenance, problem of determining failure rate of some components.
4. Sequencing constraints (e.g. vessel draft, port facilities etc).
5. Vessel class.

1. Service frequency.
2. Number of ports of call.
3. Order of calling to ports (sequencing)

INPUTS
Capacity requirements from:

1. Cargoes received for shipment
2. Short term demand (boom)

Skill
Equipment
etc

Scheduling

System

OUTPUT
Scheduling specifying:

Allocation of vessels

Sequencing of ports

Frequency of service

Updating and control

Performance measure

$$\text{Minimize} = \begin{bmatrix} \text{Total} \\ \text{scheduling cost} \end{bmatrix} + \begin{bmatrix} \text{Cost of idleness} \\ \text{from poor} \\ \text{utilization} \end{bmatrix} + \begin{bmatrix} \text{Cost of from} \\ \text{late deliveries} \end{bmatrix} + \begin{bmatrix} \text{Cost of from} \\ \text{schedule} \\ \text{adjustments} \end{bmatrix}$$

Source: Operations Management page 597.

FACTORS CONSIDERED IN SCHEDULING LINER VESSELS

The major restrictions on ship size for liners are port access, time spent in port and cargo availability. The increasing sophistication of cargo handling methods in the general cargo sector, and subsequent reductions in port time, have led to cargo availability being seen as the chief determinant of ship size in the liner trades. One method of easing this restriction on ship size is to widen the range from which cargo is received, and to which it is delivered. This can be done either by extensive use of support transport (either inland carriers or feeder ships) or by the use of multi-port itinerates for the main ships. Particularly in the latter ease, there is usually a trade-off between increased cargo and increased port time. In general, the shorter the route, the higher the proportion of port time, and hence the more attractive are simple itinerates of the main ships. The increase in ship size associated with shorter port time has also been accompanied in the liner trade by an overall increase in the ship speed.

Suppose a shipping company plans to enter a liner trade. How does it decide on the best ship for the route? The initial factors to be decided upon range from annual tonnage, frequency of service to be provided, to the size and the number of ships to be used.

Shorter transit times attract high paying cargoes, and competition for these cargoes results in unnecessarily high ship speeds, (Kuvas). High speed is therefore seen as marketing requirement. Service frequency, traffic demand and fleet transport capacity are the starting point in the choice for optimal ship size and speed.

Service frequency is the most likely factor independent of ship design which is given a priori in scheduling liner service. How much a restriction this is on the options for ship size and speed, number of ports, etc. will depend on the geography of the route. For a trade route such as UK-Australia, the differences in route length and voyage time associated with different choices of port will comprise a small percentage of the overall distance and time.

For a trade route such as North West Europe-U.S. East Coast, however, the sailing distance can vary between 6,500 and 11,000 miles depending on the choice of ports. Hence in the latter case there is much more variation available to the shipowner, even if service frequency is pre- determined, he still has a wide choice of combination of number of ships, voyage length, number of ports and so on. One restriction on this choice is the maximum acceptable transit time.

Service frequency and associated transit time exert a major influence not only on ship size but also on ship size. This is simply because only a limited amount of cargo can accumulate at a port during the 'service interval'. If this could be accurately quantified, the optimal size of ship would simply be that which would be full carrying all the cargoes which accumulate during this period.

In conclusion, it can be seen that service frequency is a major factor in the choice of optimal ship size and speed, but only in conjunction with other factors such as traffic demand.

TRAFFIC DEMAND

Benford suggests that ships can be divided into two distinct categories: those which are limited by physical characteristics and those limited by cargo availability. In the general cargo sector, long term contracts are less likely to be a major factor in determining trade flows, and the demand for an individual line's service will be less accurately predictable, unless the trade is a controlled one (e.g. by a strong closed conference with agreed market shares or pooling agreements as in UK-West Africa line).

Market research into individual cargo flows, competitive strength, the potential market for the ship type considered (e.g. containerisable cargoes not yet carried in containers) an external constraint question such as national legislation will therefore be required.

PREPARATION OF SCHEDULE

The preparation of a schedule is far from being an easy matter that it seems at the first glance. From the point of view of the shipowner, total scheduling and voyage costs will be minimized when a vessel loads a fill cargo at a port of origin and discharges same at a destination port and there, loads a full cargo back to port of origin or home port. Contrarily, the shippers' demand is satisfactorily met only if their consignments could be carried from wherever port they put them to which ever port/ ports they want them on the route and at the   time, too. It is because of these conflicting requirements of the both parties that the shipowner should adopt a realistic schedule that will act as a compromise.

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To this end, much laboriously accumulated data, much careful thought and juggling of figures, dates, and ship names go into its making. For instance in liner service from UK to West Africa, the Operations Manager of Elder Dempter Line said that "it involves the operation of ships between specified ports at approximately equal time interval, voyage after voyage, month after month the whole compilation will be determined by the length of the projected voyage, the possible frequency of sailings from the home port, the number of ports to be visited, and very importantly, the number of and characteristics of available vessels." This means that to plan a schedule, the operator will have an idea of the kind of service he would like to offer, good cargo forecast, the ports of call, the probable duration of the voyage (s) and the possible frequency of sailings. Having made up his mind on these points, he faces the fundamental decision (see figure 1) the number of ships and their characteristics (speed, class, draft, etc) which will enable him put his execution, Ryder and Chappell (1979).

Suppose a shipowner is thinking of a cargo service between United Kingdom and West African ports. He would in all probabilities, decide to put his ships into Liverpool port, London, Glasgow, Lagos - Apapa, Accra, Tema, Liberia, with stops at not more than four of the lesser ports on the West African Coast on each round voyage. He would then study the operational details of the route. This would show that to make the trip from UK Liverpool or London to Accra, Ghana and return would require 18 days although this depends on many factors among which are ship sizes, speeds, cargo availability, port time, etc., Ryder and Chappell (1979).

If the operator felt that it would be desirable to have weekly sailings from Liverpool, his fleet should be made of three ships. On the other hand, if he owned or controlled two vessels only and still wished to maintain the same itinerary, he would have to be content with a fortnightly service.

Therefore, it is clear from all the literature reviewed herein that in liner service, the schedule is basic to all plan. Renon (1982), emphasized that it determines the number of vessels required for a projected service, or, alternatively, limits the employment possible to a fleet of fixed size and capability.

Before going in detail, it will be pertinent to mention the specific factors influencing ship in operation. These are

1) Tide range which affects vessel draft and docking time.
2) Port and pilot rules of each port of call.
3) Passengers' convenience of arrival and departure (for passenger liner).
4) Longshoremen working hours and overtime rules.
5) National holidays which slow or stop operations.
6) Cargo-handling facilities for the type of cargo carried.
7) Capacity of port-avoidance of ships waiting to dock.
8) Vessel repairs-- when and where to be made.

Once the decision has been to place ships in service on a given route, the personnel of the operating department begin a systematic and detailed study of ports to be visited, the quantities and kinds of cargo to be handled in each port, and the capabilities of the ships available for this run. On routes such as the North Atlantic in winter, when the water of the ocean regularly reaches fantastic heights, it is customary to reduce speed to the average which comparable ships are able to hold under such condition, Desrosiers et al (1995).

Schedule- making personnel must have an up-to-date knowledge of the characteristics of their ships, the individual peculiarities of the cargoes normally loaded in the different ports of call, the working hairs and condition affecting the rapidity with which goods may be taken aboard or taken off the vessels, and such minor but actually very importance details as the time when pilots and tug are available to care for ships either on arrival or departure. There must also be close communication between the traffic and the operating departments, so that a plan of ship movements can be set up, based on approximately correct varieties and tonnages of cargo, Agarwal and Eryan (2010).

Christiansen et al (2004) noted that the most important factor in the line service is regularity – the dependable arrivals and departures of ships at the ports named in the schedule. To ensure this regularity, necessarily based on the most efficient use of the fleet, it may be necessary to adopt a variety of approaches: The amount of cargo accepted for a port may be limited to a quantity which can be handled in the length of time allowed for a call at the port. Thus, if a ship is to call at Port Harcourt port in Nigeria, and to stay for 14 hours and containers are handled at a rate of 15 per hour in loading and 12 per hour in discharging, the maximum that can be stowed aboard the ship is 210 containers and the maximum that could be discharged for her is 168 containers.

Alternatively, it may be decided to work a ship "around the clock" in a port, to the limit permitted by local working conditions. The payment of overtime wages to labour may be less than the cost of holding the ship, and hence it is justified.

In planning a schedule, certain assumptions must be made at the outset of the plan. These assumptions are based on the experience of the owner and usually appear to be what can be accurately achieved by the ships. They represent the foundation on which is to be erected the structure of dependability, implicit in the definition of liner service. In the first instance, the schedule -maker assumes that the cargo liner will be loaded with a representative variety of cargo (in routes not fully containerized but in containerized routes this assumption does not hold), stowed according to the standard pattern of the line's stevedoring practice. This is determined from a study of cargo manifests for a period ranging from the last voyage. Among these is the fact of the tide range, and whether any or all of the scheduled ports can be entered when the tide is low. Should examination reveal that a port of outstanding importance (e.g. Apapa in UK – West Africa line) from the view point of cargo is accessible only at high tide, then the schedule must be adjusted to permit ships to conform to the tidal change. In London, for example, the 26-ft change in tides   regularly call at London, some flexibility must be worked into their schedules so that they can fellow the prescribed time routines and still meet the advertised sailing and arrival times. This may be achieved by prescribing sea-speeds which are less than the maximum of which the ship is capable, so that the master may increase his cruising speed to arrive earlier, and thus meet the tide, or speed more rapidly after learning London and arrive at his next port approximately on the advertised time.

Alternatively, the necessary flexibility may be obtained by increasing the allowance for port time average by from 4 to 6 hours at two or three ports along the route, and leaving the execution of the schedule to the discretion of the master and advice of the ship's agents at the port by communication. No matter, however, how the planners have come to their decisions in making the schedules, port operation should be keyed to the tide, insofar as local working conditions will permit e.g., public holidays, availability of pilots in compulsory pilotage ports and the time when tugs (if necessary) are available at each port so that delays will be minimized, and the ship be made to sail with the first high tide after she finishes her cargo.

Having explained planning and managing of a schedule, it is necessary to illustrate the basic method of scheduling as follows: after investigating or surveying the route they found out that they could attain a 25–30% market share with a load factor of 0.8. This share represented an approximate monthly demand of transport capacity for 15,000 twenty equivalents units (TEUS) in a few months to perhaps 2 or 3 years. It is the kind of loan which can be expected at a given time on the operator's trade route.

The next assumption is that the ports of call and the sequence, in which they are to be visited, will not be changed during the period for which the schedule is being evolved. It is also expected that working hours and conditions of labour will not alter to any degree that would affect the efficiency of the ports. Service time at each port is rated on the number of tonnes of cargo or containers that can be handled into and out of a ship in the course of one hour, and any drop in this rate naturally will have repercussions on the schedule. Storms or unfavourable weather slow down cargo work, but unless, the ship is to sail to ports where there is reasonable assurance that such conditions will be encountered, it is customary to make allowance for the possibility of such interruptions. Underlying this custom is the unpredictability of storms and their intensity or the effects they may have on cargo operation. This, of course, is a gambler's choice, but the odds are no more unfavourable to assume good weather than bad weather when planning a schedule, Ronen (1982). Kelareva (2011) is inclined to feel that other assumptions of equal significance are that there will be no interference with the ship by reason of strikes, riots, or civil commotion, and no major breakdown of cargo- handling equipment.

I can add that these assumptions, based on the historical experience of the company planning the schedule, reflect the actual conditions which have been encountered in the past, and the performance records of the ships employed in the trade for which the schedule is being developed, more especially the respective speed of the ships in the fleet. If the planners of the schedule or the ship operator have had no personal experience in the service, for which the schedule is being drawn up, it is essential that he obtains all possible pertinent information from steamship agents, consultants, and/or his own operating personnel who may have made detailed surveys of port conditions. Moreover, volume of trade will be forecast for the rate.

On the basis of these assumptions, it becomes possible for the operating department to consider the specific factors which will influence the schedule.

The company found out from shippers that a weekly service would be satisfactory to their demand. The number of ports of call for each ship was decided, plus some feeder service ports. The company decided the size and speed characteristics and number of ships required for this service thus:

15 – 30% market share approximately   15,000 TEUs (monthly)

Weekly service   = $\dfrac{1500}{4}$ = 3,750 TEUs /week.

Ship size at 0.8 load factor   = $\dfrac{3750}{0.8}$ ≈ 4,600 TEUs

Past experience shows that 1 day port time is reasonable and they decided to call to 24 ports on the route giving port time = 24x1day = 24 days.

Roundtrip distance is approximated to 40,000 nautical miles.

Speed of the vessel is planned to be 18knots

Sea voyage time plus port time = round trip time   = $24 + \dfrac{4000}{18 \times 24}$

=   116.59 day

=   177 days approx.

❖   Number of ships required to maintain weekly frequency

= $\dfrac{177}{07}$ = 16.7 ≈ 17 ships.

Having determined the fleet size of the company, the selected speed considered ideal for the voyage and forecast load factor, the schedule can be prepared to enter the new route. The schedule must be updated and maintained in response to periodical trends in the shipping environment.

SUMMARY

Ship scheduling problems are varied and complex- The high uncertainty associated with ship operation confines the applicability of deterministic models to long and medium term planning. So medium term schedules are used as guidelines and must be updated often. Actual scheduling is done with the fleet and cargoes available for loading at the moment. The recent trend toward computerized interactive scheduling systems, which are used mainly to evaluate alternative schedules, demonstrates the complexity of the problem and limited applicability of existing mathematical programming models to operational ship schedules.

In a search, only a few models or computerized systems, for short terms scheduling were found. Essentially, the short term scheduling problem boils down to three questions: where are empty ships sent? where are loaded ships sent? and what cargoes to load on what ships? The answers to these questions may change frequently with changes in the fleet operating environment. The relation between the medium term schedule (the plan) and short term problem (the execution of that plan) is blurred by the operational uncertainty which is usually not accounted for in the medium term plan. This relation, which is complicated by binary aspect of scheduling problems (is the specific ship at the right place at the planned time, or not?) is not well understood and requires further analysis.

The objective of scheduling is not always clear cut especially in tramp shipping where not all cargoes available are known in advance. Liner operations try to maximize profit per time unit in the long run but may divert from this objective in the short run in order to gain market share. Industrial operations try to minimize cost as long as they are engaged in intra-corporate service, but once they look for backhauls for other parties they face problems similar to tramp shipping. When cost minimization is the objective, all relevant cost components should be taken into account, including port entry charge, cost of loading and discharge times and demurrage.

The ship scheduling problem becomes more realistic when two additional decision variables are considered: the cruising speed, and the shipment sizes. The fuel consumption of a motor ship, which may cost tens of thousands of dollars a day depends on the third power of its speed and is a major component of operating cost. Thus the cruising speed should be considered when a schedule is determined. Shipment sizes may often vary in a given range, especially in industrial operations and such variations allow larger flexibility for the human schedulers than for a mathematical model which does not account for them. A further realistic aspect may be instilled by trying to avoid ports on weekends and public holidays, when cargo handlings do not take place.

Fleet routing and scheduling problems cannot be disconnected from fleet size and mix decision since the latter imposes constraint on the former, at least in the short run.

Most of the publications in ship routing and scheduling have been performed in industrial operation and very little has been done in other areas. Even in industrial operations, the existing models are realistic aspects of ship scheduling problems. When a ship costs tens of thousands of dollars a day, large cost savings can be realized by proper scheduling of a fleet, but realistic models are needed to achieve those savings. Hence it is highly recommended that more serious research be conducted in this same area of shipping operations management.

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REAL INCOME, INFLATION, AND INDUSTRIAL PRODUCTIVITY IN NIGERIA (1970-2005)

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ABSTRACT

The study empirically examines the effect of real income, inflation, and industrial productivity in Nigeria, in line with the objectives of this study, secondary data were obtained from central bank of Nigeria statistical bulletin covering the period of 1970 to 2005. In concluding the analysis, multiple regressions were employed to analyze data on such variables as real income, inflation, wages, manufacturing output and consumer price index were all found to have significant effects on the Economics Growth with the Adjusted R^2 of 72%. Following the outcome of this study, it is therefore concluded that an increase in real income resulted in an increase in the unit cost of labour and cause firms to substitute capital for labour, which reflected in an increase in the marginal productivity of labour. The result suggest that the government should continue to import few but only essential commodities, a large number of imported goods and raw material should be cut down to eliminate imported inflation.

KEYWORDS

Real income; inflation; industrial productivity.

BACKGROUND TO THE STUDY

The studies of the productivity in the non-manufacturing industry and manufacturing industry have transpired in the late 1990s. For instance, Oulton (1998) studied a sample of 140,000 UK companies including both the manufacturing and non-manufacturing industry over the period 1989-93. Faggio et al. (2007) investigated the relation between productivity inequality and wage inequality by analyzing a UK longitudinal panel data covering the manufacturing and non-manufacturing sectors since the early 1980s. Morikawa (2008) empirically analyzed the relationship between union presence and firm performance in area such as productivity and profitability by using data on a large number of Japanese firms, covering both manufacturing and non-manufacturing industries.

It is almost standard in the theoretical literature to envisage that inflation and productivity growth are negatively related as workers purchasing power affects motivation and effort, but also because inflation affects firms' investment plans, influences capital depreciation rates and induces changes in the choices of production techniques (Wakeford 2004). Growth in productivity is the key driver of growth in per capita income and living standards in the long run. The trend in productivity growth is determined by the development of new technologies and how efficiently resources-labour, capital and fixed resources (such as land) – are organized in the production process. These are factors that determine the capacity of the economy to supply goods and services and are not directly responsive to monetary policy in the short run. Nevertheless, because inflationary pressures reflect the balance of supply and demand growth in the economy, trend productivity growth is an important determinant of the pace at which the economy can grow over the medium term without generating inflationary pressures. Understanding developments in trend productivity growth is therefore an important consideration for monetary policy formulation. Following a period in the 1990s and early 2000s when, by historical standards, Australia experienced unusually rapid productivity growth, trend productivity growth slowed over the latter part of the 2000s. The slowing in aggregate productivity growth is widely recognised, but there has been some debate about how broad based this has been across industries and about the reasons for the slowdown. Weaker productivity outcomes have been especially pronounced in the mining and utilities industries, where the level of productivity has fallen. However, there has also been a marked slowing in trend productivity growth across most other industries (Patrick D'Arcy and Linus Gustafsson, 2012).

The historically high trend productivity growth in the 1990s allowed the economy and incomes to grow at a relatively rapid pace without generating inflationary pressures. This experience was common. Two main arguments are relevant here. First, higher real income increase the opportunity cost of job loss, which can stimulate greater work effort to avoid redundancy (an efficiency-wage type hypothesis). Second, an increase in real income will result in an increase in the unit cost of labour and cause firms to substitute capital for labour, which will be reflected in an increase in the marginal productivity of labour. Gordon (1987) highlights that substitution from labour to capital in response to inexorable increases in real income has been at the heart of the economic growth process for centuries. Of course, inflation and real income are also related and Hendry (2001) shows succinctly that inflation responds to excess demands in many parts of an economy including labour costs within the labour market.

The effect of inflation on real income is reflected especially where there is a change in the expected inflation rate. If the earning streams of an individual remain unchanged and inflation changes from expected, real income will experience a decline. According to Milton (2007), Nigeria's long-run growth performance has been extremely poor. For the 1960-2000 period, real income per capita grew at only 0.43% per annum at constant domestic prices, and in PPP-adjusted terms average income actually fell. The importance of economic growth for poverty reduction has been established by numerous empirical studies and has recently been underscored by the phenomenal progress of China and other countries in East Asia and Pacific region. In Nigeria, the consequence of long-run stagnation in average income was a sharp cumulative increase in poverty, both in terms of absolute numbers and as a share of the overall population. Nigeria's long-run stagnation has occurred in a context of acute short-to medium-run volatility. Nigeria was a poor country at independence in 1960, with a per capita income in constant 2000 U.S. dollars of less than $250 at official exchange rates (about $1000 in PPP-adjusted terms). Real per capita income rose impressively between 1960 and the mid-1970s, with the exception of a brief but sharp interruption immediately before and during the civil war of 1967-70. In the mid-1970s, income fluctuated with little overall trend, but then it plummeted in 1981 with the onset of an acute economic crisis. Between 1981 and 1984, real output fell at an annual average rate of nearly 6%. The Structural Adjustment program adopted in 1986 brought about temporary relief, with real growth averaging over 5% per annum between 1988 and 1990. The 1990s, however, witnessed nearly complete stagnation, with average income growing at a rate of less than half a percentage point per annum. Note that while the growth rate of real income per capita averaged 0.43% between 1960 and 2000, it averaged a robust 3.4% between 2001 and 2006, and the average growth rate of real per capita income was an outstanding 4.2% between 2003 and 2006. The first decade of the 21st century was then a period of unprecedented growth spurt in Nigeria.

Recognition and strong evidence of real income, inflation and industrial productivity interrelationships can help shape policy formation for industrial productivity enhancement, inflation control or consumption stimulation. Although some studies have focused on this set of interrelationships using a range of co-integration techniques, none have controlled for structural breaks and, therefore, may provide misleading results.

STATEMENT OF THE PROBLEM

In relation to these and other earlier empirical studies the following three points must be stressed. First, most studies used standard time series or panel data techniques but failed to consider structural changes in the co-integrating vector. Since the early 1980s many countries, including Australia, have undergone significant structural changes and, therefore, it has become necessary to test for structural breaks in co-integrating relationships. Second, some of the previous empirical studies have been conducted using co-integration analysis with small sample sizes. This may significantly distort the power of the standard tests and lead to misguided conclusions. Third, most empirical studies have ignored the role of real income on the relationship between inflation and productivity. Given these empirical concerns the remainder of this paper seeks to empirically investigate the effect of inflation and real income on productivity for Nigerian economy over a 40 year period using a comprehensive set of empirical tests which include the explicit inclusion of a structural change test.

OBJECTIVES OF THE STUDY

The main objective of this article is to examine empirically the effect of real income and inflation on industrial productivity for the Nigerian economy over the period 1970 to 2010 using a comprehensive set of empirical tests. The objectives are broken down into the following specifics:
(i)   To evaluate the effect of inflation on Nigerian economy,
(ii)   To examine the relationship between real income and industrial productivity.
(iii)   To assess the effects of inflation on Industrial Productivity either positively or negatively.

LITERATURE REVIEW

The relationships between real income, inflation, and productivity growth have received much attention in the empirical literature. This literature is characterized by the application of a variety of different empirical tests on data sets corresponding to a variety of economies.

Inflation has been low when industrial productivity growth has been high. This occurs because the Federal Reserve has not adjusted nominal income growth in response to changes in industrial productivity growth, implying that an acceleration in trend industrial productivity growth leads to a deceleration in inflation. According to Saten *et al.* (2010), many conceive that inflation and productivity growth are negatively related (Jaret and Selody, 1982; Clark, 1982; Hondroyiannis and Papapetrou, 1997). For instance, inflation reduces the incentive to work, distorts the informational content of relative price levels (leading to inefficient investment plans), and shrinks tax reductions for depreciation (resulting in an increase in the rental price of capital); all of these will indirectly constrain productivity growth (Christopoulos and Tsionas, 2005). Narayan and Smyth (2009) surmise further possible mechanisms through which inflation can adversely affect labour productivity, including the movement towards an inefficient mix of factor inputs, an increase in buffer stocks and a reduction in R&D expenditures.

Four important empirical studies suggest there is a *negative* relationship between inflation and productivity. Bitros and Panas (2001) examined the effect of inflation on total factor productivity across Greek manufacturing industries between 1964 and 1980. They found that the acceleration of inflation from the period 1964-1972 to 1973-1980 led to a significant slowdown in total factor productivity in 16 out of 20 manufacturing industries. Tsionas (2003) also found a negative relationship between inflation and productivity for fifteen European countries over the period 1960-1997. While their application of Bayesian techniques revealed no co-integration, their application of the Vector Error Correction Model (VECM) technique did suggest a negative relationship between inflation and productivity for most countries. Further, their causality test results imply that there is bi-directional causality between inflation and productivity for five countries while one-way causality exists for two countries. Christopoulos and Tsionas's (2005) application of panel co-integration techniques to European data over the period 1961-1999 also imply a long run negative relationship between inflation and productivity growth in seven of the fifteen countries.

Mahadevan and Asafu-Adjaye's (2005) application of Granger causality tests to domestic inflation and mineral product price data for the Australian mining sector provides results that imply a negative unidirectional causality ran from prices to mining productivity growth between 1968 and 1998. However, Freeman and Yerger (1998), who utilized Engle and Granger (1987) and Hsiao's (1981, 1982) Granger causality tests to examine the link between inflation and productivity using data from 1955-1994 for 12 OECD countries, argue that the correlation between inflation and productivity is spurious due to the cyclical movements between them. One main reason for a lack of consensus behind the inflation-productivity relationship may be the omission of an explicit consideration of real wages. For instance, using US data Mehra (1991) examined the relationship between inflation and productivity adjusted wages and found that in the long run inflation had a positive effect on per-unit labour costs. Mehra's (1993, 2000) own re-examinations assert that in the long run there is a bi-directional relationship between these variables.

That inflation has costs is widely accepted. What is less clear is the path by which inflation generates these costs – there are many alternative theories. The interaction of inflation with the tax system, the reduction in the value of the price mechanism, the diversion of resources from productive activities to managing inflation, or even the cost of adjusting prices on menus have all been posited as costs of high inflation. However, quantifying these channels empirically is much harder than describing them theoretically. Regardless, whatever the channel of effect, they must all ultimately reduce output. And inflation's negative effect on output is most likely to be reflected in lower productivity growth.

REAL INCOME AND INDUSTRIAL PRODUCTIVITY

Sharpe 2002 defined Productivity as the relationship between output and inputs. Partial productivity indicators may be defined in terms of output per unit of labour, per unit of capital, per unit of land, and per unit of raw materials or intermediate goods. Total factor productivity growth is defined as output growth in relation to a weighted average of the growth of inputs (usually labour and capital) where the weights are the income shares of the factors of production. The productivity measure that will be used is industrial productivity, as industrial productivity is much more closely related to potential increases in real income and living standards than total factor productivity growth. Productivity also refers to the efficiency with which an economy employs resources to produce economic output.

Productivity refers to the efficiency with which an economy employs resources to produce economic output. Growth in productivity is the key driver of growth in per capita income and living standards in the long run. The trend in productivity growth is determined by the development of new technologies and how efficiently resources – labour, capital and fixed resources (such as land) – are organised in the production process. These are factors that determine the capacity of the economy to supply goods and services and are not directly responsive to monetary policy in the short run. Nevertheless, because inflationary pressures reflect the balance of supply and demand growth in the economy, trend productivity growth is an important determinant of the pace at which the economy can grow over the medium term without generating inflationary pressures. Understanding developments in trend productivity growth is therefore an important consideration for monetary policy formulation(Patrick and Gustafsson 2012).

Again according to Saten Kumar (2010), a positive relationship between real income and industrial productivity is often hypothesised because higher real wages increase the opportunity cost of job loss and stimulate greater work effort to avoid redundancy. This positive relationship is also hypothesised because higher real income put upward pressure on labour costs and cause firms to substitute capital for labour, thereby increasing the marginal industrial productivity of labour (Wakeford, 2004). The relationship between real income and industrial productivity is also based on the concept that greater capital stocks increase the demand for labour, thereby increasing the real income, and stimulating industrial productivity. Similarly it is possible that domestic pressures on real income stimulate movements towards the adoption of capital thereby increasing measures of industrial productivity.

Erenburg (1998) examined the long run relationship between real income and industrial productivity in the US from 1948-1990 and identified a long run, counter-cyclical relationship between real income and industrial productivity once the empirical stance had controlled for capital stocks. Their main findings imply that if the public capital stock had remained constant then both real income and industrial productivity would have increased. However, using panel co-integration techniques Mora *et al.* (2005) examined the convergence in income and industrial productivity for eleven European countries for the period 1981-2001 and found reductions in the dispersion of nominal income and unit labour costs, but did not find similar dispersion reductions in industrial productivity or real income.

INFLATION, REAL INCOME AND INDUSTRIAL PRODUCTIVITY

The concept of inflation has been define as a persistence rise in the general price level of broad spectrum of goods and services in a country over a long period of time. Inflation has been intrinsically linked to money, as captured by the often heard maxim "inflation is too much money chasing too few goods". Hamilton (2001) inflation has been widely described as an economic situation when the increase in money supply is faster than the new production of goods and services in the same economy. Piana (2001) economists usually try to distinguish inflation from an economic phenomenon of a onetime increase in prices or when there are price increases in a narrow group of economic goods or services.

Ojo (2000) and Melberg (1992) the term inflation describes a general and persistent increase in the prices of goods and services in an economy. Inflation rate is measured as the percentage change in the price index (consumer price index, wholesale price index, producer price index etc). Essien (2002) opine that the consumer price index (CPI), for instance, measures the price of a representative basket of goods and services purchased by the average consumer and calculated on the basis of periodic survey of consumer prices. Owing to the different weights the basket, changes in the price of some goods and services have impact on measured inflation with varying degrees. There are several disadvantages of the CPI as a measure of price level. First, it does not reflect goods and services bought by firms and/or government, such as machinery. Secondly, it does not reflect the change in the quality of goods which might have occurred overtime. Thirdly, changes in the price of substitutable goods are not captured. Lastly, CPI basket usually does not change often. Despite these limitations, the CPI is still the most widely used measurement of the general price level. This is because it is used for indexation purposes for many wage and salary earners (including government employees).

It is not unusual to amalgamate the above relationships for the purpose of empirical testing. For instance, Narayan and Smyth (2009) used panel co-integration techniques to examine the relationships between inflation, real wages and productivity growth for the G7 countries over the period 1960-2004. They found a positive statistically significant relationship between real income and industrial productivity growth but no statistically significant relationship between inflation and productivity growth.

Strauss and Wohar (2004) examined the long run relationship between inflation, real income and industrial productivity for a panel of 459 US manufacturing industries between 1956-1996 and found that in the long run, inflation Granger-causes productivity, while bi-directional Granger causality runs between real wages and productivity. Hall (1986) and Alexander (1993) found empirical evidence that inflation, real wages and productivity have a co-integrating relationship in the UK, with an implication that higher wage rates stimulate labour productivity via the efficiency wage argument. Finally Gunay *et al.* (2005) examined the relationship between inflation, real wages and profit margins over twenty-nine Turkish manufacturing sub-sectors over the period 1980-1996 and found that profit margins (markups) are positively and significantly affected by real wage costs and price inflation; similar conclusions were obtained for Turkey by Blanchard (1985) and Metin-Ozcan *et al.* (2002).

RESEARCH METHODOLOGY

This chapter describes the methodology employed in this study. Methodology consists of the procedures to be used for collecting data, summarizing and analyzing the data gathered in other to answer the research questions. It is intended to applying the chosen methods in the research to minimize the costs of obtaining the data and analyzing them while maximizing the expected values of resultant information as well as association level of accuracy. For the purpose, issues addressed include; research design, study population sample and sampling technique, data collection and research instrument validation.

METHOD OF DATA COLLECTION

Method employed in Carrying out this research work was by secondary data. Secondary data is the name given to data that has been used for some purpose other than that for which they were originally collected. Secondary data generally used when the term manpower resource necessary for survey arc not available and of course the relevant information required. Secondary data were gotten from different sources e.g. CBN Statistical Bulletin 2005 and Nigeria Bureau of Statistics.

SAMPLE SIZE

The duration of my research was basically from 1970-2005 which is in the range of 35yrs. This duration was used because it is detailed enough to give a good result and analysis. This study employs annual data on the rate of inflation, real income (proxied by monthly compensation in the manufacturing sector) and productivity (proxied by output per hour in the manufacturing sector) for Nigeria over the period 1970 to 2005. Data were obtained from the Federal Ministry of Statistics (2006).

MODEL SPECIFICATION

Model A

The effect of real income on inflation, wages, consumer price index and manufacturing on Nigeria economy.

$$Y_t = \alpha + \beta_1 R_t + \beta_2 N_t + \varepsilon \qquad\qquad (1)$$

Where   Y is the productivity

         R is the real income

 N is the inflation   and

ε is an error term.

The estimates of β_1 and β_2 signify income and inflation elasticities with respect to productivity, *yt* is a vector of *I*(1), non-stationary in level form variables and α is a constant.

Model B

$$\ln Y_t = \alpha + \beta_1 \ln R_t + \beta_2 \ln N_t + \varepsilon_t \qquad\qquad (2)$$

Where   lnY is the natural log of productivity

lnR is the natural log of real income

lnN is the natural log of inflation and

ε is an error term.

The causality results are obtained by regressing the respective dependent variables against their past values and the past values of other variables.

$$\Delta ln Y_t = \nu + \sum_{i=1}^{k} \theta_i \Delta lny_{t-1} + \sum_{i=1}^{k} k_i \Delta lnR_{t-1} + \sum_{i=1}^{k} m_i \Delta lnN_{t-1} + \varphi_1 ECT_{t-1} + \varepsilon_{1t} \qquad\qquad (3)$$

In addition to the variables defined above, the lagged error correction term derived from the long run co-integrating relationship is represented by ECT$_{t-1}$. The serially independent random error is ε_{1t} and has means equal to zero and finite covariance matrices.

PRESENTATION AND ANALYSIS OF DATA

This chapter will be used in analyzing and presentation of data collected from different reliable source like CBN Statistics Bulletin 1999, 2005. Nigeria Bureau of Statistics. This was done so as to determine the the effect of real income, inflation, and industrial productivity in Nigeria from the period of 1970 to 2005.

According to the research question, what is the effect of real income and inflation on industrial productivity for the Nigerian economy and after getting the results or answers to these questions, we can now decide if this research has affected Nigeria economy positively or negatively during the periods in which the data are used for the research.

The following tables below are actually gotten from different sources but they are answers to these research questions.

RESULT PRESENTATION AND DISCUSSION

The estimated model used observations for the periods 1970 - 2005 (35years).

TABLE 1: THE EFFECT OF REAL INCOME ON INFLATION, WAGES, CONSUMER PRICE INDEX AND MANUFACTURING ON NIGERIA ECONOMY

Real income	Coefficient.	Std. Err	t-statistics	P>|t	[95%Conf. Interval]		R^2= 0.7559
Manufacturing	-.2325047	.0419066	-5.55	0.000	-.3179738	-.1470355	**AdjR^2=0.7244**
Inflation	-.044296	.1062005	-0.42	0.679	-.2608934	.1723013	**F(4, 31) = 24.00**
Wages	.0001397	.0005354	0.26	0.796	-.0009521	.0012316	**Prob > F = 0.0000**
Cpi	-.0032792	.0025194	-1.30	0.203	-.0084175	.001859	**Root MSE = 8.4919**
_cons	51.97595	4.138095	12.56	0.000	43.53625	60.41565	

MS = 261.673361

The above table is represented by regression plots below:
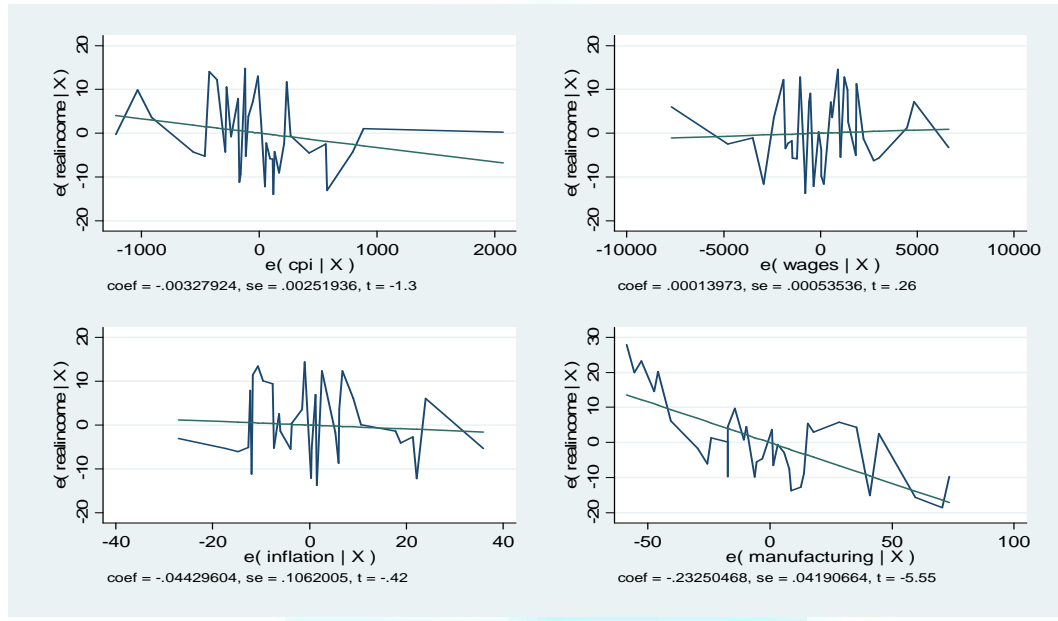
DATA ANALYSIS

TABLE I shows the result of the effect of real income on inflation, wages , consumer price index and manufacturing on Nigeria economy in the short run . A 1% increase in the real income reduces the manufacturing sector by 0.2 percent. This suggests an inverse relationship between the rate of income and industrial growth in Nigeria. The result is also significant. The relationship between real income and inflation is also negative suggesting that if real income increases, the inflation reduces. The relationship between real income and consumer index is also negative.

Given the adjusted R^2 significant 72%, it connotes the independence variables incorporated into this model have been able to determine variation of real income to 72%.The F and probability statistics also confirmed the significance of this model.

TABLE 2

INreal income	Coefficient.	Std. Err	t-statistics	P>|t	[95%Conf.Interval]		R^2=1.0000
INmanufacturing	.0015185	.0012147	-1.25	0.221	-.0039958	.0009589	**Adj R^2=1.0000**
INinflation	-.0000692	.0006217	-0.11	0.912	0013373	.0011988	**F(4, 31) = .**
INwages	1.000059	.001848	541.15	0. .000	0.9962903	1.003828	**Prob > F = 0.0000**
INcpi	-.9994806	.0012451	-802.73	0.000	-1.00202	-.9969412	**Root MSE = .00257**
Constant	.0040145	.009546	0.42	| 0.677	-.0154547	.0234837	

MS = 35 .651769419

The above table is represented by regression plots below:

Table 2 also shows the result of the effect of real income inflation, wages , consumer price index and manufacturing on Nigeri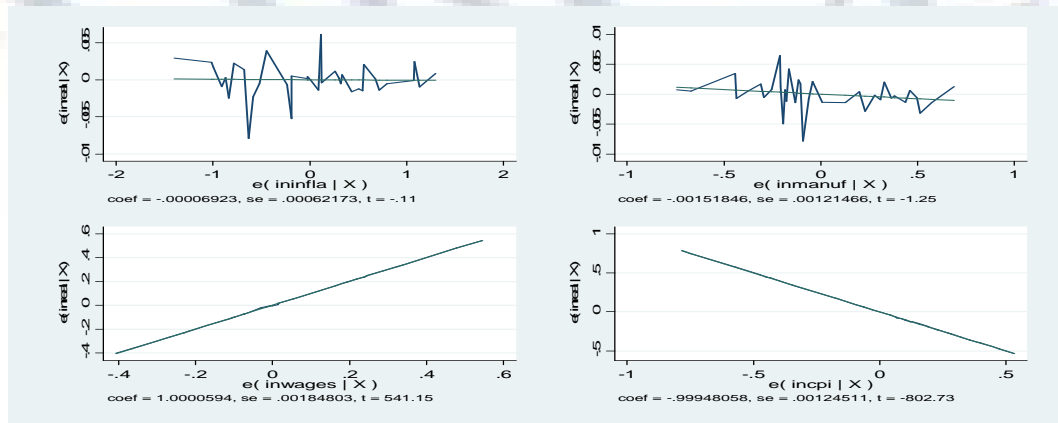a economy in the long run by finding the log of real income compared with logarithms of on the independent variables.1% of increase in real income brings about 0.0015 % reduction in manufacturing. This also suggests an inverse relationship between the rate of income and industrial growth in Nigeria in the long run decision planning. The result is also significant. The relationship between log of real income and log of inflation is also negative suggesting that if real income increases in the long run, the inflation reduces. The relationship between log of real income and log consumer index is also negative.

Given the adjusted R^2 significant 100%, it connotes the independence variables incorporated into this model have been able to determine variation of real income to 100%.The F and probability statistics also confirmed the significance of this model.

Table 2 in the appendix contains simple regression results for the log of real income model. The results indicate that the coefficient of real income is statistically significant and the constant is statistically significant.

SUMMARY AND CONCLUSION

This study has reviewed the relationship between real income, inflation, and industrial productivity in Nigeria. The links between real income, inflation, industrial productivity have assessed, tested the relationship between real income, inflation and industrial productivity by employing co integration and Granger-causality test analysis. Estimated results suggest that industrial productivity growth impacts strongly upon inflation, wages and real income. Similarly wages has a strong effect on productivity growth alone. As regard to inflationary effects, there is a negative and strong relationship with labor productivity growth. This in turn may support the view of aggregate supply approach. Including the real wage growth as opposed to the nominal one in the model eliminates the direct effect of inflation on productivity growth statistically, though direction remained the same. The findings revealed that the relationship between the real income, inflation, wages and industrial productivity is significant at the level of 5%. Real income was seen to Granger cause both output and inflation. The result suggest that monetary stability can contribute towards price stability in Nigerian economy since the variation in price level is mainly caused by real income and also conclude that inflation in Nigeria is too much extent a monetary phenomenon. The real income has a positive impact on growth after a considerable lag. The results of unit root suggest that all the variables in the model are stationary and the results of Causality suggest that real income causes inflation and not inflation causing real income. The results also revealed that inflation possessed a positive impact on economic growth through encouraging productivity and output level and on evolution of total factor productivity. The countries had low productivity growth and high inflation in the 1970s and, to a lesser extent, them1980s. Productivity growth then generally increased through the 1990s at the same time as inflation generally fell. The model explores the fact that faster wage growth now appears to cause higher productivity growth in the next quarter as well. A higher real productivity growth also affects positively the nominal wage growth. On the other hand, nominal wage growth does not cause a change in inflation rate. One simple reason for this would be wage stickiness making unit labor costs constant. As a result, inflation rate would not be affected through this period of time; a good performance of an economy in terms of per capita growth may therefore be attributed to the rate of inflation in the country.

POLICY RECOMMENDATIONS

Based on the results of this research and the realization of the effect of real income and inflation on industrial productivity for the Nigerian economy, the following recommendations are made

1. A major policy implication of this result is that concerted effort should be made by policy makers to increase the level of industrial output in Nigeria by improving productivity/supply in order to reduce the prices of goods and services (inflation) so as to boost the growth of the economy.
2. To keep inflation low and stable, monetary policy needs to be attuned to persistent changes in productivity growth to ensure that growth in demand and nominal factor incomes remain consistent with the economy's supply potential, and hence with the inflation target.
3. The government should continue to import few but only essential commodities .A large number of imported goods and raw material should be cut down to eliminate imported inflation.
4. Government should reduce their spending drastically in the form of budget surplus. This will have a significant contracting effect on total demand in the economy.

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DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES IN NIGERIA: A PARADIGM SHIFT

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ABSTRACT
This paper establishes a linkage between national economic growth and Small and Medium Enterprises (SMEs) development and thus examines government's successive interventions in the development of SMEs significantly in the area of access to finance. The paper posits that the single-solution approach by way of providing more finance to SMEs may not effectively bring about the desired objectives of a wholesome development of the sector and thereby suggests an integrated multifaceted approach. Accordingly, the paper provides a review of extant legislations and literature on Small Scale entrepreneurial development and gives a deeper understanding of the roles that Development Institutions are to play to encourage, motivate and instil entrepreneurial initiatives and thereby enhance SME as a driver of national economic growth and development in Nigeria.

KEYWORDS
DFIs, entrepreneurial, incentives, SMEs, vision 20:2020.

1. INTRODUCTION

The significance of the Small and Medium Enterprises (SMEs) in the economic growth of many countries cannot be overemphasized. There is consensus of opinion that though the sector consists of individually small businesses, their total contributions to industrial development and national output is very significant (Roslida, 2011; Ogunsiji & Ladanu, 2010, Surienty, Hong, & Hung, 2010; Hong & Hung, 2010; OECD, 2004; NIPC, 2004). Researchers also support that SMEs help in the achievement of improvement in rural infrastructure, improved living standard of the rural dwellers, creation of employment and utilization of indigenous technology, production of intermediate technology and increase in revenue base of individuals and governments (Wahab and Ijaya, 2006; Odubanjo, 2000; Nnanna, 2001, Onwumere, 2000).

The developed nations understand the importance of this sector and are harnessing the potentials for national growth and development. In China, SMEs with fewer than 300 employees accounts for 99.5% of the factories in Tokyo and employs 74% of the workforce there. Korea and Taiwan are prospering as both countries manufacture and export with the aid of well established SMEs. The German SMEs employ 73% of the labour force. Some other comparative analysis of SMEs contribution is as in the table below:

COMPARATIVE ANALYSIS OF SMES CONTRIBUTIONS IN SELECTED COUNTRIES

Countries	Employment (% of Total)	Export Earnings (% of Total)	Contribution to GDP (% of Total)
United Kingdom	53	27	52
USA	52	30	50
India	79	38	40
Hong Kong	78	37	51
Japan	70	40	51
Nigeria	**75**	**2**	**10**

Source: CBN SMEs Surveys (2005) and Vision 20:2020

By 2020 Nigeria intends to be one of the 20 largest economies in the world, able to consolidate its leadership role in Africa and establish itself as a significant player in the global economy. The SMEs sector has been identified as one of the critical elements to achieving the Nigerian vision 20:2020.

The SME sector constitutes 99% of the total business enterprises in Nigeria, employs 75% of the nation's industrial labour force but only accounts for 10% to 15% of the total industrial output while utilizing only about 30% of its installed capacity. Significant as the SME contribution to employment generation is, there is still a serious unemployment crisis in the country today. In the recent past people without basic education accounted for over 76% of the unemployed in Nigeria. The situation today has been compounded by the regularly increasing number of unemployed graduates. According to the National Bureau of Statistics, (NBS) the total number of unemployed Nigerians rose from more than 12 million in 2010 to over 14 million in 2011, with the figure increasing by 1.8 million between December 2010 and June 2011. The Bureau added that unemployment was highest among people aged between 15 and 24, and 25 and 44 years. The NBS data also shows that over 22million of the active population are either unwilling or unable to work or are working for less than 40 hours per week on the average.

2. STATEMENT OF THE PROBLEM

The Vision 20:2020 document notes that as at 2006, the SMEs contributed only 2 per cent of export earnings and 10 per cent to GDP. The low contribution to export earnings has been attributed to lack of skills, management capacity, poor product quality, low production capacity, poor access to international markets and lack of working capital that have made the sector to be uncompetitive.

Similarly, whereas SMEs account for 75% employment rate in Nigeria, the incidence of poverty is dangerously hovering over a large proportion (70%) of the population living below the poverty line of US$2.00 (NGN300) per day. Empirical research shows that the causes of poverty in Nigeria were not limited to unemployment, and that most of the poor were employed in a large variety of small scale, low-productivity activities. Thus, it has been suggested that one way to alleviate poverty in Nigeria could be to increase the productive capability of those engaged in small-scale production (Aftab and Rahim, 1989).

The Federal Bureau of Statistics (FBS) recently released the results of its first National Survey on SMEs conducted across the 36 states of the Federation and the Federal capital territory July 2012. The result announced by the Minister of Trade and Investment, Mr. Olusegun Aganga, showed that 17.28 million SMEs are in the country out of which 17.26 million (about 99.9%) are micro enterprises employing less than 10 persons and valued at less than N5 million each.

The minister stressed that the National Micro Small and Medium Enterprises (MSME) policy recognizes that the sub-sector is the biggest employer of labour throughout the world and the visions of National MSME policy therefore include:

➢ Delivery of maximum benefits of employment generation;
➢ Wealth creation;
➢ Poverty reduction;
➢ Growth to the Nigerian economy.

In recognition of the significance of this sector, successive governments in Nigeria have launched several initiatives to encourage and develop entrepreneurship. Some of these interventions include specification of credit guidelines by the Central Bank of Nigeria (CBN) to banks lending to SMEs, the establishment of rural banking programmes and indirect lending to SMEs at concessionary rates through participating banks (Inang and Ukpong, 1992; Inegbenebor, 2006). Other schemes include the establishment of the second-tier Securities market, the merger of the Nigerian Bank for Commerce and Industry, the Nigerian Industrial Development Bank and the National Economic Reconstruction Fund into the Bank of Industry to provide cheap financial and business support services to SMEs.

Similarly, the CBN and the Bankers' Committee, in an attempt to tackle the financial problems of SMEs established the Small and Medium Enterprises Equity Investment Scheme (SMEEIS). The Scheme requires all banks in Nigeria to set aside 10% of their profit before tax annually for equity investment in small and medium enterprises operating in the productive sector of the economy. The scheme aimed at facilitating the flow of funds from banks for the establishment of new and viable small and medium industry projects, stimulating economic growth, developing local technology, promoting indigenous entrepreneurship and generating employment.

All these interventions have not been as successful as anticipated essentially because they are all focused towards making more funding available to the SMEs. Then one is tempted to ask the question: Is credit alone the main critical constraint of SMEs development? The generally poor attitude of Nigerians to loan repayment resulted in the banks having high accumulated non-performing loan portfolio from SMEs and effectively resulted in unwillingness of banks to extend further required credits to the sector. The challenge of developing an SME sector that is the driver of national economic growth and development may involve an integrated multifaceted approach rather than the extant singular focus and concentration on creating more framework of funding to the sector.

This paper is concerned with the modalities for strengthening the SME sector and making the sector fulfil its expected mandates towards national growth and development. Specifically, the paper is concerned with the potential roles of Development Finance Institutions (DFIs) in relation to SMEs and how these roles, if effectively discharged, may jump start a paradigm shift in government intervention framework to SME development.

3. CHARACTERISATION OF SMEs IN NIGERIA

The SME sector comprises micro, small and medium enterprises which are distinguished as a group separate from large organisations. There is no widely accepted definition of SMEs in Africa (Beyene, 2002). In Nigeria, the definition has changed from time to time and differs from one agency to another (Appendix 1 shows differences in definitions). However, with the introduction of the National Policy on MSMEs the issue of definition has been addressed. This definition, also adopted by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) classifies SMEs according to size category, number of employees and asset holdings as follows:

Definition of MSMEs

Size Category	Employment	Asset(=N=million) Excluding Land and Building
Micro Enterprises	Less than 10	Less than 5
Small Enterprises	10 to 49	5 to less than 50
Medium Enterprises	50 to 199	50 to less than 500

Source: National Policy on MSMEs

According to the National Policy on MSMEs, micro enterprises in Nigeria are dominated by wholesale and retail trade, manufacturing, vehicle repair/servicing, transport, hotels and restaurants and building and construction. Majority of micro enterprises are informal, family owned businesses with low output value and low levels of skills and technology. In the First National Survey on SMEs, the FBS announced that 99.9% of SMEs in the country are micro enterprises.

Most small enterprises are registered businesses and they are usually more organised and efficiently run. They have a larger number of well educated, technically skilled proprietors and they have easier access to bank credits with targeted assistance and support.

The medium enterprises dominate the formal SME sector. Majority of these are in the manufacturing, transportation and ICT sectors. They have better access to credit and are the main recipients of most government initiatives targeted towards SMEs. Government initiatives like SMEDFUND and SMEEIS aimed to cover only enterprises with a maximum asset base of N200 Million and those that regularly complied with applicable tax laws. These criteria clearly ruled out most informal businesses providing majority of employment and constituting 99.9% of SMEs (FBS, 2012).

Characterization of SMEs in Nigeria has taken various forms and shapes (Aluko, Oguntoye, and Afonja 1975; Ekpenyong and Nyong (1992); Ogunsiji and Ladamu, 2012). Some of these include:

- Concentration of power in one person, i.e. the proprietor
- Vision of the manager/proprietor confined to local community, with little or no knowledge of wider or distant market;
- Little or no accounting records are kept;
- Ownership structure largely revolves around a key man or family;
- Labour – Intensive production processes;
- High cost of funds as a result of high interest rates paid on loan sourced from informal financial sector;
- High mortality rate especially within the first two years of existence.
- Poor inter and intra-sectoral linkages; hence they hardly enjoy the benefits economies of scale.
- Poor product quality, poor packaging and equally poor marketing strategy.
- Absence of Research and Development to drive innovative ideas and match global benchmark.
- High production costs due to inadequate infrastructure.
- Lack of access to international market.
- Lack of succession plan.
- Poor access to vital information.

4. CHALLENGES OF SMEs IN NIGERIA

Several of the SMEs die within the first few years of their existence. Problems associated with their high mortality have been widely identified and discussed (Aftab and Rahim, 1989; Ekpenyong and Nyong, 1992; Onugu, 2005).

The challenges have been grouped into two broad categories of exogenous and endogenous issues (Vision 2020). The exogenous issues are those imposed by external circumstances and institutional deficiencies while the endogenous issues are human related and are mostly caused by lack of depth, knowledge and expertise of participants in the sector. These issues could be further identified as follows:

- ❖ Poor Policy Framework
- ❖ Lack of coordination among various programmes
- ❖ Absence of linkage programmes
- ❖ Inadequate legal framework
- ❖ Difficulty doing business
- ❖ Poor data issues
- ❖ Insufficient Capital;
- ❖ Lack of Succession plan;
- ❖ Inadequate Market Research;
- ❖ Over Concentration on one or two markets for finished products;
- ❖ Lack of focus;
- ❖ Inexperience
- ❖ Lack of proper records or lack of any records at all;
- ❖ Inability to separate business and family or personal finances;
- ❖ Lack of business strategy;
- ❖ Inability to distinguish between revenue and profit;

- ❖ Inability to procure the right plant and machinery;
- ❖ Inability to engage or employ the right caliber staff;
- ❖ Lack of planning;
- ❖ Cut-throat competition;
- ❖ Lack of official patronage of locally produced goods and services;
- ❖ Inimical government rules and regulations (e.g. dumping of foreign goods, unfavourable fiscal policy, multiple taxes, levies and rates)
- ❖ Over concentration of decision making on one key person;
- ❖ Infrastructural inadequacy;
- ❖ Restricted market access;
- ❖ Raw materials sourcing problems;
- ❖ Problems of inter-sectoral linkages given that most large scale firms source some of their raw materials outside instead of subcontracting to SMEs;
- ❖ Insecurity of people and property;
- ❖ Unfavourable monetary policies;
- ❖ Lack of preservation, processing and storage technology and facilities.

5. FINANCE CONSTRAINTS AND GOVERNMENT INTERVENTION POLICIES

Access to finance has been identified as a major constraint of SMEs in Nigeria.

There are three main sources of financing open to them as follows:

- ➢ Formal Financial institutions such as the conventional banks, insurance companies and development banks.
- ➢ Informal Financial institutions consisting of money lenders, credit and savings associations (cooperative societies); esusu, friends and relations.
- ➢ Personal savings.

A study by the Nigerian Institute for Social and Economic Research (NISER) in 1984 reveals that about 73% of the respondent obtained their funds from personal savings, while only about 2% obtained theirs from the formal financial institutions. Another study by Ojo (1984) on the sources of investment finance for small industries shows a similar trend that over 96% came from personal savings with about 3% from the informal sector and less than 1% from the formal financial institutions. The trend has not improved over the years.

Attempts made to address the financing problem of SMEs in Nigeria include specification of credit guidelines by the CBN to banks, lending to SMEs, the establishment of rural banking programmes and indirect lending to SMEs at concessionary rates through participating banks, the merger of the Nigerian Bank for Commerce and Industry, the Nigeria Industrial Development Bank and the National Economic Reconstruction Fund into the Bank of Industry (BOI) to provide cheap financial and business support services to SMEs.

In addition, the CBN and the Bankers' Committee in an attempt to tackle the financial problems of SMEs established the (SMEEIS) which started in June 2001 and requires all Banks in the country to set aside 10% of their profit before tax annually for equity investment in SMEs operating in the productive sector of the economy. The objectives of the scheme are to stimulate economic growth, facilitate the flow of funds from banks for the establishment of new viable small medium industry projects, develop local technology and promote indigenous entrepreneurship (UBA, 2001)

The table in appendix 2 shows the distribution of bank loans to SMEs in Nigeria from 1992 to 2008. Between 1992 and 1996, there was a mandatory minimum of 20% of total bank credit to allocate to SMEs owned by Nigerians. From 1997 when the mandatory allocation was abolished, there has been a downward trend in the total credit allocation to SMEs which has dangerously reached a frightening proportion as at 2008 when only 0.2% of total commercial banks credit was channelled to SMEs.

This trend has, no doubt, established a yearning gap in financing options available to this important sub-sector. This and many other challenges of SMEs are what the Development Finance Institutions (DFIs) were established to resolve.

6. DFIs ON RESCUE MISSION

Development Finance Institution (DFI) is defined by scharf and shetty, (1972) as 'an institution promoted or assisted by government mainly to provide development finance to one or more sectors or sub-sectors of the economy. The institution distinguishes itself by a judicious balance between commercial norms of operation as adopted by any private financial institution and developmental obligations. It emphasizes the 'project approach' – meaning the viability of the project to be financed- against the 'collateral approach'; apart from provision of long-term loans, equity capital, guarantees and underwriting functions, a development bank normally is also expected to upgrade the managerial and other operational pre-requisites of the assisted projects'.

Its insurance against default is the integrity, competence and resourcefulness of the management, the commercial and technical viability of the project and above all, the speed of implementation and efficiency of operations of the assisted projects. Its relationship with its clients is of a continuing nature and of being a 'partner' in the project than that of a mere 'financier'.

It has been confirmed that DFIs play crucial roles in providing credit in the form of higher risk loans, equity positions and risk guarantee instruments in support of private sector investments in developing countries for infrastructural and real sectors development.

A major DFI in Nigeria is, for instance, the Bank of Industry (BoI).

BoI has the mandate to 'transform Nigeria's industrial sector and integrate it into the global economy through providing cheap financing and business support services to existing and new industries in order to achieve the attainment of modern capabilities to produce goods that are attractive to both domestic and external markets. The Bank is specifically expected to assist in resuscitating ailing industries and promoting new ones in all the geopolitical zones in the country. To achieve this, it has been mandated to identify and assist projects that have large transformational impacts by way of

- • creating forward and backward linkages with the rest of the economy;
- • utilizing domestic inputs by adding value to raw materials;
- • generating employment opportunities;
- • produce quality products for the market.

The Small and Medium Enterprises Development Agency (SMEDAN) is another initiative of government to bring succour to entrepreneurs. Established by the SMEDAN Act of 2003 to be the official bedrock of SMEs in the country, the agency has a vision to establish a structured and efficient micro, small and medium enterprises sector that will enhance sustainable development of Nigeria. The mission of SMEDAN is to facilitate the access of micro, small and medium scale investors to all resources required for their development and the mandate of the agency are stated as including stimulation, monitoring and coordination of the development of the MSMEs subsector; initiation and articulation of policy ideas for small and medium enterprises' growth and development; promotion and facilitation of development programmes, instruments and support services to accelerate the development and modernisation of MSME operations; linking MSMEs to internal and external sources of finance, appropriate technology, technical skills as well as to large enterprises and promoting and providing access to industrial infrastructures such as layouts, incubators and industrial parks.

The main purpose therefore for BoI and SMEDAN as well as other DFIs is to do what conventional formal banking system has failed to do by providing finance and other logistics to the SMEs for investments that create jobs, produce quality products and promote economic growth and development.

7. CREDIT ALONE NOT ENOUGH

In spite of several initiatives to provide financing incentives to SMEs, the Nigerian SME sector contributes just 2 percent to export earnings and only 10 percent to GDP. The low contribution is attributed to lack of skills/management capacity, poor product quality, low production capacity, poor access to international markets, and lack of working capital hence the sector has tended to serve the bottom end of the domestic market. Therefore, any initiative to promote SMEs must be deliberately holistic in conception and delivery.

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The role of DFIs to SMEs can be summed up in the concept and mandate of developmental banking or financing as enunciated in the mandates of both the BoI and SMEDAN. This is different from that of the conventional banks to the extent that DFIs are to fill the gap that conventional formal banking services have failed to invest sufficiently as a result of the special risks of certain economic agents. The task of development finance is to identify the gaps in institutions and markets in a country's financial sector and act as a 'gap-filler'. The principal motivation for developmental finance is to make up for the failure of financial markets and institutions to provide certain kinds of finance to certain kinds of economic agents (e.g. SMEs). The failure may arise because the expected return to the provider of finance is lower than the market-related return or the risk involved cannot be covered by high risk premium as economic activity to be financed becomes unviable at such risk-based price. Therefore, developmental financing is targeted at economic agents that are rationed out of the market. The aim of the DFIs is to be catalysts in galvanizing economic growth and development. This can be done with maximum impact by assisting and encouraging small and medium scale enterprises, not only providing finance but similarly in the following special areas of need:

7.1 ACCESS TO CREDIT, EQUITY AND GUARANTEES

The first National survey on SMEs shows that an estimate of 99 percent of SMEs is valued at less than 5 million. The main source of capital is personal savings with over 54 percent followed by loan with 22 percent and family source with 16 percent. DFIs need to explore, exploit and fill this financing gap by providing long term equity finance in the form of project finance. Similarly, credit guarantee schemes help in building linkages between small non-bankable borrowers and formal financial institutions. Innovative guarantee schemes could be extended by DFIs to SMEs that will give SMEs more and better access to credit in conventional commercial banking system.

7.2 SME EXPORT

The survey on SMEs (2012) affirms that only 3 percent of the SMEs in Nigeria were accessing export market, a situation which the Minister for trade and Investment described as "adversely inimical to the development of the nation's economy". This revelation is a testimony to the unexploited opportunity by local SMEs that require a coherent approach by all stakeholders, including the government. On the part of the DFIs, the development and extension of export promotion facilities that will incorporate export opportunity awareness and encouragement of the SMEs to compete internationally will certainly be helpful.

7.3 PHYSICAL INFRASTRUCTURE AND BUSINESS FACILITIES

A major challenge to the success of SMEs in Nigeria is irregular power supply and antiquated facilities. This has manifested in several areas as low capacity utilisation, low output and low quality and internationally uncompetitive products of many of the SMEs. DFIs can facilitate the upgrade of facilities through special packages deliberately targeted at infrastructural upgrade of the SMEs.

7.4 TRAINING IN ENTREPRENEURSHIP SKILLS AND MANAGEMENT

Empirical researches are conclusive that lack of business experience, skill and exposure is a major factor in the success rate of SMEs. Part of the extension programme of DFIs to SMEs could be in areas such as organised seminars, workshops and facility tours that will enhance the general education and exposure of the SME proprietors and their employees. If done at moderate cost and inherent values carefully articulated, the package may be an instant success.

7.5 LINKAGES

In general, linkages between large and small enterprises should be encouraged by SME policy in Nigeria and facilitated by the DFI strong network with government.

The role of DFIs to SMEs can also be viewed with reference to a framework developed by Dunning (1992), who identified five main types of linkage and spillover effects. The framework was initially developed in respect of Foreign Direct Investment (FDI), which has a concurrent application and similarity of development financing objectives with DFIs. These linkages are:

- **Backward Linkages with Suppliers**: This refers to the extent to which components, materials and services are sourced within the business environment of the SMEs. Interconnectivity with suppliers can be facilitated by financing institutions which have a better advantage of deep knowledge of the environment of the SMES. This knowledge can be made available to these small entrepreneurs at little or no cost through seminars, 'meet-the buyer' events etc.
- **Forward Linkages with Customers**: These can include marketing outlets from within and outside the country which is normally at the data base of DFIs and which can be made accessible to SMEs. Similarly, seminars, trade fairs, and such other programs to connect SMEs with their customers can be organized by DFIs.
- **Linkages with Competitors**: DFIs may act as the bridge to facilitate the connectivity of similar companies in the same industry for shared experience and facilities for mutual benefits. Because of the vantage position and activities of the DFIs to the economy, they have access these enterprises with their strengths and weaknesses. The weaknesses of some of these SMEs are the strengths of others and some of these may be mutually exchanged in a manner that will not compromise healthy competition and leave each of the participating SMEs better off.
- **Linkages with Technology Partners**: One of the challenges of SMEs has been found to be antiquated technology (Ekpenyong and Nyong, 1992; UNCTAD, 2008). The reason for this is partly finance and partly lack of knowledge on the part of the SMEs to sources of technology that will enhance their optimal performance. DFIs with their wide contacts both locally and externally can act as facilitators with technology partners from within and outside the country.
- **Other Spillover Effects**: These include demonstration effects, as DFIs demonstrate new and better ways of doing things to SMEs. This could be by way of human capital spillover whereby trained personnel leave the DFIs to work for SMEs in areas of human deficiency by the SMEs.

7.6 ENTERPRISE CLUSTERS AND INDUSTRIAL PARKS

DFIs could come together in a consortium to finance Clusters and Parks for SMEs where they could pool their resources to reduce costs. This initiative may be an instant success especially because of the linkages it may also facilitate which will engender synergy for the participating SMEs.

8. CONCLUSION AND RECOMMENDATIONS

This paper has given an overview of the contributions of SMEs in the growth of economies all over the world with particular reference to Nigeria. Specifically, it identified the SMEs significant contributions in areas of employment creation, improvement in rural infrastructure, improved living standard of the rural dwellers, utilization of indigenous technology and production of intermediate technology. The achievement of the lofty ideals of Vision 2020 in Nigeria may be a mirage except there is a concerted effort to make the SMEs the true engine of growth and innovation they are expected to be.

The paper also identified the various challenges facing the growth and development of SMEs in Nigeria, principally identifying lack of education, skill and experience; lack of succession plan; deficient infrastructure and capital inadequacy.

Taking a cursory look at the challenges of SMEs and the inadequacy and unwillingness of conventional commercial banking system to address and resolve these challenges, a natural gap is thus created for a special-purpose financing and empowerment framework to provide for the needs of SMEs as an engine of growth. The Development Financing Institutions are not only providers of finance to SMEs; they act as the educators, promoters and pathfinders for the SMEs. DFIs are supposed to be the lubricating oil inside the engine of growth which the SMEs are expected to be.

An interesting issue is that one or more of the DFIs are located in each state of the Federation but their reach and spread is rather limited. However, a vast majority of entrepreneurs are not aware of their existence and operations. Except perhaps for DFIs such as Bank of Agriculture (BoA), BoI and SMEDAN that have some significant capacity and penetration to local communities, many others that are State government financed operate only within the state capital and even at that, have very limited capacity to provide necessary support to the SMEs.

For Nigeria to achieve the developmental objective of becoming one of the 20 most industrialised nations by the year 2020 and for the SME sector to play a leading role in the emerging economic landscape, the DFIs require a paradigm shift in order to provide necessary support and lubrication for SMEs.

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10. APPENDIX

APPENDIX 1

	Assets Excluding Real Estate(=Nm)			Annual Turnover (=Nm)			No of Employees		
	Med	Small	Micro	Med	Small	Micro	Med	Small	Micro
CBN	<150	<1		<150	<1		<100	<50	
NERFUND		<10							
NASSI		<40	<1		<40			3-35	
Min of Ind.	<200	<50					<300	<100	<10
NASME	<150	<50	<1	<500	<100	<10	<100	<50	<10
CAMA 37b(2)		<1			<2				

SME Definition by Various Agencies.

APPENDIX 2

Period	Loans to SME (Nm)	Total Bank credit (Nm)	Bank Loan to SMEs as % of Total Credit
1992	20,400	41,810	48.8
1993	15,462.90	48,056	32.2
1994	20,552.50	92,624	22.2
1995	32,374.50	141,146	22.9
1996	42,302.10	169,242	25
1997	40,844.30	240,782	17
1998	42,600.70	272,895.50	15.5
1999	46,824	353,081.10	13.3
2000	44,542.30	508,302.20	8.7
2001	52,428.40	796,164.80	6.6
2002	82,368.40	954,628.80	8.6
2003	90,176.60	1,210,033.10	7.5
2004	54,981.20	1,519,242.70	3.6
2005	50,672.60	1,899,346.40	2.7
2006	25,713.70	2,524,297.90	1
2007	41,100.40	4,813,488.80	0.9
2008	13,383.90	7,725,818.90	0.2

Ratio of Loans to SMEs to Commercial Banks Total Credit

Source: CBN statistical Bulletin various issues.

APPENDIX 3

S/N	Sector	Enterprise	Product and Activities
1	Real Sector	Agriculture	Lumbering, Farming of cassava, cereals, tubers, cocoa, rubber, groundnuts, etc.
		Agro-Allied	Primary agricultural processing of raw agricultural produce such as oil palm, cocoa, groundnut, cassava, fruits, rice, etc
		Manufacturing	Food and beverage, metal, iron, & steel; paper, printing and publishing; chemicals, paints, pharmaceuticals & plastics, textiles, garments & leather; wood, furniture & paper; automobile components and assembly; tanning; fabricators; foundry, etc
		Building and Construction	Building, Structures, Roads, etc.
		Solid Minerals	Artisanal mining, small and medium scale mining, quarrying, etc
2	Service-Related Sector	Information Technology and Communication	Software development, hardware assembly, computer supply and maintenance companies, internet service providers, communication accessories companies, etc.
		Educational Establishments	Schools, colleges, continuing education centres, training centres, vocational skills centres, etc.
		Tourism and Leisure	Hotels, resorts, entertainment, restaurants, recreational services, arts, etc.
		Transportation	Road transport, water transport, logistics, haulage, storage and warehousing etc
		Trade and Commerce	Wholesale and retail, supermarkets, shops, import and/or export etc
		Other Services	Consulting, law, healthcare, financial services, real estate, etc

Distribution of SMEs across Sub-Sectors in Nigeria

THE EVALUATION OF KNOWLEDGE MANAGEMENT'S EFFECTIVENESS ON E-LEARNING: A CASE STUDY ON PAYAME NOOR UNIVERSITY OF IRAN

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ABSTRACT

The aim of this study is evaluating the effectiveness of knowledge management on e-learning according to both these variables. Based on the reviews taken, knowledge management indicators include: organizational culture, information technology, human resources, leadership, organizational structure and internal processes, and indicators of e-learning are training based on computer, training based on networks, network training, virtual classrooms and digital collaboration. The statistical society of this study is the employees of the Payame Noor University central organization and the samples are 289. We used random and multistage cluster sampling and the measuring tool consists of two questionnaires based on knowledge management and e-learning. To describe the data we used frequency indicators, mean and standard deviation and to analysis the data, the Pearson correlation coefficient test, Levin equal variance test, independent group t test, one-way ANOVA (one way variance test) and Post Hoc test with SPSS software were used. Research result shows that among all the knowledge management indicators, there is a positive correlation. Independent group t test on the dimensions of internal processes, information technology and organizational structure showed significant difference between group learning and individual learning by emphasizing on group learning and on organizational culture dimension, the difference emphasized on the individual learning. Also, independent group t test only based on the relationship between traditional and untraditional learning showed significant difference. ANOVA test on the dimensions of information technology, human resources, organizational structure and organizational culture with regard to employee learning levels showed significant difference, and finally according to the obtained data, the effectiveness of knowledge management on e-learning is desirable.

KEYWORDS

knowledge management, e-learning, effectiveness, virtual education, open distance learning

INTRODUCTION

Today many organizations are following the data and information and faced with massive amounts of data that in many cases, proper management and exploitation of them is another matter. Today, organizations increasingly are separated based on their knowledge and also knowledge in the organization's competitive advantage in the global economy. Intellectual capital as a powerful force is being replaced rather than physical assets. So the topic of workforce learning and development today is a particularly important issue like e-learning. [24]

In the age of informatics and IT, changes are not limited only to teaching-learning process, but it also changes educational structures, behavioral paradigms, and even instructional content and education organization is expected to play role in solving educational, social, cultural, and economic problems and grow people independent, flexible, and proportionate to specific needs and keep the step with individual and pluralism in the society and it presupposes a special approach in educational system, because as students study IT they can attain much information in a short time.

Knowledge management tools such as community [20], social software [23], peer-to-peer [18] and personalized knowledge management [2, 21] are now commonly being used in ubiquitous learning. Learners use these tools to generate and share ideas, explore their thinking, and acquire knowledge from other learners.

On the other hand the new era of e-learning services is mainly based on ubiquitous learning, mobile technologies, social networks (communities) and personalized knowledge management [8, 17].

KNOWLEDGE MANAGEMENT

Knowledge management is a systematic approach to manage people, groups and organizational knowledge using appropriate tools and technologies. [16]

O'Dell and Grayson [9] see knowledge management as a strategy to be developed in a firm as a way to ensure that knowledge reaches the right people at the right time and to share the information to improve the overall function of the organization. However, since there is no universal definition of knowledge management, it is often recognized in a generalized sense, for example: as a generic process through which organizations generate value from knowledge and also as the creative and innovative capacity of human beings [10, 36, 3]. Knowledge management can also be relevant to the use of e-learning systems within a company, systems which are extremely beneficial to company growth. [25]

In addition, since knowledge management is regarded as an important part of developing e-learning, finding a way to successfully transfer ordinary e-learning to knowledge-based e-learning will be necessary in order to remain competitive. It will be through necessity that a company place great importance on the operations of a knowledge community during a critical period when an enterprise wants to advance its practices of knowledge management or hopes to accelerate corporate innovation.

Benefits of developing a knowledge community:

When a company embarks on knowledge community-based e-learning, it needs to consider several issues: how to develop knowledge strategy, how to use information technology, how to carry out a knowledge procedure, and how to operate a knowledge community. These issues must be addressed in order to achieve organizational effectiveness and aggressive focus when working towards desired goals. Benefits an efficient knowledge community can bring to an organization environment include: learning curve improvement, quick response and efficient customer satisfaction (QR/ECS), increased experience sharing within an organization, a decrease in repetitive work, enhanced communication and innovation, efficient resolution of practical problems, and increased learning overall in relevant areas of growth. [22, 33, 19, 13, 26]

One of the primary goals of knowledge management is facilitating efficient and effective process of sharing knowledge among the members of the organization. [37]

Therefore, such a definition would be appropriate that knowledge management is a process of discovery, acquisition, development, sharing, storing, evaluating and applying the appropriate knowledge, at the right time, by the right person in the organization through the link between human resources, information and communication technology and organizational structure for achieving occurs. [1]

The most important assistance that can be made is to identify the types of knowledge management and show the differences of them. Using knowledge management by individuals, organizations and nations to improve their efficiency and effectiveness of knowledge systems, it seems absolutely vital. [14]

The general policy is the integration of knowledge management in e-learning**.** [39]

E-LEARNING

Today, E-Learning has different definitions, each of which consists of conceptions, attitudes and training philosophy of its presenters. Therefore, considering the nature of E-Learning system, without any intention to explain and criticize other definitions, it can be said that E-Learning includes organizing the training process – Learning through an institute (and not a teacher) by selecting proper solutions to apply educational technologies, organizing multimedia and IT, to provide educational self-assessment independent learning facilities, and establishing mutual connection between trainer and trainee are separate from time and place viewpoint. [38]

Nowadays we are witnessing a fast and significant expansion of the e-learning domain. Indeed many large e-learning project are launched everywhere in the world. [6, 7]

Goals of e-learning:

E-Learning [27] is defined as, ''[T]he use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance.'' The e-learning goals are to establish a learning organization and nurture a corporate culture based on knowledge sharing [12, 40, 31, 28, 35]. Hopefully knowledge innovation can be promoted through the learning of an organization, the sharing of knowledge, and the creation of a knowledge community. This way knowledge dominance can be achieved more speedily and consistently maintained. This in turn can hasten the collaborative climate of higher intellectual capital, organizational creativity, innovative business models, and raise the overall company value and efficiency. [34, 32, 4, 29, 11]

Open and remote education includes organizing training-learning process-learning and educational evaluation by a reflexible institute, or giving equal opportunities to everybody and removing access obstacles, in particular geographical distance of society members to the required training and independent learning in all levels and taking proper strategies to apply the educational technology, multimedia and IT. Thus, we are facing with a type of educational system, organizing training elements in a manner that the trainer in his/her desirable time and place, with his/her proper speed but with maintaining organizational relationship, cooperates with assistance of development or teacher and/or a learning group.

The terms distance education, open education, tale education are ambiguous terms, for which numerous meanings have been offered. In Cambridge encyclopedia (hormozi, 1994, cited from crystal, 1990) distance education is defined as below (educating people at home or workplace).

RESEARCH METHODS, THE STATISTICAL SOCIETY AND SAMPLING

The statistical society of this study is the employees of the Payame Noor University central organization and the samples are 289. This type of research is descriptive and co relational. We used random and multistage cluster sampling and the measuring tool consists of two questionnaires based on knowledge management and e-learning. To describe the data we used frequency indicators, mean and standard deviation and to analysis the data, the Pearson correlation coefficient test, Levin equal variance test, independent group t test, one-way ANOVA and Post Hoc test with SPSS software were used. Sample of 289 members, there are 194 people as a group and 89 people as individual learning, 152 people are under the traditional learning process and 129 people are under the non-traditional learning process.

FINDINGS

For internal consistency of questions within the subscale, we have used Correlation coefficient and Cronbach's alpha.

TABLE 1: CRONBACH'S ALPHA COEFFICIENT OF KNOWLEDGE MANAGEMENT INDICATORS

Indicator	Alpha coefficient	Average	Standard deviation
Effectiveness	0/73	26/92	4/62
Internal processes	0/37	19/78	3/29
Information technology	0/78	17/82	4/24
Human resources	0/70	18/50	3/79
Organizational structure	0/61	20/23	3/18
Leadership	0/64	14/12	2/85
Organizational culture	0/65	11/41	2/27
Total	0/90	128/78	19/09

TABLE 2: SUBSCALES CORRELATED WITH EACH OTHER AND WITH THE TOTAL SCALE

	Effectiveness	Internal processes	Information technology	Human resource	Organizational structure	Leadership	Organizational culture	Total
Effectiveness	1							
Internal processes	0/50**	1						
Information technology	0/54**	0/61**	1					
Human resources	0/67**	0/57**	0/67**	1				
Organizational structure	0/70**	0/57**	0/54**	0/60**	1			
Leadership	0/58**	0/44**	0/43**	0/64**	0/47**	1		
Organizational culture	0/68**	0/34**	0/30**	0/50**	0/43**	0/52**	1	
Total	0/86**	0/74**	0/78**	0/86**	0/80**	0/73**	0/66**	1

** $p < 0/01$

According to the tables with the exception of internal processes indicator, the other subscales of the coefficients and the total are high.

On the other hand, the significant correlation with all subscale and total scores show that the scale has good internal consistency.

Questions:

1. Is there any significant relation between e-learning and knowledge management?

By using the Pearson correlation coefficient, the relation between the total score of e-learning with its four subscales and seven subscale scores of knowledge management was obtained. The result is in table 3.

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TABLE 3: THE RELATION BETWEEN KNOWLEDGE MANAGEMENT SUBSCALES AND e-LEARNING SUBSCALES

	Training based on computer	Training based on networks	Network training	Virtual classrooms	Digital collaboration
Effectiveness	0/35**	0/37**	0/20**	0/22**	0/33**
Internal processes	0/28**	0/36**	0/23**	0/15**	0/18**
Information technology	0/15**	0/11	0/08**	0/03	0/23**
Human resources	0/32**	0/33**	0/25**	0/17**	0/28**
Organizational structure	0/34**	0/38**	0/21**	0/19**	0/33**
Leadership	0/26**	0/33**	0/21**	0/05	0/24**
Organizational culture	0/24**	0/24**	0/08	0/21**	0/25**

- Is there any significant relation between learning types and learning methods?

Independent group t test was used to answer this question:

TABLE 4: INDEPENDENT GROUPS t-TEST RESULTS: KNOWLEDGE MANAGEMENT, LEARNING TYPES AND LEARNING METHODS

	Learning types	Average	Standard deviation	T amount	Learning methods	Average	Standard deviation	T amount
Effectiveness	Group	26/89	4/38	-0/21	Traditional	26/88	4/66	-0/25
	Individual	27/02	5/20		Non traditional	27/02	4/68	
Internal processes	Group	19/50	2/94	-2/28*	Traditional	19/64	2/88	-0/80
	Individual	20/54	3/82		Non traditional	19/65	3/63	
Information technology	Group	17/32	3/95	-3/02**	Traditional	18/04	4/39	-0/90
	Individual	19/06	4/72		Non traditional	17/58	4/12	
Human resources	Group	18/55	3/60	0/26	Traditional	18/51	3/79	-0/06
	Individual	18/42	4/30		Non traditional	18/54	3/91	
Organizational structure	Group	19/85	3/22	-2/94**	Traditional	20/32	3/02	0/93
	Individual	21/02	2/89		Non traditional	19/98	3/20	
Leadership	Group	13/98	2/85	-1/14	Traditional	13/78	3/07	-1/99*
	Individual	14/41	2/94		Non traditional	14/47	2/59	
Organizational culture	Group	11/76	2/11	3/82**	Traditional	11/62	2/12	1/66
	Individual	10/67	2/43		Non traditional	11/16	2/43	

*Significant level, p<0/05 ** Significant level p<0/01

- Is there any significant difference between the knowledge management subscales and the learning level?

To answer this question we use Analysis of one way variance test and Post Hoc test that do not need any defaults.

TABLE 5: ANALYSIS OF ONE-WAY VARIANCE TEST

	Learning level	Average	Standard deviation	F
Effectiveness	Weak	29/25	3/92	10/32**
	Middle	27/44	5/05	
	Good	25/66	4/14	
Internal processes	Weak	20/50	3/37	1/31
	Middle	19/83	3/39	
	Good	19/52	3/39	
Information technology	Weak	19/94	4/38	8/8**
	Middle	17/42	3/87	
	Good	16/93	4/20	
Human resources	Weak	15/12	4/46	7/50**
	Middle	18/50	3/36	
	Good	17/52	3/71	
Organizational structure	Weak	22/50	2/67	15/56**
	Middle	19/87	3/20	
	Good	19/45	3/36	
Leadership	Weak	14/69	2/62	1/04
	Middle	14/38	2/90	
	Good	14/96	3/05	
Organizational culture	Weak	11/12	2/67	3/85*
	Middle	11/99	2/11	
	Good	11/14	2/09	

- Is there any significant difference between the four e-learning subscales with learning types and learning methods? It is a side question. We use independent group t test.

TABLE 6: INDEPENDENT GROUP t TEST

	Learning types	Average	Standard deviation	T amount	Learning methods	Average	Standard deviation	T amount
Training based on computer	Group	2/95	12/18	0/94	Traditional	26/72	11/8	1/66
	Individual	24/45	12/93		Non traditional	24/28	12/95	
Training based on networks	Group	6/14	3/23	0/20	Traditional	6/12	3/05	-0/11
	Individual	6/05	3/84		Non traditional	6/16	3/82	
Network training	Group	7/37	4/08	1/19	Traditional	7/27	3/65	0/29
	Individual	6/72	4/60		Non traditional	7/12	4/88	
Virtual classrooms	Group	8/27	3/22	0/49	Traditional	8/68	3/26	2/36*
	Individual	8/05	3/79		Non traditional	7/74	3/42	
Digital collaboration	Group	4/17	4/27	0/96	Traditional	4/65	4/88	2/8**
	Individual	3/64	4/42		Non traditional	3/26	3/43	

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CONCLUSIONS

According to the data obtained the following conclusions can be made:

1- There is a positive correlation among all the knowledge management indicators.
2- There is a significant difference between group learning and individual learning by emphasizing on group learning and on organizational culture dimension, the difference emphasized on the individual learning.
3- Independent group t test only based on the relationship between traditional and untraditional learning showed significant difference.
4- ANOVA test (one way variance test) on the dimensions of information technology, human resources, organizational structure and organizational culture with regard to employee learning levels showed significant difference.
5- According to the obtained data, the effectiveness of knowledge management on e-learning is desirable.

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THE RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE AND JOB SATISFACTION AMONG PROFESSIONAL STAFF IN VIETNAMESE CONSTRUCTION COMPANIES

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ABSTRACT

In the context of the organizational environment, the relationship between organizational culture and employee job satisfaction has not been extensively explored and therefore, there has been still a big gap in academic research on these areas in Vietnam. For this reason, this study attempted to investigate whether the significant relationship existed between organizational culture and job satisfaction within Vietnamese construction companies. The sample was a total of 348 participants working for construction companies. Job Satisfaction Survey and Organizational Culture Survey were used to measure the level of job satisfaction and the perceptions of organizational culture. The correlation analyses showed that there were the strong and positive relationships between organizational culture and employee job satisfaction in Vietnamese construction companies.

KEYWORDS

Construction companies, Job satisfaction, Organizational culture, Vietnam.

INTRODUCTION

During the past few decades, organizational culture and job satisfaction have gained a great amount of attention from many researchers in both developed and developing countries, especially in Western countries. Previous studies (Deal & Kennedy, 1982; Wilkins & Ouchi, 1983) demonstrated that organizational culture could affect various aspects of organizational outcomes such as employee satisfaction, productivity, financial performance, customer satisfaction, and ethical behavior. In the early 1990s, researchers demonstrated that organizational culture significantly affected an organization, its employees' behavior, motivation, and financial performance (Holmes & Marsden, 1996). O'Reilly, Chatman, and Caldwell (1991) developed the Organizational Culture Profile to investigate the effect of person-organizational culture fit on outcomes - organizational commitment, job satisfaction, and turnover. Sheridan (1992) found an association between organizational cultural values and the rates at which new recruits voluntarily terminated their employment.

Since 1986, with innovation policy and economic reform, Vietnam has gradually integrated into the world economy. Events that Vietnam joined ASEAN in 1995 and became the official member of WTO in 2007 have brought Vietnamese organizations a lot of opportunities and new challenges. Since then, the concept of organizational culture has introduced into Vietnam and become a hot topic, attracting the attention of numerous intellectuals, businesses and society. However, literatures and research works in these fields were still limited (Pham Quoc Toan, 2007; Pham Van Quay & Nguyen Duy Chinh, 2009) and only paused for translating books from foreign languages (Luu Van Huy, 2005). Additionally, research findings regarding organizational culture and job satisfaction that have been interpreted with a Western cultural background might not be suitable for organizations in Vietnam due to culture differences. Therefore, it was necessary to find out how employees in Vietnamese organizations perceived organizational culture and whether the relationship existed between organizational culture and employee job satisfaction based on demographic variables by examining some relevant variables.

REVIEW OF LITERATURE

Despite the long-standing debate among researchers around the relationship between organizational culture and job satisfaction, some supports for the relationship between two concepts have been found in various industries (Schneider & Snyder, 1975; Koberg & Chusmir, 1987; Sempane, Rieger, & Roodt, 2002; Daulatram, 2003; Sikorska-Simmons, 2005; Ladislav, 2007). Organizational culture and its relationship with job satisfaction were examined directly or indirectly in many studies comparing relationships among variables such as organizational climate, person-organization fit, employee motivation, turnover, and organizational commitment.

Putti and Kheun (1986) conducted the study to examine the relationship between organizational climate and job satisfaction in one of the departments in the Civil Service in Singapore. The sample included professional, technical, and administrative people. The overall finding of this study was that job satisfaction was highly correlated with organizational climate. According to Putti and Kheun (1986), a strong relationship existed between job satisfaction and the culture dimension of standards in the workplace. The researchers pointed out that employees were happy working in an environment where they feel safe and secure, and where they are associated with work of a high standard.

Sempane, et. al. (2002) conducted a study to determine whether a relationship existed between the variables of job satisfaction and organizational culture within a service organization. By using the Minnesota Satisfaction Questionnaire and the Organizational Culture Questionnaire delivered to the sample of 160 employees, a significant relationship between organizational culture and job satisfaction was found. The researcher stated that employee's perceptions of organizational culture might be useful in the prediction of employee's job satisfaction and the extent of employees' satisfaction in the workplace influenced the manner in which they perceive aspects of the organization's culture.

Daulatram (2003) conducted the empirical investigation to explore the impact of organizational culture types on job satisfaction in a survey of marketing professionals in a cross-section of firms in the U.S. Cameron and Quinn's model of organizational cultures comprising of clan, adhocracy, hierarchy, and market was utilized as the conceptual framework for analysis. The results indicated that job satisfaction levels varied across corporate cultural typology. Job satisfaction was positively related to clan and adhocracy cultures, and negatively related to market and hierarchy cultures. However, Daulatram (2003) noted that while overall job satisfaction in clan and adhocracy organizational culture types was higher than overall job satisfaction in market and hierarchy cultures, it did not imply that employee performance was correspondingly higher in adhocracy and clan cultures than in market and hierarchy cultures.

Lok and Crawford (2004) conducted a cross-cultural study to explore how organizational culture and leadership styles affect organizational commitment and job satisfaction in different national cultures. The participants of the study consisted of Hong Kong and Australian managers. The results of the study pointed out the Australian managers scored more highly the innovative and supportive culture measures, and on job satisfaction. They concluded that there were significant differences among national cultures with regard to organizational culture and job satisfaction. Most significantly, the researchers found that the impact of an innovative culture on job satisfaction was stronger with Australian sample than Hong Kong sample.

Zazzali, Alexander, Shortell, and Burns (2006) conducted a study in the U.S. to assess the extent to which the organizational culture of physician group practices is associated with individual physician satisfaction with the managerial and organizational capabilities of the groups. Organizational culture was conceptualized using the Competing Values framework, yielding four distinct cultural types. Physician-level data were aggregated to the group level to attain measures of organizational culture. Using hierarchical linear modeling, individual physician satisfaction with six dimensions of group practice was predicted using physician-level variables and group-level variables. Separate models for each of the four cultural types were estimated for each of the six satisfaction measures, yielding a total of 24 models. The researchers concluded that some dimensions of physician organizational culture were significantly associated with various aspects of individual physician satisfaction with group practice.

Ladislav (2007) conducted a study in Slovak to determine the relationship between job satisfaction and organizational culture by using correlation analysis. The survey sample consisted of 95 employees working in the public administrative organizations. Two test instruments used for this study were the Organizational Culture Assessment Instrument (OCAI) developed by Cameron and Quinn (1999) and the Job Satisfaction Survey designed by Spector (1994). The result of this survey pointed out that there was a relation between job satisfaction and some types of organizational culture, e.g. job satisfaction showed a significantly positive correlation with clan type of culture and a significantly negative one with market type of culture.

PURPOSE OF THE STUDY

The aim of this study was to investigate whether the relationship existed between job satisfaction and organizational culture in Vietnamese construction companies based on current position, age, gender, and length of employment within the organization.

RESEARCH QUESTION AND HYPOTHESES

Question: *Are there significant relationships between organizational culture scores and job satisfaction scores based on demographic variables?*
Null Hypotheses:
H1. There is no significant relationship between job satisfaction scores and organizational culture scores based on current position.
H2. There is no significant relationship between job satisfaction scores and organizational culture scores based on age.
H3. There is no significant relationship between job satisfaction scores and organizational culture scores based on gender.
H4. There is no significant relationship between job satisfaction scores and organizational culture scores based on length of employment.

RESEARCH METHODOLOGY

Quantitative research was used to examine the relationship among variables (Sekaran, 2005). Participants were asked to complete three questionnaires used to assess various components of organizational culture and job satisfaction: the Employee Demographic Survey (EDS), the Job Satisfaction Survey (JSS), and the Organizational Culture Survey (OCS). Correlation coefficient was used to examine the relationship between job satisfaction (JS) scores and Organizational Culture (OC) scores based on the demographic data.

POPULATION AND SAMPLE

The population of this study consisted of full-time employees working for construction companies in Vietnam. Such employees were construction engineers, site managers, project managers, and office staff. The selected construction companies were ranked at VNR500 list - Top 500 Vietnamese largest enterprises published by Vietnamnet newspaper in 2011. The sample size for this study consisted of 348 employees within construction sector. In order to ensure an adequate sample size, approx 1,200 survey packets were distributed to the employees and 348 valid ones were returned, for a response rate of 29.0%.

INSTRUMENTATION

The EDS was designed by the researcher to collect demographic information from the population. The EDS consisted of four items about the respondent's current position, age, gender, and length of employment within the organization. The JSS designed by Spector (1994) was used for measuring the levels of job satisfaction. The JSS is a 36 item, nine- facet scale to assess employee attitudes about the job and aspects of the job. A summated rating scale format is used, with six choices per item ranging from "strongly disagree" to "strongly agree". Negatively worded items are 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21, 23, 24, 26, 29, 31, 32, 34, and 36. A score of 6 representing strongest agreement with a negatively worded item is considered equivalent to a score of 1 representing strongest disagreement on a positively worded item, allowing them to be combined meaningfully. Scores with a mean item response (after reverse scoring the negatively-worded items) of 4 or more represents satisfaction, whereas mean responses of 3 or less represents dissatisfaction. Mean scores between 3 and 4 are ambivalence. Translated into the summed scores, for the 36-item total where possible scores range from 36 to 216, the ranges are 36 to 108 for dissatisfaction, 144 to 216 for satisfaction, and between 108 and 144 for ambivalent.

The OCS was designed by the researcher to measure organizational culture. Based on Shein's model of organizational culture (Shein, 2004), this survey was locally developed for Vietnamese circumstances. The OCS asked participants to complete 30 items on a 5-point scale that produced interval data. To complete the survey, the respondents should indicate how much they agree or disagree with each of items. The respondents select from five choices ranging from a score "1" - disagree very much to a score "5" – agree very much by circling the appropriate number. Neutral score "3" should be used when the respondents are stuck in the middle and neither agree nor disagree with the statement. Scores with a mean response of 3 or more represent a strong culture, whereas a mean response of 3 or less represents a weak culture. Scores for total organizational culture, based on the sum of all 30 items, can range from 30 to 150. High scores from 90 to 150 indicate that the assumptions, values, or rules of the culture are widely shared and deeply held among members of the organization, representing a strong culture, whereas low scores from 30 to 90 represent a weak culture.

ANALYSIS AND INTERPRETATION OF DATA

Data collected from the test instruments were entered into the Statistical Package for the Social Sciences (SPSS), version 16.0 software and Microsoft Excel to evaluate descriptive statistics and percentages and to provide analysis to answer the research questions posed. The null hypotheses for this research study were tested at level of significant α = 0.01 for Pearson correlation.

TABLE 1: A SUMMARY OF THE DEMOGRAPHIC DATA, JS MEAN SCORES, AND OC MEAN SCORES

Variables	Number	Percent	JS mean scores	OC mean scores
Current position:	348	100%	144.353	108.621
☐ Construction Engineer	133	38.22%	145.368	110.504
☐ Site/ Project Manager	67	19.25%	147.164	106.881
☐ Office Staff	148	42.53%	142.169	107.716
Age:	348	100%	144.353	108.621
☐ 18 – 30	151	43.39%	140.119	106.265
☐ 31 – 40	142	40.80%	146.781	110.550
☐ 41 and over	55	15.81%	149.709	110.110
Gender:	348	100%	144.353	108.621
☐ Female	88	25.29%	140.740	106.661
☐ Male	260	74.71%	145.580	109.285
Length of employment:	348	100%	144.353	108.621
☐ Less than 3 years	126	36.21%	144.603	108.643
☐ 4 to 7 years	149	42.82%	142.591	108.280
☐ 8 years or more	73	20.97%	147.521	109.290

NULL HYPOTHESIS TESTING

H1. There is no significant relationship between job satisfaction scores and organizational culture scores based on current position.

TABLE 2: A SUMMARY OF CORRELATION COEFFICIENT BETWEEN JS SCORES AND OC SCORES BASED ON CURRENT POSITION

Current position	N	Correlation coefficient between JS Scores and OC Scores	Findings
Construction Engineer	133	Pearson Correlation r = 0.927* P.-Value = 0.000	Significant
Site/ Project Manager	67	Pearson Correlation r = 0.831* P.-Value = 0.000	Significant
Office Staff	148	Pearson Correlation r = 0.855* P.-Value = 0.000	Significant
Note: * Correlation is significant at the 0.01 level (2-tailed)			

- *For Construction Engineer:* Pearson Correlation r = 0.927 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H1 could be rejected at level of significant α = 0.01.
- *For Site/ Project Manager:* Pearson Correlation r = 0.831 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H1 could be rejected at level of significant α = 0.01.
- *For Office Staff:* Pearson Correlation r = 0.855 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H1 could be rejected at level of significant α = 0.01.

H2. There is no significant relationship between job satisfaction scores and organizational culture scores based on age.

TABLE 3: A SUMMARY OF CORRELATION COEFFICIENT BETWEEN JS SCORES AND OC SCORES BASED ON AGE

Age Group	N	Correlation coefficient between JS Scores and OC Scores	Findings
18 – 30	151	Pearson Correlation r = 0.830* P.-Value = 0.000	Significant
31 – 40	142	Pearson Correlation r = 0.865* P.-Value = 0.000	Significant
41 and over	55	Pearson Correlation r = 0.882* P.-Value = 0.000	Significant
Note: * Correlation is significant at the 0.01 level (2-tailed)			

- *For '18-30':* Pearson Correlation r = 0.830 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H2 could be rejected at level of significant α = 0.01.
- *For '31-40':* Pearson Correlation r = 0.865 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H2 could be rejected at level of significant α = 0.01.
- *For '41 and over':* Pearson Correlation r = 0.882 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H2 could be rejected at level of significant α = 0.01.

H3. There is no significant relationship between job satisfaction scores and organizational culture scores based on gender.

TABLE 4: A SUMMARY OF CORRELATION COEFFICIENT BETWEEN JS SCORES AND OC SCORES BASED ON GENDER

Gender	N	Correlation coefficient between JS Scores and OC Scores	Findings
Female	88	Pearson Correlation r = 0.834 * P.-Value = 0.000	Significant
Male	260	Pearson Correlation r = 0.860* P.-Value = 0.000	Significant
Note: * Correlation is significant at the 0.01 level (2-tailed)			

- *For Female:* Pearson Correlation r = 0.834 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H3 could be rejected at level of significant α = 0.01.
- *For Male:* Pearson Correlation r = 0.860 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H3 could be rejected at level of significant α = 0.01.

H4. There is no significant relationship between job satisfaction scores and organizational culture scores based on length of employment.

TABLE 5: A SUMMARY OF CORRELATION COEFFICIENT BETWEEN JS SCORES AND OC SCORES BASED ON LENGTH OF EMPLOYMENT

Length of employment	N	Correlation coefficient between JS Score and OC Score	Findings
Less than 3 years	126	Pearson Correlation r = 0.866* P.-Value = 0.000	Significant
4 to 7 years	149	Pearson Correlation r = 0.839* P.-Value = 0.000	Significant
8 years or more	73	Pearson Correlation r = 0.869* P.-Value = 0.000	Significant
Note: * Correlation is significant at the 0.01 level (2-tailed)			

- *For 'Less than 3 years':* Pearson Correlation r = 0.866 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H4 could be rejected at level of significant α = 0.01.
- *For '4 to 7 years':* Pearson Correlation r = 0.839 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H4 could be rejected at level of significant α = 0.01.
- *For '8 years or more':* Pearson Correlation r = 0.869 and Significance P_{-Value} = 0.000. And this indicated that the relationship between JS scores and OC scores was significant, positive and strong. Therefore, H4 could be rejected at level of significant α = 0.01.

DISCUSSION, CONCLUSION, AND IMPLICATION

An important finding of this study indicated that there were the strong and positive relationships between organizational culture and employee job satisfaction in Vietnamese construction companies. When the company has a strong culture, the company will have a positive working environment, which impact strongly on employees, increasing the level of job satisfaction. The questions herein raised are what a strong culture is, and how to build a strong culture for the company. It is important for leaders to understand these matters and apply to their business. Therefore, this study suggests that company must focus on building organizational culture.

The research findings showed that employees under 30 years of age and with the length of employment under 7 years had a low level of job satisfaction. In fact, employees in these groups often change jobs and cause disturbance of human resources of the company. It is important to note that organizational leaders need to establish positive policies to attract and retain the employees for these groups.

The research also indicated that women had a lower level of job satisfaction than men had. Therefore, the company needs to consider and have separate policies for women to enable them to increase the level of job satisfaction and labor productivity.

The findings from this study were consistent with the previous research findings conducted in other countries, which was that organizational culture could affect various aspects of organizational outcomes such as employee job satisfaction, productivity, financial performance, customer satisfaction, and ethical behavior (Deal & Kennedy, 1982; Wilkins & Ouchi, 1983). Thus, this study adds to theory and extends the concepts of organizational culture and job satisfaction beyond the borders of Western countries and the United States. It could also apply to Eastern countries, such as Vietnam.

Based upon the results of this study, organizational leaders may be able to understand how and why their employees have dissatisfied or how to motivate employees in the workplace.

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APPENDIX

JOB SATISFACTION SURVEY

	Paul E. Spector Department of Psychology, University of South Florida Copyright Paul E. Spector 1994, All rights reserved. PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT	Disagree very much / Disagree moderately / Disagree slightly / Agree slightly / Agree moderately / Agree very much
1	I feel I am being paid a fair amount for the work I do.	1 2 3 4 5 6
2	There is really too little chance for promotion on my job.	1 2 3 4 5 6
3	My supervisor is quite competent in doing his/her job.	1 2 3 4 5 6
4	I am not satisfied with the benefits I receive.	1 2 3 4 5 6
5	When I do a good job, I receive the recognition for it that I should receive.	1 2 3 4 5 6
6	Many of our rules and procedures make doing a good job difficult.	1 2 3 4 5 6
7	I like the people I work with.	1 2 3 4 5 6
8	I sometimes feel my job is meaningless.	1 2 3 4 5 6
9	Communications seem good within this organization.	1 2 3 4 5 6
10	Raises are too few and far between.	1 2 3 4 5 6
11	Those who do well on the job stand a fair chance of being promoted.	1 2 3 4 5 6
12	My supervisor is unfair to me.	1 2 3 4 5 6
13	The benefits we receive are as good as most other organizations offer.	1 2 3 4 5 6
14	I do not feel that the work I do is appreciated.	1 2 3 4 5 6
15	My efforts to do a good job are seldom blocked by red tape.	1 2 3 4 5 6
16	I find I have to work harder at my job because of the incompetence of people I work with.	1 2 3 4 5 6
17	I like doing the things I do at work.	1 2 3 4 5 6
18	The goals of this organization are not clear to me.	1 2 3 4 5 6
19	I feel unappreciated by the organization when I think about what they pay me.	1 2 3 4 5 6
20	People get ahead as fast here as they do in other places.	1 2 3 4 5 6
21	My supervisor shows too little interest in the feelings of subordinates.	1 2 3 4 5 6
22	The benefit package we have is equitable.	1 2 3 4 5 6
23	There are few rewards for those who work here.	1 2 3 4 5 6
24	I have too much to do at work.	1 2 3 4 5 6
25	I enjoy my coworkers.	1 2 3 4 5 6
26	I often feel that I do not know what is going on with the organization.	1 2 3 4 5 6
27	I feel a sense of pride in doing my job.	1 2 3 4 5 6
28	I feel satisfied with my chances for salary increases.	1 2 3 4 5 6
29	There are benefits we do not have which we should have.	1 2 3 4 5 6
30	I like my supervisor.	1 2 3 4 5 6
31	I have too much paperwork.	1 2 3 4 5 6
32	I do not feel my efforts are rewarded the way they should be.	1 2 3 4 5 6
33	I am satisfied with my chances for promotion.	1 2 3 4 5 6
34	There is too much bickering and fighting at work.	1 2 3 4 5 6
35	My job is enjoyable.	1 2 3 4 5 6
36	Work assignments are not fully explained.	1 2 3 4 5 6

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ORGANIZATIONAL CULTURE SURVEY

	PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT	Disagree very much	Somewhat Disagree	Neutral	Somewhat Agree	Agree very much
1	We willingly give our time to help others who have work-related problems.	1	2	3	4	5
2	Information is widely shared so that everyone can get the information.	1	2	3	4	5
3	We keep up with developments in the organization.	1	2	3	4	5
4	Cooperation across different parts of the organization is actively encouraged.	1	2	3	4	5
5	We view failure as an opportunity for learning and improvement.	1	2	3	4	5
6	Everyone believes that you can have a positive impact.	1	2	3	4	5
7	We avoid differences of opinion as much as possible.	1	2	3	4	5
8	Our organization really cares about benefits.	1	2	3	4	5
9	We always express loyalty toward the organization.	1	2	3	4	5
10	People show pride when representing the organization in public.	1	2	3	4	5
11	Authority is delegated so that people can act on their own.	1	2	3	4	5
12	My department can always provide quick response to the requests from other departments/other employees.	1	2	3	4	5
13	My supervisor is available to me when needed.	1	2	3	4	5
14	Our organization recognizes people for taking initiative.	1	2	3	4	5
15	There is continuous investment in the skills of employees.	1	2	3	4	5
16	There is a clear agreement about the right way and the wrong way to do things.	1	2	3	4	5
17	It is easy to coordinate projects across different parts of the organization.	1	2	3	4	5
18	People offer ideas to improve the functioning of the organization.	1	2	3	4	5
19	People from different parts of the organization share a common perspective.	1	2	3	4	5
20	There is an ethical code that guides our behavior and tells us right from wrong.	1	2	3	4	5
21	In our organization, teamwork occurs among individuals and between departments when necessary.	1	2	3	4	5
22	Customer input directly influences our decisions.	1	2	3	4	5
23	In our organization, there are proper policies and procedures to help us serve customers in a better way.	1	2	3	4	5
24	Our organization creates systems to measure gaps between current and expected performance.	1	2	3	4	5
25	New and improved ways to do work are continually adopted.	1	2	3	4	5
26	People give open and honest feedback to each other.	1	2	3	4	5
27	Ignoring core values will get you in trouble.	1	2	3	4	5
28	We have a shared vision of what the organization will be like in the future.	1	2	3	4	5
29	People understand what needs to be done to succeed in the long- run.	1	2	3	4	5
30	There is a clear mission that gives meaning and direction to our work.	1	2	3	4	5

*** Thank you for your time in completing this survey ***

ANALYSIS OF LIQUIDITY OF SELECTED PRIVATE SECTOR INDIAN BANKS

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ABSTRACT

The present study is conducted to analyze the liquidity of selected private sector Indian banks namely ICICI Banking Corporation Ltd. (ICICI), Indusind Bank Ltd (Indusind), AXIS Bank Ltd (AXIS) and HDFC Bank Ltd (HDFC) in India by using CAMEL Model ratios for a period of eleven years i.e. from 2000-01 to 2010-11. The study is of analytical nature and therefore is based on the secondary data collected from various Journals, Annual Reports, Performance Highlights of the Private Sector Banks, Reports on Trends and Progress of Banking in India, etc. One-way ANOVA has been used for the analysis of data collected and to arrive at the conclusions. The results reveal that there is no significant difference in the ratio of liquid assets to total assets and liquid assets to demand deposits in selected banks during the period under study. However, the ratio of government securities to total assets and liquid assets to demand deposits shows a significant difference in the liquidity of the selected banks during the same period.

KEYWORDS

Liquid Assets, Government Securities, Demand Deposits, Total Deposits, Total Assets.

INTRODUCTION

A sound financial system is indispensable for a healthy and vibrant economy. The banking sector constitutes an integral component of the financial services industry. The performance of any economy to a large extent is dependent on the performance of the banking sector. The banking sector's performance is seen as the replica of economic activities of the nation as a healthy banking system acts as the foundation of social, economic and industrial growth of a nation. Banking institutions in our country have been assigned a significant role in financing the process of planned economic growth. During the past six decades since independence, the banking sector has witnessed significant changes and has surely come a long way from the days of nationalization during early 1970s to the advent of liberalization, privatization and globalization, in the post-1991 era. The flurry of reforms witnessed over the last one and half decade has brought about significant changes in the banking arena in the country. Leveraging on their new found tech-savvy and increased thrust on product/service innovation, the banks in the country witnessed a phenomenal growth in the last few years as the economic growth moved up into top gear to be amongst top in the world. The Asian crisis of 1997 and the recent events like the US subprime crisis have once again underlined the significance of a strong and robust financial sector for smooth and efficient allocation of resources. Indian banks, which initially were in a denial mode about the impact of crisis (on them), but soon admitted to vulnerability to global shocks, have shown remarkable resilience, thanks to the Reserve Bank of India's timely and prudent measures which saved the domestic banks from the blushes of the worst financial crisis.

Liquidity is very important for any organization dealing with money. For a bank, liquidity is a crucial aspect which represents its ability to meet its financial obligations. It is of utmost importance for a bank to maintain correct level of liquidity, which will otherwise lead to declined earnings. Banks have to take proper care in hedging liquidity risk, while at the same time ensuring that a good percentage of funds are invested in higher return generating investments, so that banks can generate profit while at the same time provide liquidity to the depositors. Among a bank's assets, cash investments are the most liquid. A high liquidity ratio indicates that the bank is more affluent. Induced by the forgoing revelations, an attempt is made to analyze the asset quality of selected private sector Indian banks.

LITERATURE REVIEW

In the process of continuous evaluation of the bank's financial performance both in public sector and private sector, the academicians, scholars and administrators have made several studies on the CAMEL model but in different perspectives and in different periods. Lace well and Stephen Kent (2001) conducted a study consisting of multiple stages. Stage one in the estimation of cost and alternative profit efficiency scores using a national model and a size-specific model. Previous research asserts that an efficiency component should be added to the current CAMEL regulatory rating system to account for the ever-increasing diverse components of modern financial institutions. Stage two is the selection and computation of financial ratios deemed to be highly correlated with each component of the CAMEL rating. The research shows that there is definitely a relationship between bank efficiency scores and financial ratios used to proxy a bank's CAMEL rating. Godlewski (2003) has tested the validity of the CAMEL rating typology for bank's default modelisation in emerging markets and focused explicitly on using a logical model applied to a database of defaulted banks in emerging markets. Kapil (2005) examined the relationship between the CAMEL ratings and the bank stock performance. The analysis of the banks was analyzed on the basis of the Offsite Supervisory Exam Model - CAMEL Model. The M for Management was not considered because all public sector banks were government regulated and also because all other four components - C, A, E and L - reflect management quality. The remaining four components were analyzed and rated to judge the composite rating. Sarker (2005) examined the CAMEL model for regulation and supervision of Islamic banks by the central bank in Bangladesh and enabled the regulators and supervisors to get a Shariah benchmark to supervise and inspect Islamic banks and Islamic financial institutions from an Islamic perspective. This effort added a new 'S' to the CAMEL rating system as Shariah rating and CAMEL has become 'CAMELS' rating system. Singh & Kohli (2006) examined the banking and financial sector in India during liberalization process in the early 1990s, which led to reforms in the banking and financial sector and changed the Indian banking structure. During the period from 1992 to

1997, interest rates were liberalized and banks were allowed to fix lending rates. As a sequel to these reforms, new private sector banks were allowed entry in the market. Many of these private sector banks brought with them new technologies and new products. Even then Indians preferred nationalized banks for their services. The failure of Global Trust Bank made Indian depositors to question the sustainability of private sector banks. Gupta (2008) conducted the study with the main objective to assess the performance of Indian private sector banks on the basis of CAMEL Model and gave rating to top five and bottom five banks. They ranked 20 old and 10 new private sector banks on the basis of CAMEL Model. They considered the financial data for the period of five years i.e. from 2003-07. Aspal and Malhotra (2012) aimed to measure the financial performance of Indian public sector banks excluding State Bank Group for the period of 2006-11. The study found that Bank of Baroda was at the first position with overall composite ranking average of 6.05 due to its better performance in the areas of liquidity and asset quality, closely followed by Andhra Bank with overall composite ranking average of 6.15 because of its strength in the spheres of management efficiency, capital adequacy and asset quality. United Bank of India hold the bottom most rank with overall composite ranking average of 14.60 due to management inefficiency, poor assets and earning quality. The study recommends that United Bank of India has to improve its management efficiency, assets and earning quality. Similarly, Bank of Maharashtra should take necessary steps to improve its liquidity position and management efficiency.

SCOPE OF STUDY
This study covers four private sector banks namely ICICI Banking Corp. Ltd (ICICI), Indusind Bank Ltd (Indusind), AXIS Bank Ltd (AXIS) and HDFC Bank Ltd (HDFC).

OBJECTIVES OF THE STUDY
The present study aims to analyze the liquidity of selected private sector Indian banks.

RESEARCH HYPOTHESES
To achieve the above objectives of the study, the following hypotheses have been formulated and tested:
1.   There is no significant difference in the ratio of liquid assets to total assets in the selected private sector Indian banks.
2.   There is no significant difference in the ratio of government securities to total assets in the selected private sector Indian banks.
3.   There is no significant difference in the ratio of liquid assets to demand deposits in the selected private sector Indian banks.
4.   There is no significant difference in the ratio of liquid assets to total deposits in the selected private sector Indian banks.

RESEARCH METHODOLOGY
The present study is of analytical nature and therefore is based on the secondary data for the period of eleven years i.e. from 2000-01 to 2010-11 collected mainly from various Journals, Annual Reports, Performance Highlights of the Private Sector Banks, and Reports on Trends and Progress of Banking in India. For the analysis of data collected, one-way ANOVA has been used to arrive at the conclusions.

RESULTS AND DISCUSSIONS
Liquidity is a crucial aspect for a bank, which represents its ability to meet its financial obligations. It is of utmost importance to maintain correct level of liquidity, which will otherwise lead to decline in earnings. Banks have to take proper care in hedging liquidity risk, while at the same time ensuring that a good percentage of funds are invested in higher return generating investments so that banks can generate profit and also provide liquidity to the depositors. The ratios used to analyze the liquidity are as follows:

1. LIQUID ASSETS TO TOTAL ASSETS
Liquid assets include cash in hand, balance with the RBI, balance with other banks (both in India and abroad) and money at call and short notice. This ratio is arrived at by dividing the liquid assets by total assets. The proportion of liquid assets to total assets indicates the overall liquidity position of the bank.

TABLE 1: LIQUID ASSETS TO TOTAL ASSETS

Years	ICICI	Indusind	AXIS	HDFC
2000-2001	17.14	14.45	10.64	15.56
2001-2002	12.13	13.78	11.63	13.93
2002-2003	6.08	11.62	18.20	10.42
2003-2004	6.76	14.94	23.45	8.65
2004-2005	7.71	7.39	13.98	8.70
2005-2006	6.78	8.40	7.32	9.41
2006-2007	10.77	12.40	9.44	10.03
2007-2008	9.52	9.36	11.41	11.10
2008-2009	7.90	6.97	10.17	9.56
2009-2010	10.70	7.36	8.42	13.46
2010-2011	8.39	8.82	8.82	10.70
ANOVA Value	F-1.16	P-value- 0.34		df-3

Source: Performance Highlights of Private Sector Banks, IBA, Mumbai.

As is evident from the Table -1, the ratio of liquid assets to total assets ranges from 6.08 to 17.14 in case of ICICI, from 6.97 to 14.45 in case of Indusind, from 7.32 to 23.45 in case of AXIS and from 8.65 to 15.56 in case of HDFC during the period under study. The results of one-way ANOVA reveal that there is no significant difference in the ratio of liquid assets to total assets in selected banks; therefore, null hypothesis is accepted.

2. GOVERNMENT SECURITIES TO TOTAL ASSETS
Government securities are the most liquid and safe investment. This ratio measures the proportion of risk-free liquid assets invested in government securities as a percentage of the total assets held by the bank and is arrived by dividing investment in government securities by the total assets. This ratio measures the risk involved in the assets held by a bank.

TABLE 2: GOVERNMENT SECURITIES TO TOTAL ASSETS

Years	ICICI	Indusind	AXIS	HDFC
2000-2001	19.41	19.58	21.30	20.33
2001-2002	21.55	18.04	24.24	21.33
2002-2003	23.92	20.40	23.70	20.89
2003-2004	23.88	24.99	20.94	27.25
2004-2005	20.57	21.80	19.97	21.83
2005-2006	20.37	26.01	23.71	26.71
2006-2007	19.63	23.17	22.43	24.71
2007-2008	18.89	23.37	18.42	23.78
2008-2009	16.73	22.79	18.77	28.46
2009-2010	18.87	24.09	18.93	22.95
2010-2011	16.00	21.96	18.21	19.34
ANOVA Value	F- 3.84	P-value-0.02		df-3

Source: Performance Highlights of Private Sector Banks, IBA, Mumbai.

As is evident from the Table-2, the ratio of government securities to total assets ranges from 16.00 to 23.92 in case of ICICI, while from 18.04 to 24.99 in case of Indusind, from 18.21 to 24.24 in case of AXIS and from 19.34 to 28.46 in case of HDFC during the period under study. The results of one-way ANOVA reveal that there is significant difference in the ratio of government securities to total assets in selected banks, therefore, null hypothesis is rejected.

3. LIQUID ASSETS TO DEMAND DEPOSITS

This ratio measures the ability of a bank to meet the demand from demand deposits in a particular year. It is arrived at by dividing the liquid assets by total demand deposits. The liquid assets include cash in hand, balance with the RBI, balance with other banks (both in India and abroad), and money at call and short notice.

TABLE 3: LIQUID ASSETS TO DEMAND DEPOSITS

Years	ICICI	Indusind	AXIS	HDFC
2000-2001	81.18	190.03	87.51	57.26
2001-2002	249.53	143.40	89.51	50.81
2002-2003	87.80	116.27	94.13	34.50
2003-2004	54.66	188.16	72.83	23.05
2004-2005	53.81	84.69	45.00	20.83
2005-2006	45.95	79.50	23.35	22.80
2006-2007	74.62	100.23	30.50	23.65
2007-2008	60.12	73.80	31.95	27.33
2008-2009	48.39	45.64	30.45	27.98
2009-2010	46.99	41.57	23.51	34.80
2010-2011	34.22	43.42	28.04	27.25
ANOVA Value	F-5.31	P-value-0.00		df-3

Source: Performance Highlights of Private Sector Banks, IBA, Mumbai.

As is evident from the Table-3, the ratio of liquid assets to demand deposits ranges from 34.22 to 249.53 in case of ICICI, from 41.57 to 190.03 in case of Indusind, from 23.35 to 94.13 in case of UTI and from 20.83 to 57.26 in case of HDFC during the period under study. The results of one-way ANOVA reveal that there is significant difference in the ratio of liquid assets to demand deposits in selected banks, therefore, null hypothesis is rejected.

4. LIQUID ASSETS TO TOTAL DEPOSITS

This ratio measures the liquidity available to the depositors of a bank. Liquid assets include cash in hand, balance with the RBI, balance with other banks (both in India and abroad), and money at call and short notice. Total deposits include demand deposits, savings deposits, term deposits and deposits of other financial institutions.

TABLE 4: LIQUID ASSETS TO TOTAL DEPOSITS

Years	ICICI	Indusind	AXIS	HDFC
2000-2001	21.94	18.77	13.33	22.40
2001-2002	39.85	17.77	14.25	19.59
2002-2003	13.47	13.38	21.04	14.16
2003-2004	12.44	20.12	27.03	12.03
2004-2005	12.95	8.80	16.64	12.31
2005-2006	10.32	9.87	9.08	12.40
2006-2007	16.10	14.71	11.77	13.40
2007-2008	15.56	11.44	14.27	14.67
2008-2009	13.72	8.70	12.79	12.27
2009-2010	19.24	9.75	10.76	17.89
2010-2011	15.11	11.71	11.31	14.22
ANOVA Value	F- 1.06	P-value-0.38		df-3

Source: Performance Highlights of Private Sector Banks, IBA, Mumbai.

As is evident from the Table-4, the ratio of liquid assets to demand deposits ranges from 10.32 to 39.85 in case of ICICI, from 8.80 to 20.12 in case of Indusind, from 9.08 to 27.03 in case of UTI and from 12.03 to 22.40 in case of HDFC during the period under study. The results of one-way ANOVA reveal that there is no significant difference in the ratio of liquid assets to demand deposits in selected banks, therefore, null hypothesis is accepted.

CONCLUSION AND SIGNIFICANCE OF THE STUDY

To sum up, there is no significant difference in the ratio of liquid assets to total assets and liquid assets to demand deposits in selected banks during the period under study. However, the ratio of government securities to total assets and liquid assets to demand deposits indicates a significant difference in the liquidity of the selected banks during the same period. The study will be useful to the bankers, policy makers and to economy as a whole by improving the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spill over from the financial sector to the economy. It will also be helpful in improving the liquidity risk management practices adopted by private sector banks in India so that they may be the best all over the globe.

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PRODUCTIVITY MEASUREMENT OF PUBLIC SECTORS BANKS IN INDIA

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ABSTRACT

In 1991 financial sector reforms were initiated in India as an overall economic reform. These reforms have changed the face of Indian banking Industry. Liberalization has brought about changes in the way the banks operate. Liberalization of the Indian banking industry has thrown open the door for foreign banks, resulted in an increasingly competitive environment. The financial sector reforms emphasized the need to improve the productivity of the banks through appropriate rationalization measures so as to reduce the consumption of inputs and produce more outputs. Nowadays, productivity improvement in organizations is as one of executive managers and decision makers' main challenges in each country. In many countries, most of development programs are based on productivity improvement. Productivity is one of the most influential factors that lead to economical growth. The present study measures the productivity of banks on the basis of employees Productivity and Employee Cost Ratios. The banking industry is highly competitive. Banking being a service sector industry, productivity of the staff has a significant bearing on the banks overall performance. The key to a bank's success is having the best people. In fact, people are the main commodity. Banks don't manufacture anything; they offer a service. Human Resources are core to the success of the bank. Human resources have a significant bearing on the profitability, efficiency and overall organizational effectiveness. Public Sector banks has been worked on a recurrent theme that "people are our greatest asset".

KEYWORDS

Productivity, Human Resources Management, Financial Sector Reforms.

1. CONCEPT OF PRODUCTIVITY

Productivity denotes the efficiency with which output is produced by the resources utilized. It is generally defined in terms of efficiency with which inputs are transformed into useful output within the production process. Productivity as is understood in common parlance is the output per unit of input employed.

Productivity= Total output/ Total Input

Productivity attempts to compare in real terms the quantity of goods and services   produced against the quantity of resources employed in a given period of time.

2. RELEVANCE OF PRODUCTIVITY OF BANKING INDUSTRY IN INDIA

The Banking Industry in India has recorde d a phenomenal growth in business operations. It is necessary that banks must have a sound footing as it constitutes an important link in various socio-economic activities. Banking is fulcrum of an economy, any change in its processes affect the countries growth. Productivity is, of course a vital indicator of economic performance. Despite the fact in services business productivity is often more difficult to evaluate than manufacturing business productivity because it is difficult to determine the efficient amount of resources required to produce services outputs. Measuring the productivity of services business like banking requires techniques that are more sensitive. Output of a service Industry is the services rendered to customers, whether the customer is satisfied from the services or not is extremely difficult to measure because of the subjectivity involved. It enabled services industries like banking to avoid the question of productivity for a long time. However, as the economies grow the importance of services and territory sector increases, making it difficult to ignore its efficiency and productivity. Moreover, being an important economic activity, it cannot afford to lose sight of the concept of Productivity measurement.

3. SOURCES OF PRODUCTIVITY

Productivity attempts to compare in real terms the quality of goods and services produced against the quantity of resources employed in a given period of time. Productivity is at heart of economic growth and development, improvement in standard of living and quality of life. In view of the importance of productivity for maintaining high levels of income and standard of living, it becomes important to understand the factors which are the sources of productivity growth and could prove to be responsible for low productivity or its decline. Any factor which reduces the waste in any form, or increase efficiency can be called sources of

productivity. Anything notable happening in the society or economy may be helping or hindering productivity. The most important source of productivity growth is advance in technological knowledge applied to productive processes and instruments. Development and application of cost- reducing innovations to machines and methods of production can make significant contributions to the efficiency. Improved goods and services also contribute to productivity and welfare.

4. MEASUREMENT OF PRODUCTIVITY

If productivity is to be improved, there is need of control and for control it must be measured. While measuring Total factor productivity it poses many problems, as factors of inputs are always heterogeneous like labour, capital, material etc. For this reasons labour productivity as a measure of productivity is more popular than total factor productivity. In fact many inputs are difficult to measure and are therefore deliberately ignored in computation.

5. NEED OF THE STUDY

Banks play a vital role as they have to supply credit to the promotional and development activities of the society, at the same time restricting credit for socially undesirable and economically less beneficial purposes. In view of its key role, banking industry has to play a dual role of increasing productivity in banks themselves and also attune their operations in a manner that would promote productivity in other sectors of the economy. The need is that banks should make every effort on a continuing basis to bring down cost and improving productivity. However, no serious, systematic and conscious efforts are being made by banks to improve productivity and operational efficiency. It is believed that after liberalization PSBs witnessed substantial losses in their market share deposits and are still losing, will have a tough time for retaining their position in the coming times. So, there is need to have a look on productivity, the central element of the problem of prosperity of economy in Public Sector Banks.

6. REVIEW OF LITERATURE

Varde (1979) has made a distinction between effectiveness, efficiency and productivity of banks and has pointed out that efficiency of a bank could be classified into four categories viz. (i) manpower efficiency; (ii) operational efficiency; (iii) commercial efficiency; and (iv) efficiency of ancillary business. Efficiency of each of these four categories can be measured separately, and this efficiency in turn has got a positive influence on the productivity of the respective category. **Subramanyam (1985)** measured Total Factor Productivity (TFP) by using index number approach and addressed some of the conceptual issues and their growth on accounting implications. In this study Divisia index was shown to be preferable over Laspayers index. **Hansda(1995)** had been constructed a composite index to judge the relative performance of 28 public sector banks during the period of post-liberalization from 1991-92 to 1993-94. He considered 25 indicators under five categories viz. labour productivity, branch productivity, financial management, profitability and growth by adopting principal component analysis, and found that in the pre-Liberalization phase, the banks used to function in a more or less uniform or regulatory regime. However, the significant variation has been observed in their performance for the year 1991-92, which suggested that organizations culture and quality management had a significant sharing on the relative performance of banks. **Ram Mohan and Ray (2005)** considered Tornquist total factor productivity growth, Malmquist efficiency and revenue maximization efficiency from 1992-2000 to compare the performance of public sector banks and private sector banks. The study revealed the fact efficiency and productivity have not been lower in Public sector banks relative to their peers in the private sector. **Sinha (2006)** estimated efficiency of Indian commercial banks (under constant returns to scale) using the data envelopment analysis. He considered loan as the output indicator. Number of bank branches and borrowed capital were taken as two inputs. The results were for 1996-97, 1998-99, 2000-01, and 2002-03 respectively. The results suggest superior performance by the observed private sector commercial banks as compared to the observed public sector commercial banks.

7. OBJECTIVES OF THE STUDY

The specific objectives of the study are:
1. To evaluate the Trend of productivity of PSBs in the post-liberalization period.
2. To identify the various factors affecting productivity of PSBs in the post- liberalization period.
3. To examine the contribution of Employees Productivity of PSBs in the post-liberalization period.
4. To make suggestions or the improvement in the productivity of PSBs.

8. HYPOTHESIS OF THE STUDY

Keeping in mind survey of literature and objectives of the study, the following hypotheses are
1. The productivity of PSBs has suffered in the post-liberalization period.
2. There has been a change in the nature of the factors affecting the productivity of PSBs in the post-liberalization period.
3. Various new generation private banks and foreign banks have posed a great challenge to PSBs in the post-liberalization period by introducing various innovative schemes.

9. RESEARCH METHODOLOGY

PERIOD OF STUDY

The post- reform period of seven years has been taken for measuring the Productivity performance of Public Sectors Banks in India. The years selected for analysis are 2006-2012. In order to study the productivity aspect the following indicators have been used:

TABLE 9.1: PER EMPLOYEE INDICATORS (LABOUR PRODUCTIVITY)

S. No	Ratio	Definition of Ratio
A.	Employee Productivity Ratios	
1.	Deposit per employee	Total Deposits / No. of Employees
2.	Advance per employee	Total Advances/ No. of Employees
3.	Business Per Employee	Total Business/No. of Employees
4.	Net profit per employee	Net Profit/No. of Employees
B.	Employee Cost Ratios	
5.	Employee cost to Operating Expenses	Establishment Exp./Operating Cost
6.	Employee Cost to Total Assets	Establishment Exp./Total Assets

SAMPLE- SIZE

As far as scope of the study is concerned, it covers all the 27 PSBs functioning in India. PSBs Banks are divided into two groups (1) SBI & its Associates (2) Nationalized Banks.

COLLECTION OF DATA

Data prove a useful aid for analysis of a research problem. Data are those relevant materials which are significantly used to describe the research findings in detail and to draw meaningful inferences. To achieve the objectives of the study, Secondary data is collected. Secondary data is a valuable source for research. It includes all those data which had been collected for some earlier research work and applicable or usable in the study researcher has presently undertaken. A major part of the database has been drawn from the published secondary sources, primarily the reports of Indian Bankers Association (IBA) and the Reserve Bank of India (RBI). The data relating to financial performance of the selected public sector banks have been obtained from various sources like "Financial

Analysis of Banks" brought by Indian Banker's Association, "Statistical Tables Relating to Banks of India". "Reserve Bank of India Monthly Bulletin", "Reserve Bank of India Monthly Bulletin", "Report on currency and Finance" and other publications of Reserve Bank of India.

DATA ANALYSIS

The following statistical tools have been used for analyzing data:

Ratio Analysis-To measure the Productivity of bank's Employees, analysis of relevant ratios is commonly used. Profitability ratios have been employed for assessing the Productivity of Public Sector Banks.

Mean (X) = Σ X/N   Where ΣX = Sum of series of observations N = Number of items

S.D. (σ) = ΣX/N

Where x = (X-X), X is the mean of the series and (X-X) is the deviation from the mean.

N = Number of items

C.V. = (σ/X) x 100 Where σ is Standard Deviation (S.D.) and X is the mean of the series.

## 10. ANALYSIS AND DISCUSSION

DEPOSIT PER EMPLOYEE

The success of the banking greatly lies on the deposit mobilization performance of the bank as the deposits are normally considered as a cost effective source of working fund. The commercial banks have emerged as one of the major financial intermediaries in the country to mobilize the community's financial savings. This ratio has been computed by dividing the amount of total deposits by the number of employees in the bank.

TABLE 10.1: DEPOSIT PER EMPLOYEE

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	Deposits	No. of Employees	% Deposits Per Employees	Deposits	No. of Employees	% Deposits Per Employees	Mean
2005-06	1054071	463479	227.43	542409	270611	200.44	213.93
2006-07	1317369	465697	282.88	633475	255699	247.74	265.31
2007-08	1606995	458138	350.77	773874	248425	311.51	331.14
2008-09	1993304	452725	440.29	1007041	268598	374.93	407.61
2009-10	2416049	455049	530.94	1108085	267332	414.50	472.72
2010-11	2946100	458129	643.07	1245862	283375	439.65	541.36
2011-12	3386496	475697	711.90	1405024	280256	501.34	606.62

Statistical shows that the Deposits per Employees of 20 Nationalized Banks has increased from 227.43% in 2006 to711.90% in 2012 while that of eight SBI & Its Associates has increased from 200.44% in 2006 to 501.34% in 2012. All 28 Public Sector Banks have witnessed for increasing trend in Deposits per Employees. On an average Public Sector Banks showed an increased pattern from 213.93 % in 2006 to 606.62% in 2012.

FIGURE 10.1
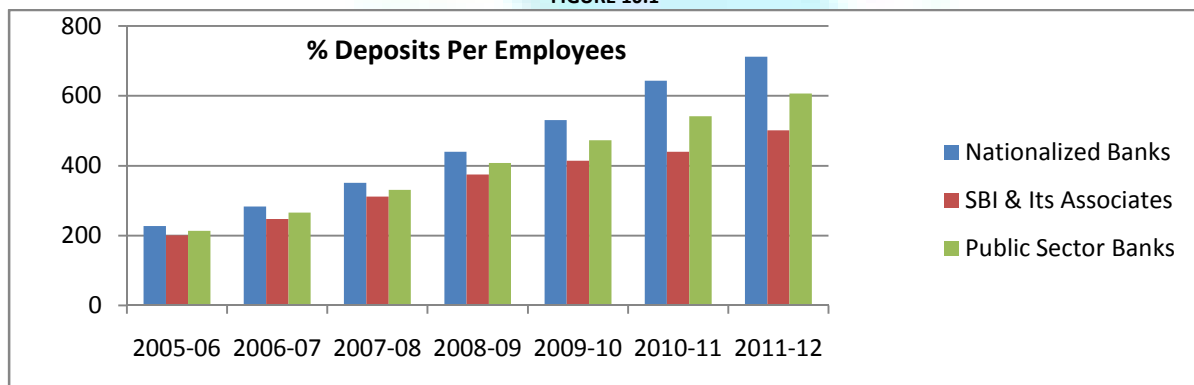
ADVANCE PER EMPLOYEE

Deposits mobilized by the banks are utilized for loans and advances. Advances as a phenomenon of development and regarded the banking system along with entrepreneurship as being the key agent in the process of development. This ratio has been computed by dividing the amount of total advances by the number of employees.

TABLE 10.2: ADVANCE PER EMPLOYEE

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	Advances	No. of Employees	% Advances Per Employees	Advances	No. of Employees	% Advances Per Employees	Mean
2005-06	681869	463479	147.12	371519	270611	137.29	142.20
2006-07	895405	465697	192.27	482269	255699	188.61	190.44
2007-08	1121569	458138	244.81	593722	248425	238.99	241.90
2008-09	1416317	452725	312.84	739449	268598	275.30	294.07
2009-10	1704899	455049	374.66	858198	267332	321.02	347.84
2010-11	2153181	458129	469.99	994153	283375	350.83	410.41
2011-12	2545162	475697	535.04	1151991	280256	411.05	473.04

Statistical shows that the Advances per Employees of 20 Nationalized Banks has increased from 147.12% in 2006 to535.04% in 2012 while that of eight SBI & Its Associates has increased from 137.29% in 2006 to 411.05% in 2012. All 28 Public Sector Banks have witnessed for increasing trend in Advances per Employees. On an average Public Sector Banks showed an increased pattern from 142.20 % in 2006 to 473.04% in 2012.

FIGURE 10.2
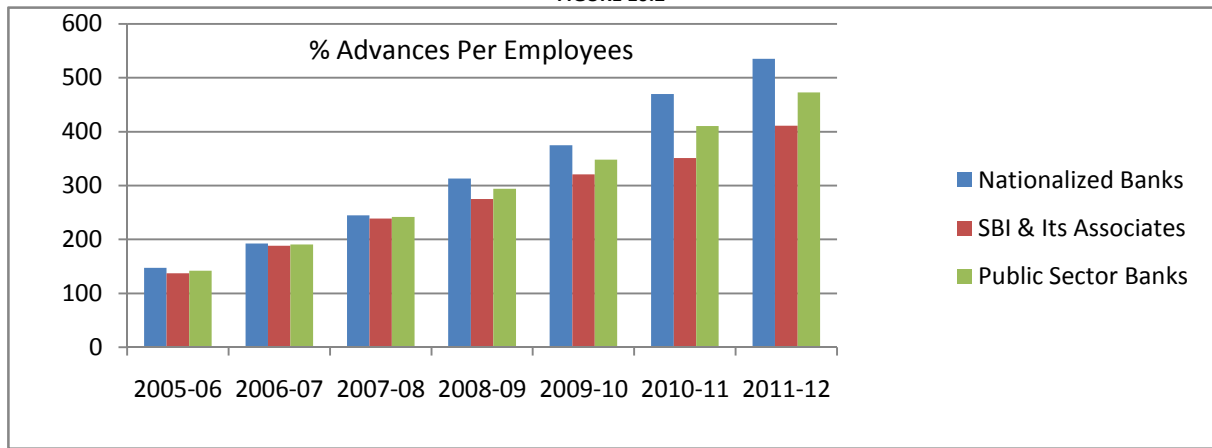
BUSINESS PER EMPLOYEE

Total Business is the sum of total Deposit and total Advances. This ratio has been computed by dividing the amount of total business by the number of employees in the bank.

TABLE 10.3: BUSINESS PER EMPLOYEE

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	Business	No. of Employees	% Business Per Employee	Business	No. of Employees	% Business Per Employee	Mean
2005-06	2119385	463479	457.28	1138874	270611	420.85	439.07
2006-07	2640081	465697	566.91	1327619	255699	519.21	543.06
2007-08	3230966	458138	705.24	1631420	248425	656.71	680.97
2008-09	4014616	452725	886.77	2104115	268598	783.37	835.06
2009-10	4875728	455049	1071.47	2343941	267332	876.79	974.13
2010-11	5981392	458129	1305.61	2625712	283375	926.59	1116.10
2011-12	6935238	475697	1457.91	2974337	280256	1061.29	1259.60

Statistical shows that the Business per Employees of 20 Nationalized Banks has increased from 457.28% in 2006 to1457.91% in 2012 while that of eight SBI & Its Associates has increased from 420.85% in 2006 to 1061.29% in 2012. All 28 Public Sector Banks have witnessed for increasing trend in Advances per Employees. On an average Public Sector Banks showed an increased pattern from 439.07 % in 2006 to 1259.60% in 2012.

FIGURE 10.3
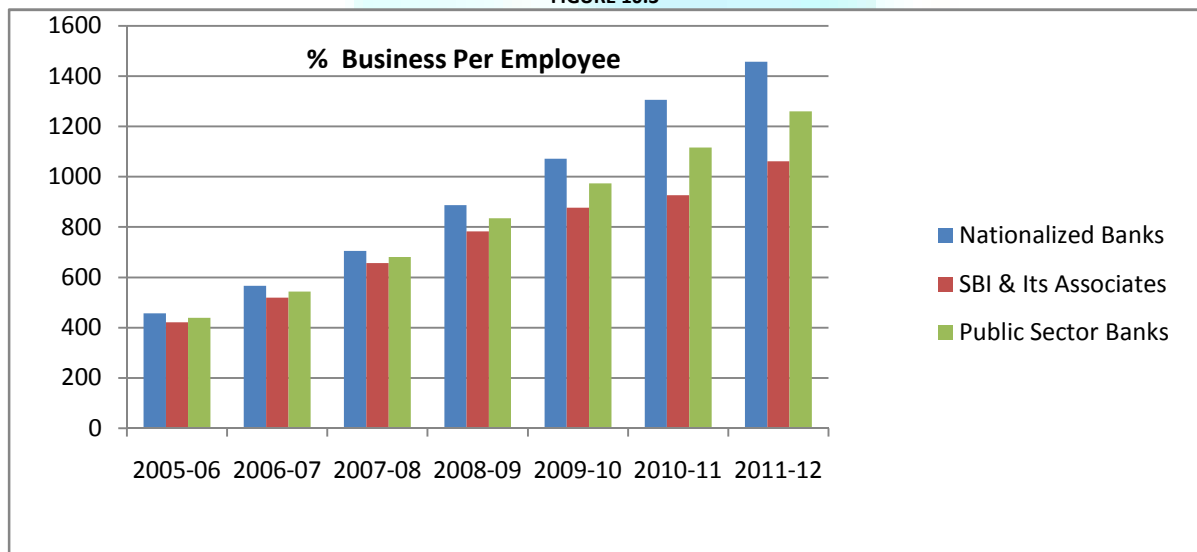
NET PROFIT PER EMPLOYEE

The balance of operating profit after the provisions and contingencies is known as net profit. Net profit mainly depends upon productivity of the bank and growth of profit per employee. Profitability is the ratio of earnings to the funds used. It indicates the efficiency with which a bank deploys its total resources to maximize its profits. This ratio has been computed by dividing the amount of total amount of net profits by the number of employees in the bank.

TABLE 10.4: NET PROFIT PER EMPLOYEE

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	Net Profit	No. of Employee	% Net Profit Per Employee	Net Profit	No. of Employee	% Net Profit Per Employee	Mean
2005-06	10021.3	463479	2.16	5956.48	270611	2.20	2.18
2006-07	13195.82	465697	2.83	6572.04	255699	2.57	2.71
2007-08	17344.19	458138	3.79	9005.79	248425	3.63	3.71
2008-09	21618.33	452725	4.78	11895.7	268598	4.43	4.60
2009-10	25793.18	455049	5.67	12432.62	267332	4.65	5.16
2010-11	31387.53	458129	6.85	11862.95	283375	4.19	5.52
2011-12	32148.73	475697	6.76	15333.64	280256	5.47	6.11

Statistical shows that the Net Profit per Employees of 20 Nationalized Banks has increased from 2.16% in 2006 to 6.76% in 2012 while that of eight SBI & Its Associates has increased from 2.20% in 2006 to 5.47% in 2012. All 28 Public Sector Banks have witnessed for increasing trend in Total income per Employees. On an average Public Sector Banks showed an increased pattern from 2.18 % in 2006 to 6.11% in 2012.

FIGURE 10.4
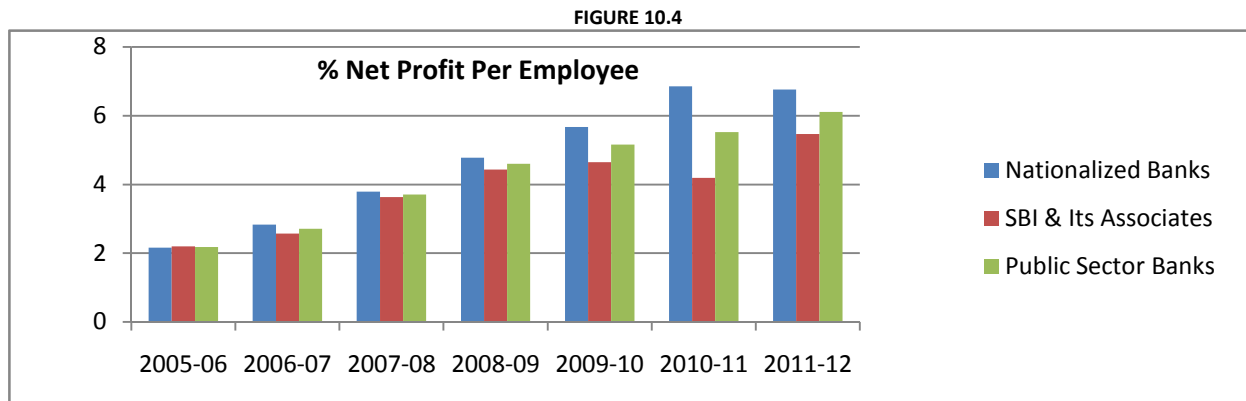
EMPLOYEE COST TO OPERATING EXPENSES

Employees Cost refers to payments to and provision for employees. The Employees Cost to operating Expenses is based on the portion of wage bill data in operating Expenses of the banks group. Banks have been treating them as critical factor for improving profitability and try to minimize them in relation to operating cost.

TABLE 10.5: EMPLOYEE COST TO OPERATING EXPENSES

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	payments to and provision for employees	Operating Exp.	% Employee Cost to Operating Expenses	payments to and provision for employees	Operating Exp.	% Employee Cost to Operating Expenses	Mean
2005-06	16394.57	24901.34	65.84	10665.09	15770.85	67.63	66.73
2006-07	17049.8	26489.3	64.36	10470.17	15986.75	65.49	64.93
2007-08	17883.47	28646.36	62.43	10294.23	16992.7	60.58	61.50
2008-09	21663.76	34078.06	63.57	12331.1	20087.71	61.39	62.48
2009-10	24706.28	38960.73	63.41	15568.27	25199.17	61.78	62.60
2010-11	34730.49	51564.6	67.35	19207.34	29145.91	65.90	66.63
2011-12	35108.25	54867.5	63.99	21183.53	32739.56	64.70	64.35

Statistical shows that Employee Cost to Operating Expenses of 20 Nationalized Banks has decreased from 65.84% in 2006 to 63.99% in 2012 while that of eight SBI & Its Associates has increased from 67.63 % in 2006 to 64.70 % in 2012. All 28 Public Sector Banks have witnessed for decline trend in Employee Cost to Operating Expenses. On an average Public Sector Banks showed a decline pattern from 66.73 % in 2006 to 64.35% in 2012.

FIGURE 10.5
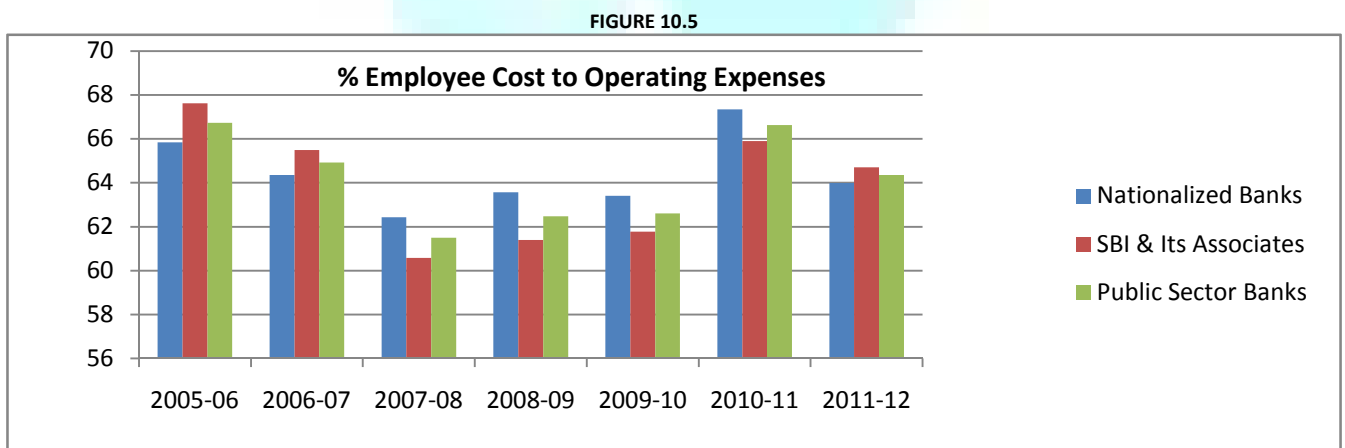

EMPLOYEE COST TO TOTAL ASSETS

Employee cost to total Assets indicate payment to and provision for employees as a percentage of total assets. It is based on the wage bill of different bank groups in total assets. It is calculated by dividing Employee Cost to Total Assets.

TABLE 10.6: EMPLOYEE COST TO TOTAL ASSETS

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	payments to and provision for employees	Total Assets	% Employee Cost to Operating Exp.	payments to and provision for employees	Total Assets	% Employee Cost to Operating Exp.	Mean
2005-06	16394.57	1234462	1.33	10665.09	691871	1.54	1.43
2006-07	17049.8	1530531	1.11	10470.17	805795	1.30	1.21
2007-08	17883.47	1880374	0.95	10294.23	1011168	1.02	0.98
2008-09	21663.76	2313299	0.94	12331.1	1280055	0.96	0.94
2009-10	24706.28	2795027	0.88	15568.27	1412514	1.10	0.99
2010-11	34730.49	3442945	1.01	19207.34	1597684	1.20	1.11
2011-12	35108.25	3975930	0.88	21183.53	1771213	1.20	1.04

Statistical shows that the Employee Cost to Total Assets of 20 Nationalized Banks has decreased from 1.33% in 2006 to0.88% in 2012 while that of eight SBI & Its Associates has increased from1.54% in 2006 to1.20% in 2012. All 28 Public Sector Banks have witnessed for declining trend in Employee Cost to Total Assets. On an average Public Sector Banks showed a declining pattern from 1.43% in 2006 to 1.04% in 2012.

FIGURE 10.6

% Employee Cost to Operating Exp.
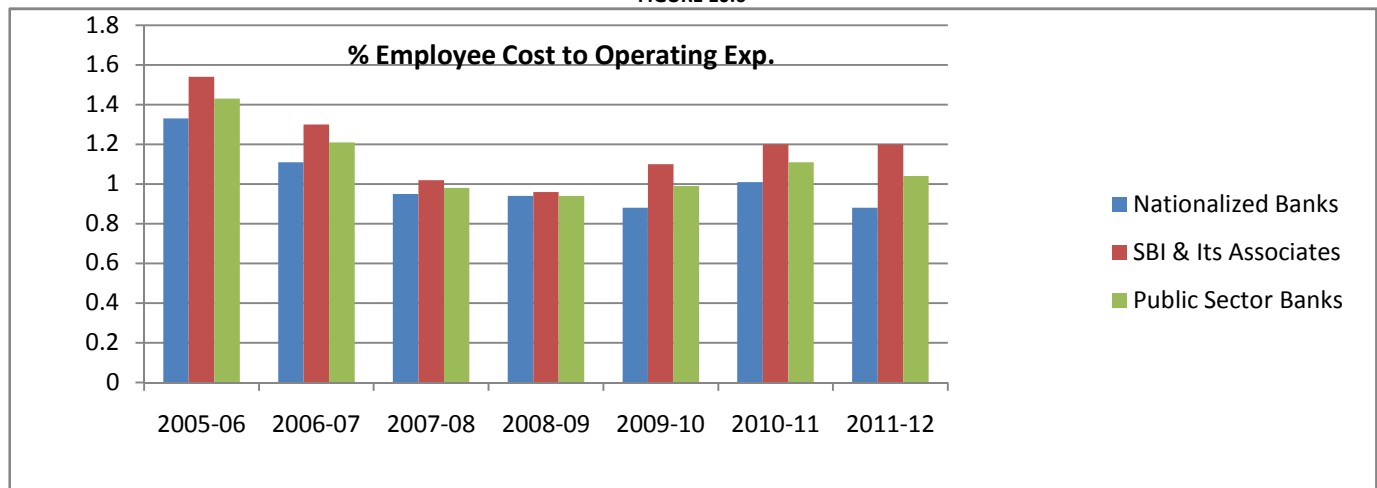
11. FACTORS AFFECTING EMPLOYEE PRODUCTIVITY

QUALITY TRAINING PROGRAMMES

Once the bank has decided to achieve Productivity efficiency, suitable training programmes should be introduced and all members of staff should get an opportunity to participate in these programmes. All employees must be trained to develop quality consciousness and the bank must continually strive to improve the quality of services provided. Training increases the skill of the new employee in the performance of a particular job. An increase in skill usually helps increase in both quantity and quality of output.

IMPROVEMENT IN TECHNOLOGICAL KNOWLEDGE

Traditional banking are sometimes unnecessary and time consuming resulting in delay of operation thus it requires a proper study of organization and method to make the office processes. More over many new types of equipment like computer fax machines and ATMs have become able to spur the global competition but our public sector bank is far behind the new entrants. To enable quicker decision making in a scientific manner, on line inter connectivity is most useful. Most of the Indian banks have embarked upon the process of computerizing their branches. It is necessary that bank would have to reinvest in IT to remain in tune with the changing dynamics of the market. Technology also helps to reduce operation costs, offer customized products and manage risks more efficiently.

ECONOMIES OF SCALE

Achievement of economies of scale i.e. reduction in per unit cost due to increase in the scale of operation. Economies of scale mean reduction in per unit cost by producing multiple products with the same firm. For example: A bank can sell insurance units, mutual fund products etc with the same branch network. Product diversification can establish "one –stop shop "and attract new customers and achieve productivity efficiency. The banks based in South India may look for a bank in North India to have presence in North. Similarly banks in North may look for banks in South to increase its area of operations.

EMPLOYEE MORALE

Productivity is linked to employee morale. When employees are happy at work they have more motivation, which increases productivity. Poor morale causes employees to be disengaged. A study done by the Corporate Executive Board says that because employee engagement is down there has been a 5% decrease in productivity. When the employee is motivated-customer served well-does more business with banks- profitability of banks goes up-benefits passed on to the deserving employees-employee is motivated-excellent service to customers is provided.

12. CONCLUSION

The public sector banking system in India is standing at an important cross road. There are critical choices to be made and initiatives to be taken. The time is ripe for leaving the old baggage and taking bold measures. These measures would determine the future path of public sector banks and whether they would continue to retain their position of preeminence in the banking space or would they yield to the pressure from their peers in the private sector. The productivity of employees is crucial for measuring the overall efficiency of the banks. Researcher examined the various parameters of efficiency and given a number of suggestion to improve the efficiency of the banks in India. Faced with tough competition from the foreign and new private sector banks, public sector banks employed a number of measures to improve employee productivity and reduction of operating costs. Statistics reveals that employment in public sector banks had shrunk in 2007-2008. Aggregate number of workers in 28 public sector banks declined by 2% from 7, 22,878 in 2006-07 to 7, 14,793. It was felt that manpower cost of banks has been increasing steadily over the years and it is necessary to rationalization the work force. A conscious effort has to be done for the reduction of workforce in banks. These include going for fully automated systems (Core Banking Solution based operations) preceded with business process reengineering, offering VRS to its employees, training and retraining of staff, lateral recruitment of specialists.

But one thing is more important that the productivity of bank employees as a result, has improved substantially. Employee productivity can be measured in terms of Business per employee and profit per employee. All 28 public sector banks have witnessed in increase in per employee business because of the use of IT infrastructure, training and development of the employees, and performance based promotion.

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IMBIBE ETHICAL EDUCATION

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ABSTRACT

There is a need for imparting ethical education with a spiritual bent of mind in educational institutions to churn out good citizens. Imbibing the qualities of good conduct, self-confidence and high values would help students earn a significant place in society. Education without values is like a flower without fragrance. Students should realize that character building is equally important as career building. A good character in life is ultimate thing that stretches person's self-realization. Therefore, students should learn not just from their curriculum, but from other spheres too to widen their knowledge base to emerge as bright citizens of the future. Mere ambition to excel in life was not enough, and education must be imparted to help students emerge as leaders in their chosen fields. This article is useful to educational institutions, government and parents to impart ethical education from all fronts to make good citizens for the nation.

KEYWORDS
Career building, character building, educational institution, spiritual bent, ethical education.

INTRODUCTION

Education is the vehicle of knowledge, self-preservation and success. Education not only gives a platform to succeed, but also the knowledge of social conduct, strength, character and self-respect. The greatest gift education gives is the knowledge of unconditional love and a set of values. These values include the simple difference between right and wrong, a belief in God, the importance of hard work and self-respect. Education is a continuous learning experience, learning from people, learning from success and failures, learning from leaders and followers and then growing up to be the person we are meant to be. Value based education is a tool which not only provides a profession but also a purpose in life. The purpose of life is undoubtedly to know oneself and be ourselves. Hence, it is high time to reconfigure education on the basis of values, since the present day's system moulds technocrats and individuals but not citizens. An individual thinks about himself, whereas the citizen thinks for society. Elders and teachers should articulate the need to understand the value of human life and the necessity for students to understand the purpose of education respectively.

Value based education is a three-fold development of any individual of any gender and age, but most importantly of a child. Education tries to develop three aspects, physique, mentality and character. Even though physique and mentality are important, they are menaces without the third because character is the greatest of these.

GREATEST VALUE

Remembering God was the greatest value that one could possess in his or her life. It is God, the supernatural power, who guides a person in the right direction but not science and technology. A human being is salt of the earth and stand first in society. He is one of the most complex living organisms whose behavior is most unpredictable. A docile person may become a roaring tiger when provoked. He suffers from moods, anxiety and tension. A reasonable person may suddenly become a very difficult person to deal with. That is why some discipline in life or in an organization is a must. A person must be respected for his knowledge and not for his chair. Educational institutions should bind to nurture values, scruples, ethics, moralities and decencies in the student career. An educational institution is a sacred place where the builders of the nation produced.

IMBIBE RIGHT ATTITUDE

Students should imbibe innovative and creative thoughts and adopt the right attitude towards the assigned job and practical oriented subject concepts, as these qualities would enhance their scope to gain lucrative employment. Students would become committed individuals to put their heart and soul into the work on hand. A simple stone becomes a great piece of art at the hands of these craftsmen. Educational institutions should inculcate the practice of crafting innovative and creative thoughts in students mind which essential for individual, society and nation development. They should provide a friendly atmosphere that minimizes conflicts and rigidities.

INTERACTION

Students not only exhibit their talents and skills as young managers and in resolving financial challenges, decision making and innovative thoughts with creativity in promoting a product or service in the realistic employment approach, but interact with each other. Industry-institute, society-institute, government-institute, and media- institute interactions are providing best ways to mingle one another and sharing views towards nation development.

MOTIVATION

One man can take a horse to water but twenty men cannot make him drink! An organization may provide the best tools, machines and materials for working. But if the people are not motivated, the final product is likely to be of a poor quality. On the contrary, if someone is dedicated to his work, then he may even overcome the limitations of tools and other inputs required, to turn out quality products.

An organization is built on four pillars: technology, organization, information & communication, and motivation. Lacuna in any of these factors can prove detrimental to the efforts of the organization. While the first three factors are easily understood, motivation remains an esoteric science to many people. Theories suggesting human motivation are like different routes to reach a certain destination. What makes a person tick, has not been satisfactorily explained, though the motivational theories and studies have attempted some logical explanation. Basically, a person wants to be treated as a human being with dignity. He wants the right environment to work out solutions to the problems himself.

Students should get motivated towards their deeds in their educational career. Motivation is the stepping stone of character building. Self-motivation in any work makes the task ease and one can reach the targeted goals by overwhelming impediments. Educational institutions must cultivate the practice of conducting motivational classes to the students on regular schedules.

THUMPING CHALLENGES

Students' beliefs about their ability to learn are shaped by messages and experiences at home, at school, and in the larger society. Low expectations can be subtly communicated by parents and teachers, and through school practices such as tracking, ability grouping, or curriculum that is not challenging. Students should take up thumping challenges in the career and work for innovations and development of the nation. They should think globally and act locally since the future of the country entrusted in their hands. They should get trained in facing challenges from all fronts. Challenges posed from internal and external environment can be confronted with a good character and career development.

LSRW SKILLS

There are four basic skills – listening, speaking, reading, and writing. Effective LSRW skills are essential for good communication. Usually an interpreter has to emphasize on speaking skill, whereas a translator's forte is writing skill. Spontaneous translation at international meets where different languages have equal status calls for good listening and speaking skills. Students should enrich these skills at educational institutions and make use in real life as and when necessary.

EXTRA-CURRICULAR ACTIVITIES

According to a recent study, students involved in extra-curricular activities are more likely to become leaders and good team players, while being outspoken. Co-curricular activities surely help students discover their latent talent. Most students are good at multi-tasking in an informal way, but find it daunting when they are actually on the job. It goes without saying that college life is full of stimulating and fascinating experiences. Out-of-class activities surely spur growth and personal development.

College is definitely the right place to hone skills in myriad activities, such as sports, music, dramatics and debates. Being a dynamic member of an NGO or a theatre group only adds to credentials. Whatever one chooses, it should be something he or she is passionate about in order to excel. Learning to stick to an activity is equally important. Being committed to an organization, even if it is not what it turns out be gives valuable lessons to learn. A perfect blend of extra-curricular activities, academics and social life should be considered by all students alike.

GIRL'S EDUCATION IMPORTANT

Female education is a catch-all term for a complex of issues and debates surrounding education (primary education, secondary education, tertiary education and health education in particular) for females. It includes areas of gender equality and access to education, and its connection to the alleviation of poverty. Also involved are the issues of single-sex education and religious education, in that the division of education along gender lines, and religious teachings on education, have been traditionally dominant, and are still highly relevant in contemporary discussion of female education as a global consideration.

Today, in the developed world, women have surpassed men at many levels of education. For example, in the United States in 2005-06, women earned 62% of Associate's degrees, 58% of Bachelor's degrees, 60% of Master's degrees, and 50% of Doctorates. Higher rates of high school and university education among women, particularly in developing countries, have helped them make inroads to professional careers and better-paying salaries and wages. Education increases a woman's (and her partner and the family's) level of health and health awareness. Furthering women's levels of education and advanced training also tends to lead to later ages of initiation of sexual activity and first intercourse, later age at first marriage, and later age at first childbirth (and an increased likelihood to remain single, have no children, or have no formal marriage and alternatively, have increasing levels of long-term partnerships). It can lead to higher rates of barrier and chemical contraceptive use (and a lower level of sexually transmitted infections among women and their partners and children), and can increase the level of resources available to women who divorce or are in a situation of domestic violence. It has been shown, in addition, to increase women's communication with their partners and their employers, and to improve rates of civic participation such as voting or the holding of office.

Girl child education is pivotal to usher in all round development of society and the nation as a whole. Sustained efforts to bring attitudinal change among parents towards girl child education and ensure improved access for all girls to education, especially in rural areas are inevitable. Education of girls has been a high priority with the Government of India. The National commitment to provide free and compulsory education to all children in the 6-14 years age group is now a Fundamental Right of every child in India after the passing of the Constitution (86th Amendment) Act in December, 2002.

HALLMARKS OF A TRUE STUDENT

Man should stand out as a seeker of truth. The student should practice the truths he has learnt and use them for the good of the society. Citizens may be interested in students' problems, but students should not get involved in the citizens' politics. Students should aspire to promote the nation's well-being, its security and happiness. Selflessness, absence of egoism, unostentatiousness and true love should be the hallmarks of a true student. A student's life should radiate light all around. *Vidya* means light. It is to make this illumination available to the world that students should pursue education. Students should desire to enjoy the bliss derived from *Vidya* (education) and not the pleasures of *Vishaya* (worldly objects). Students should aim at being masters of their senses and not their servants.

A man may be a great *Vedantin* (philosopher). He may explore many things. He may expound new theories. But he should really, try to find out what he has accomplished as a human being. Without the cultivation of human values, all explorations and speculations are of no use. Today the educational system, not only in India but in all countries, has taken the wrong turn. No single person is responsible for this situation. Parents have failed to bring up their children properly. The nation's leaders do not set them a good example. Even teachers have failed in their responsibilities. When there are exemplary parents, exemplary leaders and ideal teachers, students would be ideal students. Students, who are selfless, pure-hearted and innocent by nature, are being dragged into politics, their minds are getting fill with bitterness and hatred and their hearts are getting polluted. Students in no circumstance should get into politics. After completing studies, one can take up a job or start up a business, or may take to politics. In entering politics one must do so to serve the nation and promote its welfare and integrity.

TEACHER'S RESPONSIBILITY

Good teachers understand the concerns, aspirations, proficiency and limitations of teaching. At one side teacher develops his knowledge quality and reengineer academic excellence from time to time to enhance and sustain of quality in education. Quality teachers edify quality education from all fronts.

Apart from imparting education, the teachers should treat their students with affection on a par with their own children to help them grow into integrated personalities of nation building. A feeling of love and being loved by others, keeping in mind that a human being is a social animal, keeps a person going at the workplace. A person wants to be loved and respected to boost his ego. He does not want be a mere "face in the crowd". He wants to be tall and tower among the crew by achieving excellence in his work and other fields too. This is all done with motivation. Teachers should enhance the thrust of motivation in doings and deeds of students in all spheres. Student motivation is influenced by both internal and external factors that can start, sustain, intensify, or discourage behavior.

PARENT'S RESPONSIBILITY

Gone are the days more people chase behind few institutions for better education. Now the wheel come its full circle. Getting an engineering admission is not at all crucial. People have more options to select the best institution as per their desires. Many established educational institutions run after the people with lucrative packages for their patrons. At this competitive corporate environment, parents are in scuffle to take precise decision over acquiring good quality education to their children. Ignoring the fact that parents are key and immediate persons who influence the entire career of their children, most of the parents are in search of good institution. More than these, parents should churn their children career by providing healthy environment at home with spiritual blend. The community and the parents must take keen interest in the education of children. Education is the foundation upon which we have to build the society. It has to be the first social priority. It is an investment, which has the biggest multiplier.

GOVERNMENT'S RESPONSIBILITY

It is the prime responsibility of the government to enforce policies towards ethical education in higher education. Education policy in the light of ethical education should be enforced in the nation. It is quite evident that most of the advanced countries are following world class standards in providing quality education. In India, the value system in higher education is not so satisfactory. All barriers in ethical higher education should be eradicated on war foot measures. Imparting higher education focusing innovative and creative skills is immediate concern for government in the era of globalization. Government agencies should enlist the support of local community to enable a girl children access the residential education facilities provided and carve out a bright future for themselves and their families.

CRITERIA FOR QUALITY EDUCATION

Good criteria for quality and quality sustenance would half success in imparting ethical education.

INTELLECTUAL QUALITY
- Deep knowledge
- Deep understanding
- Problematic knowledge
- Higher order thinking
- Meta language
- Substantive communication

QUALITY LEARNING ENVIRONMENT
- Explicit quality criteria
- Engagement
- High expectations
- Social support
- Student's self-regulation
- Student direction

SIGNIFICANCE
- Background knowledge
- Cultural knowledge
- Inclusivity
- Connectedness
- Narrative

ADOPTION OF TEACHING TECHNOLOGY

There is a paradigm shift in teaching-learning process from conventional teacher centric to student centric approach. Teachers expose to feasible technological options and the appropriate pedagogical strategies for gainful adoption of digital technologies for teaching-learning processes. Faculty members should accept this change to improve learner performance and satisfaction. Therefore, adoption of teaching technology is the right direction in this information age. Education through Information and Communication Technology (ICT) is also the national priority to increase access and equity especially in higher education. ICT is just a tool of teacher-learning process. By using this aid teachers get equip with latest updates and changing tendencies in their respective field and blend with spiritual touch certainly prudential for building right citizens.

CONCLUSION

Teachers are builders of the nation. Students are icons of the future. Educational institutions are sacred places. Students cherish their career in the wake of moral values with spiritual blend, innovative and creative talents and skills at the educational institutions along with emphasis on extra-curricular activities which are very essential for a person's physical and psychological growth and development. Girl child education is inevitable in countries like India since it cope the family, society and nation at large for generations together. Teachers and governments, parents should feel responsible towards making the right leaders for tomorrow. Above all the role of educational institutions is inexorable in imbibing ethical education at large to make superior human capital.

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MODELING INDIAN MONSOON (RAINFALL) VOLATILITY AS AN INDEX BASED RISK TRANSFER PRODUCT

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ABSTRACT

Various research studies are now focusing on the need for exploring the potential of rainfall indexation to engage capital markets for absorbing rainfall shocks. In this paper an attempt is made to develop a general framework for conceptualizing rainfall-index based risk transfer product based on the rainfall data of select 3 out of 36 meteorological subdivisions of India. A unique rainfall index with ticker symbol Monsoon Outcome Index (MOX) for each of the major meteorological subdivision of India is proposed, along with an estimating model. Essential statistical properties of MOX series across time and subdivisions are captured which only reinforce the vast scope for launching new breed of risk market instruments.

KEYWORDS
Coefficient of variation, Monsoon Outcome Index (MOX), Rainfall Index, Volatility, Weather derivative.

INTRODUCTION

India has always been a land of extreme diversity – be it culture, landscape or weather. Of these, the weather factor presents formidable challenges since it is not possible to control. At the same, it holds the key to economic well-being of at least 60 percent of the population, which depends upon agriculture directly or indirectly.

In many parts of India irrigation is still a dream because 60 percent of the sown area depends on rainfall and at least 50 percent of the variability in crop yields is caused by rainfall variations. As such, the failure of the monsoon is the single largest reason for crop failure, leading to social turmoil in several states where indebted farmers are driven to despair.

Farmers face basically two types of risk – (1) Price risk caused by glut in the market and (2) volumetric risk caused by vagaries of weather leading to crop failure. Price risk can be hedged by use of commodity hedging futures. Volumetric risk requires weather insurance and weather derivatives.

Agricultural insurance is an industry that is still in its evolution stages in this country. Rainfall index (RI) insurance introduced by leading insurance companies in India in the recent past holds better prospects over traditional crop insurance. The development of RI insurance just marks the beginning of a journey towards creation of full-fledged weather markets for absorbing monsoon risk to meet the needs of a wide range of entities including Agri-finance, Commodity trading, hydro-power, agro processing etc. It is necessary for the insurance market to be integrated with the capital market at the earliest. Countries like Morocco (Skees,et al,2001), India(Sinha,2004),South Africa(Geyser,2004) and others have already started experimenting with rainfall derivatives, though the contracts strictly do not resemble the true nature of derivative structure. Monsoon derivative market is critical for the development of insurance market as it provides opportunities to insurers to hedge their monsoon exposure (kotreshwar, et al(2006).

INDEX-BASED RAINFALL INSURANCE

Rainfall index as a basis for insurance is superior to traditional crop insurance in several ways. Unlike crop insurance, there is no need to submit a claim and demonstrate loss to receive a payout, payment is automatic. Besides, it overcomes the problems of traditional crop insurance such as moral hazard and adverse selection.

Academic research focuses on the design of generic applicable of rainfall index to the Agri-sector. Pilot rainfall-index insurance projects have been designed and implemented by National Agricultural Insurance Corporation (NAIC), ICICI-Lombard and others since 2005.

There has been a dramatic increase in investments related to rainfall index-based insurance programmes with the involvement of international institutions like World Bank, International Finance Corporation, Asian Development Bank, World Food Programme and others. The pilot project based studies are aimed at sustainable and standardized project deployment creating new risk markets.

Various studies, including Skees et al(1999),(2001),Miranda(1991), Martin et al.(2001), (2010), Mahul (2000), and Veeramani et al(2005), have been carried out to analyse whether rainfall-index based insurance products can be an economically viable replacement for the current insurance programmes in stabilizing the revenue risk faced by the farmers. Veeramani et al(2005) have further explored the scope for the insurers' and reinsurers' participation in the insurance schemes.

The general methodology for determining indemnity and premium rate suggested in these studies incorporate the loading feature to cover losses due to unforeseen events or to build cash reserves to cover the monitoring cost (Skees et al.2001).

Payment Percentage (For drought)	=	{Strike Rain – Actual Rain}*100/ (Strike Rain)	…………………Eq (1)
Payment Percentage (For Floods)	=	{Actual Rain – Upper strike Rain}*100/ (Actual Rain	…………………Eq (2)
Indemnity	=	(payment percentage)x (liability)	……………….Eq (3)
Premium Rate	=	(Average Indemnity/Average Liability) x Loading	…………………Eq (4)

Here loading is the hiking in the premium to cover losses due to unforeseen events or to build cash reserve or to cover monitory cost.

The idea of using climatic events for insurance payments is not new, trading based on Heating Degree Days (HDDs) and Cooling Degree Days (CDDs) are available for quite some time Turvey (2001). Veeramani (2005) considers both the upper and lower bound risk, the payoff function for the call and put options are slightly modified from the function used by Turvey (1999).

$$\text{Payoff (Call)} = \begin{cases} 0, & \text{if } X \leq \text{strike} \\ X - \text{Strike}, & \text{if Strike} < X < L1 \\ L1 - \text{Strike}, & \text{if } X \geq L1 \end{cases} \quad X\ \lambda \qquad \text{......................Eq(5)}$$

$$\text{Payoff (Put)} = \begin{cases} L2 - \text{Strike}, & \text{if } X \leq L2 \\ \text{Strike} - X, & \text{if strike} \geq X > L2 \\ 0, & \text{if } X > \text{Strike} \end{cases} \quad X\ \lambda \qquad \text{......................Eq(6)}$$

Where, L2 and L1 are the lower and upper limits, respectively, strike is a choice variable, X is the actual value, and λ is the predetermined monetary value of an index. Veeramani et al. (2005) have concluded that there exist a vast untapped potential for rainfall options and should help developing countries like India to explore expanding markets for risk sharing.

DEVELOPING RAINFALL INDEX

Rainfall index indicates what percentage of cumulative normal expected rainfall is realized ? A higher index would mean that, compared to the cumulative long period average rainfall up to the date of index, there has been more rainfall.

National Commodities Exchange (NCDEX) pioneered the introduction of rainfall index in India. Rainfall Index for Mumbai was launched on June 01, 2005. Index for Belgaum, Erode, Guntur, Karimnagar, Ganganagar, Kottayam, Murshidabad, Rajkot and Ujjain launched on June 01, 2006. The index has been based on long period average, normal, expected rainfall. It indicates what percentage of cumulative normal expected rainfall is realized. A higher index would mean that, compared to the cumulative long period average rainfall upto the date of index, there has been more rainfall. The methodology adopted by NCDEX for calculated rainfall index may be summed up by an example:

Based on historical data, normal expected rain by June 02, 2005:28.6 mm

Actual rain by June 02, 2005 : 0.65 mm

Rainfall index (scaled by 1000) on June 03, 2005 : (0.65/28.6) x 1000 = 22.7

It has rained 2.27 pc of normal rain by June 02, 2005.

The farmer would be typically seller of the index at the start of the monsoon, and will buy it back at the end of the monsoon. A monsoon failure will imply a lower index and lower monetary value. The index thus bought back by the farmer will compensate the loss suffered on the output front.

NCDEX rainfall indices are only for purpose of display and dissemination of information, emphasizing the importance of weather trading platform for the country. Yet regulators of Indian Commodity Exchanges have not come forwarded with mechanism that would help farmers hedge against weather. Parliament yet to clear amendments to Forward Contract Regulations Act, as of now Indian regulation does not define weather as a commodity, thus impeding trading.

The rainfall indexation discussed in this paper is different in the perspective of development of risk transfer products meant for capital market. It is proposed to recognize the index using a ticker symbol, MOX (Monsoon Outcome Index), which would form the basis of rainfall derivatives.

$\text{MOX} = \Sigma R_{it} / \Sigma R_{ct} \times 1000 \qquad \text{......................Eq (7)}$

Where R_{it} represents cumulative rainfall for end of ith month of the tth season; R_{ct} stands for historical average cumulative monthly rainfall for the tth season; and 1000 is the multiplier value where rainfall is measured equivalent to 1/1000th of a meter, i.e., in millimeters.

The computation of MOX values for each of the major selected meteorological subdivision in place of few selected city/locations is preferable mainly for two reasons:

The index becomes broad-based which in turn should facilitate the launch of a trading mechanism at the national level to meet the diverse needs, i.e., speculation, risk hedging and arbitraging.

Simultaneously, a broad-based index minimizes the impact of basis risk which looms large in any weather-based risk transfer product.

Accordingly, the MOX values have been computed for the selected 3 out of 36 meteorological subdivisions of India, summarized in Table 1. The selected meteorological subdivisions are Assam Meghalaya (ASMEG), Saurastra Katch & Diu (SAUKU) and Madhya Maharashtra (MADMH). The graph of the MOX values for one of the sub division, Assam Meghalaya for all the monsoon months is provided in Graph 1(a,b,c,d).

The required rainfall data is sourced from the Indian Institute of Tropical Meteorology (IITM) website, for South-West monsoon season starting from 1st June and ending on 30th September and the MOX values for end of each month are computed for 30 years for these select 3 subdivision, R_{ct}, value is based on the 30 years moving average cumulative rainfall for the monsoon months. It can be observed that MOX value has taken a wide range both across years and subdivisions. For instance, the MOX value for the end of Jun month for Saurastra Katch and Diu (SAUKU) sub division it varied between a minimum of 48 in the year 1982 and a maximum of 2562 in the year 1982.

MODELING THE INDEX TO ENABLE ESTIMATION

To enable determination of expected MOX value at the end of the monsoon month for each of the selected subdivisions, it is attempted to approach the linear regression method. For this purpose, the following simple linear regression equation is considered.

$T_t = b_o + b_1 * t \qquad \text{......................Eq (8)}$

Where b_o is the Y-Coordinate intercept and b_1 is the slope. These regression coefficients are used to construct an ordinary least square Equation. SPSS is used to compute the values of b_0 and b_1 from the available values of MOX for the monsoon months.

The regression analysis is done for Sept MOX values which shows the existence of significant trend (positive) for Assam and Meghalaya (ASMEG) and the regression Equation will be $T_t = 1067 - 7.52 * t$, where t is the yearly sequence number. For other 2 subdivisions, the existence of significant trend (negative) for Sept MOX values is seen. The results of the regression estimation for September MOX values are presented in Box 1. The graph for the trend for select 3 sub divisions is depicted in graph 2 (a, b &C).

BOX 1: REGRESSION COEFFICIENT VALUES FOR SEPT MOX VALUES FOR SAMPLE SUBDIVISIONS

Subdivisions	b_o	b_1
Assam and Meghalaya (ASMEG)	1067	-7.52
Saurashtra, Kutch & Diu (SAUKU)	612	28.99
Madhya Maharashtra (MADMH)	876	9.35

Source: IITM rainfall data

ANALYSIS OF STATISTICAL PROPERTIES OF RAINFAL INDEX

Table 2 presents few statistics including Coefficient of variation for the MOX values for each of four monsoon months from 1982 to 2011 for the sample subdivisions.

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The Coefficient of variation value for June is highest for all the subdivisions and varied from 21.07% to 76.86%. It decreases in the subsequent months and is lowest for September month. It implies that the MOX values revert back to the long time average rainfall at the end of monsoon period. For the end of September month MOX values, Coefficient of variation varied from 16.29% to 43.78%, indicates the existence of variations in the MOX values for rainfall amongst the sub-divisions.

To elaborate on inter-divisional independence in MOX values of rainfall data, correlation analysis amongst these three sample sub-divisions has been carried out at Table 3. Geographically adjacent sub-division's has moderate correlation where as distant sub-division's have weak to very weak (negative) correlation. Even within same sub division, MOX values for monsoon months have variable correlation and will reduce as the months are apart. Such weak correlation favours the introduction of derivative instruments for mitigating rainfall risk.

POTENTIAL APPLICATIONS OF MOX

Volatility is the basis for index trading. Most index trades relay heavily on volatility information. For this reason the proposed MOX, if launched on an exchange can be a popular trading tool.

An analysis of statistical properties of MOX implies that MOX can be a potential tool for both hedging and speculation. It may also be an excellent instrument in the quest for portfolio diversification. Diversification which most people consider a good thing is useful only if the instruments used are not correlated. One interesting feature of MOX is its relative inter-divisional independence, as the correlation between geographically distant subdivisions found to be close to zero. This makes it an excellent diversification tool and could be better for monsoon disaster hedging.

MOX would be an excellent speculation instrument as well. Coefficient of variation (Table 2), particularly for June are so high, it indicates how MOX could be attractive for speculators. The Coefficient of variation is high for Saurashtra, Kutch and Diu sub division. Though the variation reduces systematically in the subsequent months, but this is still higher than the variation of range bound stock indices, thus providing outstanding trading opportunities.

All this means that those who seek to hedge monsoon risk will have a new instrument to their hedging arsenal. Options on MOX would be still more attractive for the hedgers and speculators as well.

CONCLUSIONS

Rainfall index based insurance has emerged as a promising alternative to traditional crop insurance. Now attempts are directed towards exploring the scope and applicability of rainfall indexation to sub serve the capital market to meet the requirements of a wide-range of players whose financial prospects are closely inter connected to rainfall outcome. This study focused on rainfall–indexation and suggested a unique ticker symbol MOX for each of the sample meteorological subdivisions of India. An estimating function based on time-series simple regression is attempted to enable determination of expected MOX value at the end of the monsoon season. Essential statistical properties of MOX series are captured to indicate the vast scope for creating a new class of financial instrument for hedging and portfolio management purposes. Widespread availability of reliable data for long periods make it attractive to private insurers and international reinsurers and should help developing countries explore international markets for risk sharing.

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TABLES

TABLE 1: MOX VALUES FOR THE YEAR 1982-2011 FOR ALL MONSOON MONTHS

YEAR	For Assam-Meghalaya (ASMEG)				For Saurastra Katch and Diu (SAUKU)				For Madhya Maharastra (MADMH)			
	JUN	JULY	AUG	SEPT	JUN	JULY	AUG	SEPT	JUN	JULY	AUG	SEPT
1982	931	871	914	943	48	561	554	497	688	603	633	697
1983	698	978	990	1078	2562	1405	1477	1302	1000	881	1034	1217
1984	785	949	941	1014	448	449	601	840	705	986	819	838
1985	1039	1018	964	985	227	313	453	434	673	676	627	606
1986	604	704	754	810	1736	615	564	480	1631	912	901	819
1987	1044	1157	1112	1191	339	179	170	144	878	720	892	766
1988	844	1023	1288	1271	224	1722	1460	1606	710	1077	1069	1314
1989	933	1197	1099	1147	1981	1450	1318	1229	1142	1163	1051	1111
1990	867	822	795	863	345	246	894	926	1246	1020	1221	1092
1991	918	793	854	924	478	972	752	664	2158	1604	1319	1112
1992	729	771	820	819	553	1190	1068	1123	1097	870	968	943
1993	1474	1443	1446	1362	374	653	439	530	1072	1068	993	958
1994	930	812	845	841	1157	1644	1367	1546	1973	1449	1249	1109
1995	1037	979	1001	1036	101	940	699	879	555	785	889	833
1996	530	717	778	778	1999	1467	1040	904	1247	1133	1009	1008
1997	1080	927	886	934	2035	1271	1037	1277	1260	1066	1115	975
1998	1061	1096	1170	1061	1328	1323	1272	1185	1021	991	1068	1148
1999	749	934	1015	994	918	577	427	415	1284	1086	844	880
2000	941	797	939	1033	162	944	844	723	1308	1024	981	923
2001	725	749	734	744	2151	1502	1273	1101	954	715	721	881
2002	962	990	951	904	2165	913	955	837	1598	896	994	889
2003	961	856	874	853	641	1668	1616	1439	1110	938	874	814
2004	739	996	916	902	836	702	1012	929	1199	945	1140	1152
2005	969	867	986	897	1837	1179	931	1329	1582	1655	1584	1620
2006	1078	848	769	752	710	1719	1643	1553	1140	1463	1703	1572
2007	1141	1054	991	1033	1188	1201	1956	2083	1581	1396	1309	1251
2008	1073	941	1034	986	942	1042	918	1214	705	660	773	1019
2009	639	669	802	755	674	1814	1479	1273	402	956	884	941
2010	998	813	820	851	756	1756	1910	1970	1128	1194	1179	1153
2011	786	758	780	763	241	853	1236	1429	736	955	1012	1000

Source: IITM rainfall data to calculate MOX values

TABLE 2: STATISTICS FOR MOX VALUES FOR THE YEAR 1982-2011 FOR ALL MONSOON MONTHS

Monsoon	For Assam-Meghalaya (ASMEG)				For Saurastra Katch and Diu (SAUKU)				For Madhya Maharastra (MADMH)			
	JUN	JULY	AUG	SEPT	JUN	JULY	AUG	SEPT	JUN	JULY	AUG	SEPT
Mean	909	918	942	951	972	1076	1045	1062	1126	1029	1028	1021
Standard Deviation	192	166	162	155	747	487	454	465	408	268	244	227
Variance	36674	27644	26276	24001	557949	236943	205882	216201	166799	72082	59370	51743
Coeff of Variance	21.07	18.12	17.20	16.29	76.86	45.25	43.40	43.78	36.27	26.08	23.69	22.27

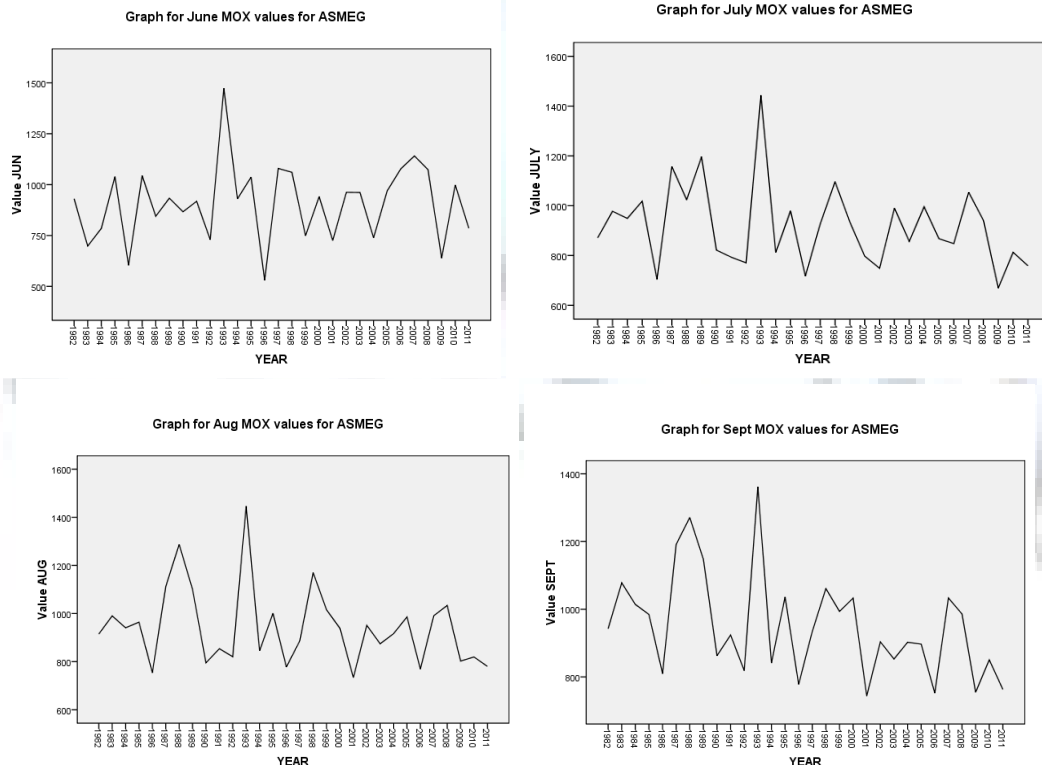Source: IITM rainfall data to calculate MOX values

TABLE 3: CORRELATION ANALYSIS FOR MOX VALUES FOR SELECT SUB DIVISIONS FOR ALL THE 4 MONSOON MONTHS

| Sub	Months	Particulars	For Assam-Meghalaya (ASMEG)				For Saurastra Katch and Diu (SAUKU)				For Madhya Maharastra (MADMH)			
			JUN	JULY	AUG	SEPT	JUN	JULY	AUG	SEPT	JUN	JULY	AUG	SEPT
ASMEG	JUN	Pearson	1.00	.693**	.592**	.542**	-	-0.12	-0.06	0.06	0.03	0.13	0.20	0.10
		Sig. (2-tailed)		0.00	0.00	0.00	0.16	0.54	0.74	0.75	0.87	0.48	0.30	0.60
	JULY	Pearson	.693**	1.00	.888**	.871**	-	-0.27	-0.23	-0.17	-0.13	-0.08	-0.05	0.00
		Sig. (2-tailed)	0.00		0.00	0.00	0.78	0.15	0.22	0.36	0.48	0.66	0.80	1.00
	AUG	Pearson	.592**	.888**	1.00	.943**	-	-0.16	-0.24	-0.16	-0.19	-0.06	-0.09	0.06
		Sig. (2-tailed)	0.00	0.00		0.00	0.43	0.41	0.20	0.41	0.31	0.76	0.63	0.76
	SEP	Pearson	.542**	.871**	.943**	1.00	-	-0.26	-0.30	-0.23	-0.17	-0.10	-0.14	-0.03
		Sig. (2-tailed)	0.00	0.00	0.00		0.33	0.17	0.11	0.23	0.38	0.61	0.46	0.86
SAUKU	JUN	Pearson	-0.26	-0.05	-0.15	-0.18	1.00	0.36	0.27	0.21	0.36	0.16	0.17	0.26
		Sig. (2-tailed)	0.16	0.78	0.43	0.33		0.05	0.15	0.27	0.05	0.41	0.38	0.16
	JULY	Pearson	-0.12	-0.27	-0.16	-0.26	0.36	1.00	.836**	.768**	0.06	.374*	0.35	.499**
		Sig. (2-tailed)	0.54	0.15	0.41	0.17	0.05		0.00	0.00	0.76	0.04	0.06	0.01
	AUG	Pearson	-0.06	-0.23	-0.24	-0.30	0.27	.836**	1.00	.940**	0.07	.367*	.443*	.558**
		Sig. (2-tailed)	0.74	0.22	0.20	0.11	0.15	0.00		0.00	0.71	0.05	0.01	0.00
	SEP	Pearson	0.06	-0.17	-0.16	-0.23	0.21	.768**	.940**	1.00	0.07	.437*	.507**	.632**
		Sig. (2-tailed)	0.75	0.36	0.41	0.23	0.27	0.00	0.00		0.73	0.02	0.00	0.00
MADMH	JUN	Pearson	0.03	-0.13	-0.19	-0.17	0.36	0.06	0.07	0.07	1.00	.687**	.559**	0.33
		Sig. (2-tailed)	0.87	0.48	0.31	0.38	0.05	0.76	0.71	0.73		0.00	0.00	0.08
	JULY	Pearson	0.13	-0.08	-0.06	-0.10	0.16	.374*	.367*	.437*	.687**	1.00	.870**	.745**
		Sig. (2-tailed)	0.48	0.66	0.76	0.61	0.41	0.04	0.05	0.02	0.00		0.00	0.00
	AUG	Pearson	0.20	-0.05	-0.09	-0.14	0.17	0.35	.443*	.507**	.559**	.870**	1.00	.889**
		Sig. (2-tailed)	0.30	0.80	0.63	0.46	0.38	0.06	0.01	0.00	0.00	0.00		0.00
	SEP	Pearson	0.10	0.00	0.06	-0.03	0.26	.499**	.558**	.632**	0.33	.745**	.889**	1.00
		Sig. (2-tailed)	0.60	1.00	0.76	0.86	0.16	0.01	0.00	0.00	0.08	0.00	0.00	

**Correlation is significant at the 0.01 level (2-tailed).　　*Correlation is significant at the 0.05 level (2-tailed).

Source: IITM rainfall data to calculate MOX statistical values

GRAPH 1; (A),(B),(C),(D): ASSAM MEGHHALAYA SUB DIVISION MOX VALUES FOR JUNE,JULY,AUG,SEPT MONTHS OF MONSOON SEASON

Graph for June MOX values for ASMEG

Graph for July MOX values for ASMEG

Graph for Aug MOX values for ASMEG

Graph for Sept MOX values for ASMEG

GRAPH 2(A),(B),(C): TREND FOR SEPT MOX VALUES FOR YEARS 1982-2011(30 YEARS) FOR SELECT SUBDIVISIONS
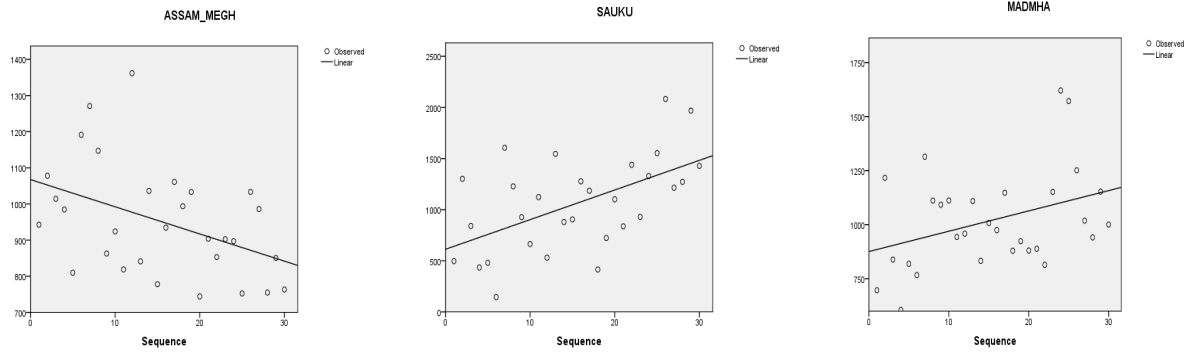
THE DEVELOPMENT OF SMALL SCALE INDUSTRIES IN MEGHALAYA

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ABSTRACT

Development of Small scale industries depends upon the availability of natural resources & finance to entrepreneurs and the other factors include population, connectivity, rural-urban combination, poverty etc. The establishment of small level business in a particular region determines the influence of microfinance of that region or the economic status of its people, existence of financial institutions, NGOs, NBFCs etc. The small-scale industries (SSIs) usually involve the units engaged in producing the items which require raw material available locally at cheaper rates with good market for the products being manufactured by them. In order to conduct the study we collected the data from both secondary and primary sources, proper statistical procedures were conducted to process and analyse the information, from the information that we have it is realized that in MEGHALAYA the number of small scale industries has increased with 41 percent growth during 2001-02 to 2008-09, the number of employs working in these SSIs also increased at the same pace but there is vast intra regional disparity associated with location of these small scale units because of population, economic and socio-cultural differences among hilly and plain areas of the state and these SSIs are engaged in more than 24 different types of activities. The formal financial support through various schemes was only 14 percent and remained 86 percent derived from the sources like; formal mortgage finance, informal finance & semiformal finance and own finance.

KEYWORDS

economic status, microfinance, natural resources, rural-urban population and Small scale industries.

INTRODUCTION

Financing to develop the small scale business in the state is being carried through various ways such as; informal, semiformal and formal financial institutions as well as through own financing. The establishment of small level business in a particular region determines the influence of microfinance of that region, where the influence is measured in terms of number of SSIs & cottage units, trends in the growth of small business, employment in them, their production etc. and these things do not use to be uniform throughout the state and the country. In Meghalaya there is the vast intra regional disparity associated with the location of the small scale units because of the population, economic and socio-cultural differences among the hilly and plain areas of the state. The overall growth of SSIs was recorded to be 41 percent from 2001-02 to 2008-09 with average growth of 4 percent per year. The formal financial support through various schemes was only 14 percent and remained 86 percent derived from the sources like; formal mortgage finance (40 percent), informal finance & semiformal finance (20 percent) and own finance (25 percent). So if there would have been the more support through schemes the growth might have been the maximum. Besides, the other sources also seem to be weak in their operational effect and they were not being able to induce the impressive growth to satisfy the objectives of the microfinance. Further the financial position of Government and the financial status of the people in the state together decide the fate of small scale business.

REVIEW OF LITERATURE

The Development of small scale industries were addressed by researches and some important studies are reviewed below.

A substantial number of employed and underemployed belongs the village and small industries group, setting up of small scale and village industries will provide employment to them in occupations in which they have been traditionally trained and for which they posses equipments. The committee realizes the necessity of introducing better techniques in the village industry, so that they can keep pace with the progressively expanding economy and do not become unsuitable tomorrow (The Village and Small scale Industries Committee Report (1955), popularly known as KARVE Committee Report).

The small scale industrial sector is an integral part of not only the industrial sector, but also of the country's economic structure as a whole. If small scale industries are properly developed, they can provide a large volume of employment, can raise income and standard of living of the people in lower income group and can bring about more prosperity and balanced economic development. (Prasad, 1983)

Despite numerous policy measures during the past 4 decades, Indian small scale units have remained mostly tiny, technologically backward and tacking in competitive strength. Not with standing their lack of competitive strength, SSI units in India could survive due to product and geographical market segmentation and policy protection (TENDULKAR et. al. 1997).

With the growth of the small sector both in terms of size, scope and number of participants, there is however now a need for developing a more formal regulatory (SAVITA SHANKAR 2009).

STATEMENT OF THE PROBLEM

The microfinance in MEGHALAYA is an important issue due to the presence of different organisations involved in the process which are because of the combination of plain forward and hilly backward areas existing in the state. The main reason behind microfinance is to let the people to set up their own income generating units, now it becomes an important matter to know the development of small scale business in the state.

RESEARCH METHODOLOGY

SOURCE OF DATA

The data was collected from both primary and secondary sources. For the primary collection of data the important departments such as; Directorate of economics and statistics, DICs, census department, revenue departments, Handloom, Handicraft, sericulture and KHADI VILLAGE industries department etc.

were personally visited and for secondary data the information was collected from official websites of these departments and from other sources like reports from Government notifications, NGOs, research papers, books, TV news, websites and internet search for various questions.

SAMPLING DESIGN

The selection of sample is based on non random convenient method where the important departments and institutions were selected for receiving the information required for answering the questionnaires.

STATISTICAL TOOLS USED

Average, mean, simple correlations, graphs, diagrams, cross tabulation and percentage analysis etc. were used to analyze and interpret the data.

METHOD OF DATA COLLECTION

A structured interview schedule was prepared by the researcher and used for collecting data from the officials of Directorate of economics and statistics, DICs, census department, revenue departments, Handloom, Handicraft, sericulture and KHADI VILLAGE industries department.

ANALYSIS AND INTERPRETATION OF DATA

SMALL SCALE INDUSTRIES

Economy of Meghalaya is largely based on agriculture and allied activities. There are few industries and most of them are small and medium enterprises. Like almost all the other northeastern states, Meghalaya is largely dependent on wood and wood-based industries. The small-scale industries (SSIs) in Meghalaya are mainly engaged in producing food items, wood furniture, non-metallic products, printing presses, or deal in repairs and services. The other activities being carried out by them include tailoring, cane and bamboo works, flour and rice mills, weaving and baking. The number of small-scale units has increased but the average number of workers per unit has barely increased, and the average net value of output per worker has actually declined. There is also the vast inter regional disparity associated with the location of these units with EAST KHASI HILLS accounting for 40 per cent of the total number of units, followed by WEST GARO HILLS (20 per cent), JAINTIA HILLS (13 per cent) AND RI BHOI (11 per cent). The remaining districts account for less than 10 per cent of the SSIs in the state. The employment effects of this skewed distribution of industry are clear, as almost half (46 per cent) of the SSI employment occurs in the EAST KHASI HILLS, with the share of SSI employment in the other districts mirroring the distribution of units.

NUMBER OF SSIs & EMPLOYMENT IN THEM

There were 4,070 SSIs with employment capacity of 23,052 persons in 2001-02 and this went up to 6,842 SSIs with employment capacity 37,656 persons in 2008-09, so the growth of 41 percent was recorded in SSIs during these nine years. The detail of small scale industries and the employment generated from 1997 to 2009 is given below:

TABLE 1: YEAR WISE EMPLOYMENT IN SMALL SCALE INDUSTRIES REGISTERED WITH DIRECTORATE OF INDUSTRIES

Year	No. of Small Scale Industries	No. of Persons Employed	Increase in the number of persons employed (Nos.)
1997-1998	3008	17259	1125
1998-1999	3270	18585	1326
1999-2000	3530	20086	1501
2000-2001	3803	21416	1330
2001-2002	4070	23052	1636
2002-2003	4341	24332	1280
2003-2004	4664	26237	1905
2004-2005	5132	28894	2657
2005-2006	5591	31467	2573
2006-2007	6107	34158	2691
2007-2008	6511	36193	2035
2008-2009	6842	37656	1463

Source: Statistical Handbook Meghalaya 2010-11 & Statistical Handbook Meghalaya 2008-09

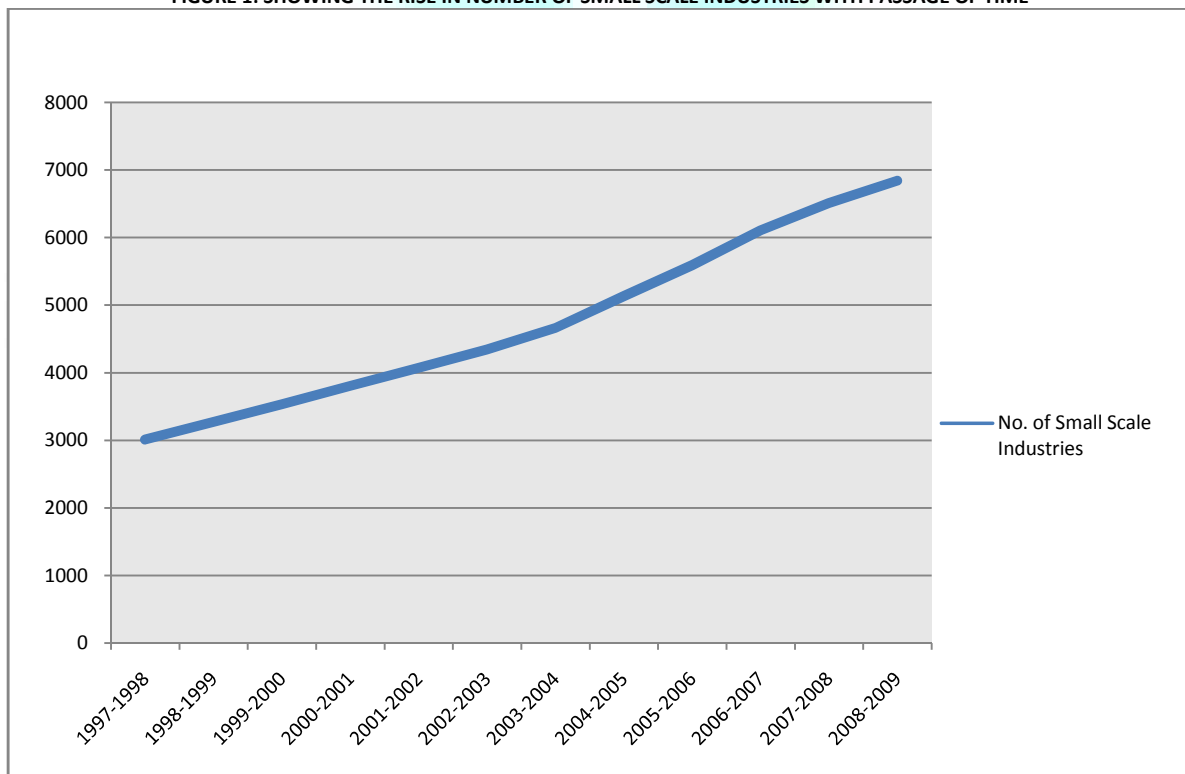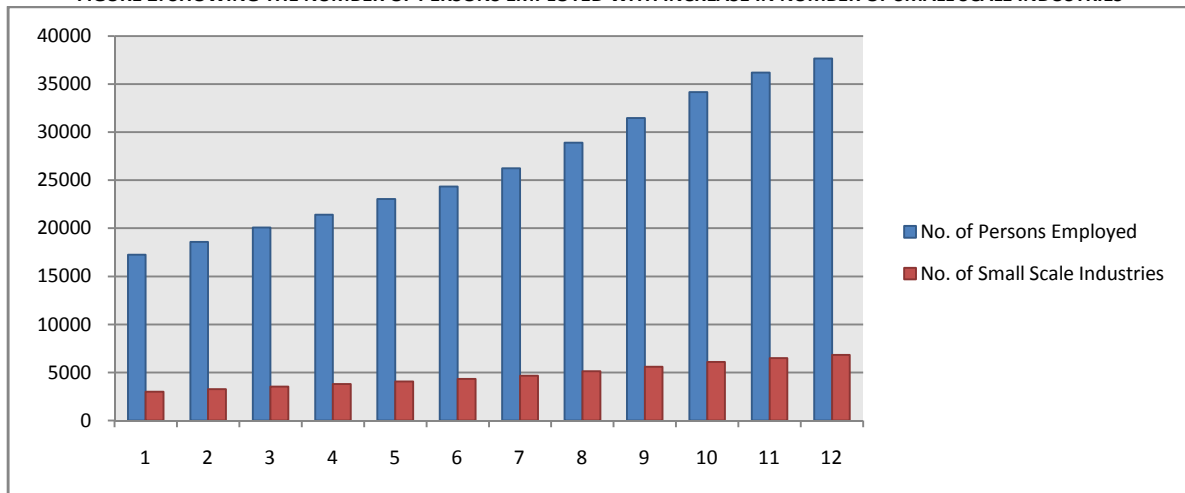**FIGURE 1: SHOWING THE RISE IN NUMBER OF SMALL SCALE INDUSTRIES WITH PASSAGE OF TIME**

FIGURE 2: SHOWING THE NUMBER OF PERSONS EMPLOYED WITH INCREASE IN NUMBER OF SMALL SCALE INDUSTRIES


It is clear that the employment has been increased with the increase of small scale industries in the state. In year 1997-98 there was 3,008 number of small scale industries with employment capacity of 17,259 persons which increased up to 6,842 with 37,656 number of employs in year 2008-09 and the average increase in number of SSIs and the employment was observed about 320 SSIs & 1,794 persons per year.

DISTRIBUTION OF SMALL SCALE INDUSTRIES

EAST KHASI HILLS have the maximum number (3087) of small scale industries providing employment to about 5173 persons followed by RI-BHOI with 331 SSIs and 4288 employs, JAINTA HILLS with 836 SSIs 1310 employs, WEST KHASI HILLS, EAST GARO HILLS with 683 SSIs and 316 employs, WEST GARO HILLS with 563 SSIs and 607 employs and SOUTH GARO HILLS with 164 SSIs and 47 employs. The EAST GARO HILLS have the large number of SSIs but provides employment to lower number of persons as compared to WEST GARO HILLS.

FIGURE 3: SHOWING THE DISTRICT WISE INVESTMENT & EMPLOYMENT IN SMALL SCALE INDUSTRIES DURING 2007-08 AND 2008-09
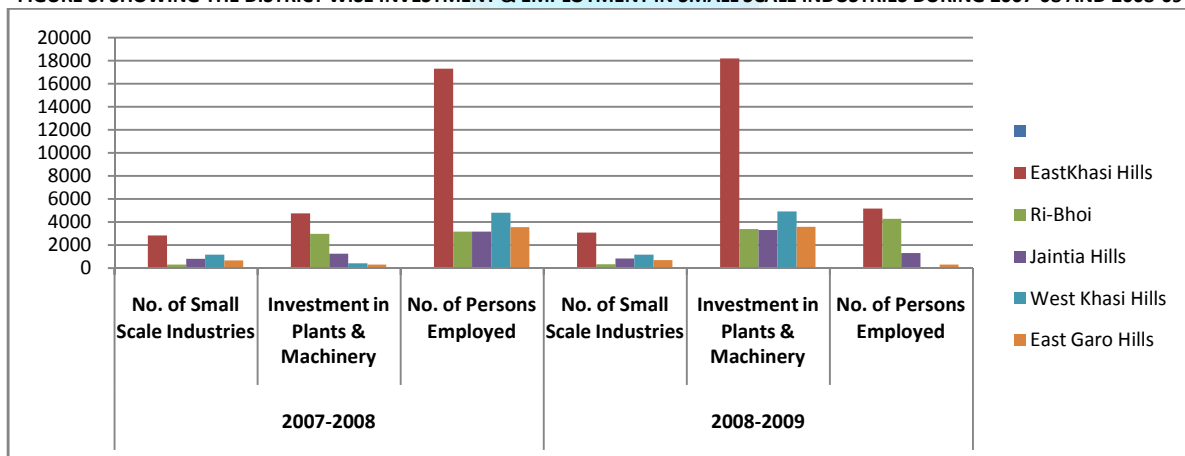
Note: Investment in Rupees Lakhs.

THE IMPACT OF ECONOMY ON DEVELOPMENT OF SSIS IN THE VARIOUS DISTRICTS OF MEGHALAYA

The economy of any state depends upon the development of business in that state and vice versa, the various districts of Meghalaya show variation in the number of small business units because of the economic variations prevailing across these districts due to many factors like; connectivity, population variations, finance available, agriculture & industrialization, market & consumption, etc. where the population is an important factor. The population of Meghalaya is 2,964,007 and the maximum 26 percent is established in EAST KHASI HILLS which is followed by WEST GARO HILLS constituting 23 percent and the minimum population exists in SOUTH GARO HILLS constituting 4.32 percent. The establishment of small scale industries in these districts occur according their population and economy except in WEST GARO HILLS where percentage of SSIs is far below than population existing there and also shares common situation with per capita income, this indicates along with population the other factors also matter in developing the business in any region. The development of small scale business in a particular region mostly depends upon the economic status of its people. The following tables and figures show the clear picture of relations existing between population, poverty, per capita income and the small-scale business:

TABLE 2: SHOWING THE NUMBER OF SSIS IN VARIOUS DISTRICTS OF MEGHALAYA

District	No. of Small Scale Industries	Percentage
EASTKHASI HILLS	3087	45
RI-BHOI	331	5
JAINTIA HILLS	836	12
WEST KHASI HILLS	1178	17
EAST GARO HILLS	683	10
WEST GARO HILLS	563	8
SOUTH GARO HILLS	164	3
Total	**6842**	**100**

TABLE 3: SHOWING THE PER CAPITA INCOME OF VARIOUS DISTRICTS IN MEGHALAYA, 2007-08

District	Per capita income in Rupees	Percentage
EASTKHASI HILLS	31,202	20.615
RI-BHOI	19,866	13.125
JAINTIA HILLS	26,015	17.188
WEST KHASI HILLS	12,592	8.319
EAST GARO HILLS	15,365	10.15
WEST GARO HILLS	17,566	11.605
SOUTH GARO HILLS	28,749	18.99
Total	**22,352**	

Source: Directorate of economics and statistics, Meghalaya 2007-08

FIGURE 4: SHOWING THE RELATION BETWEEN NUMBER OF SSIS AND PER CAPITA INCOME IN VARIOUS DISTRICTS OF MEGHALAYA
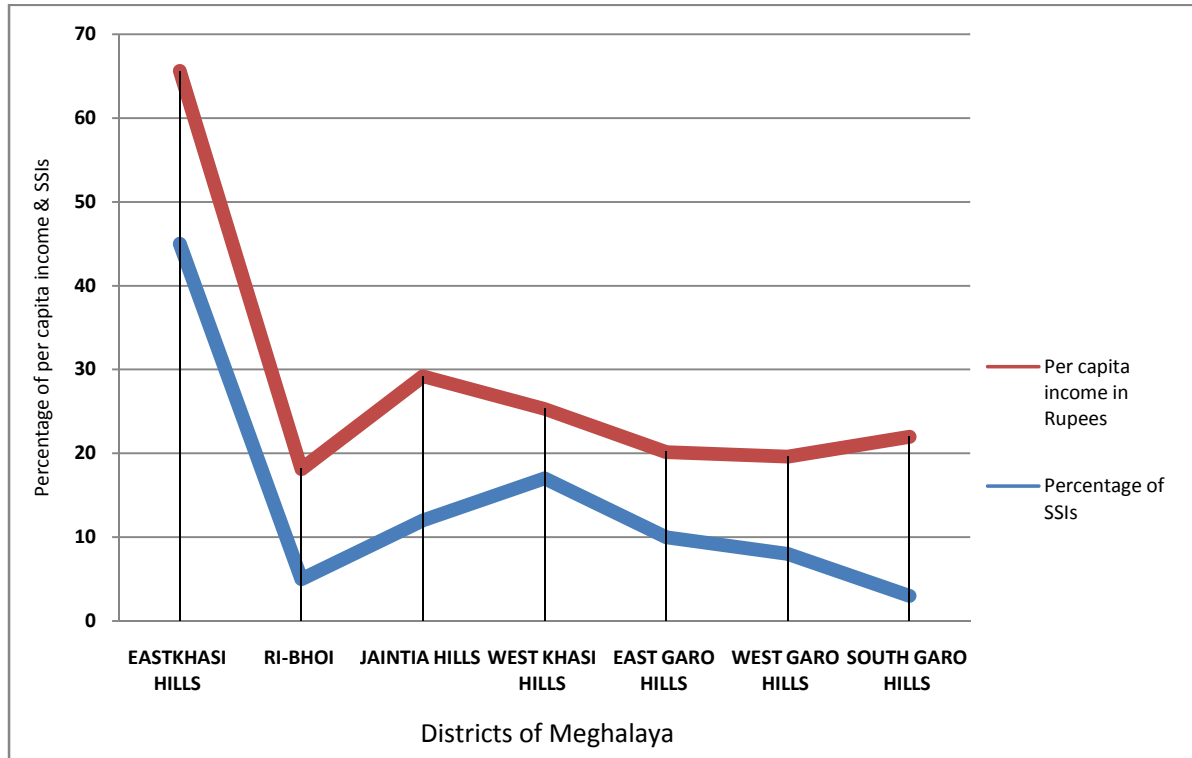
TABLE 4: SHOWING THE POPULATION OF VARIOUS DISTRICTS IN MEGHALAYA, 2007-08

District	Population	percentage
EASTKHASI HILLS	7,70,742	26
RI-BHOI	2,30,007	7.76
JAINTIA HILLS	3,52,023	11.88
WEST KHASI HILLS	4,51,715	15.24
EAST GARO HILLS	3,55,681	12
WEST GARO HILLS	6,75,794	22.80
SOUTH GARO HILLS	1,28,045	4.32
Total	**2,964,007**	**100**

Source: Directorate of economics and statistics, Meghalaya 2007-08.

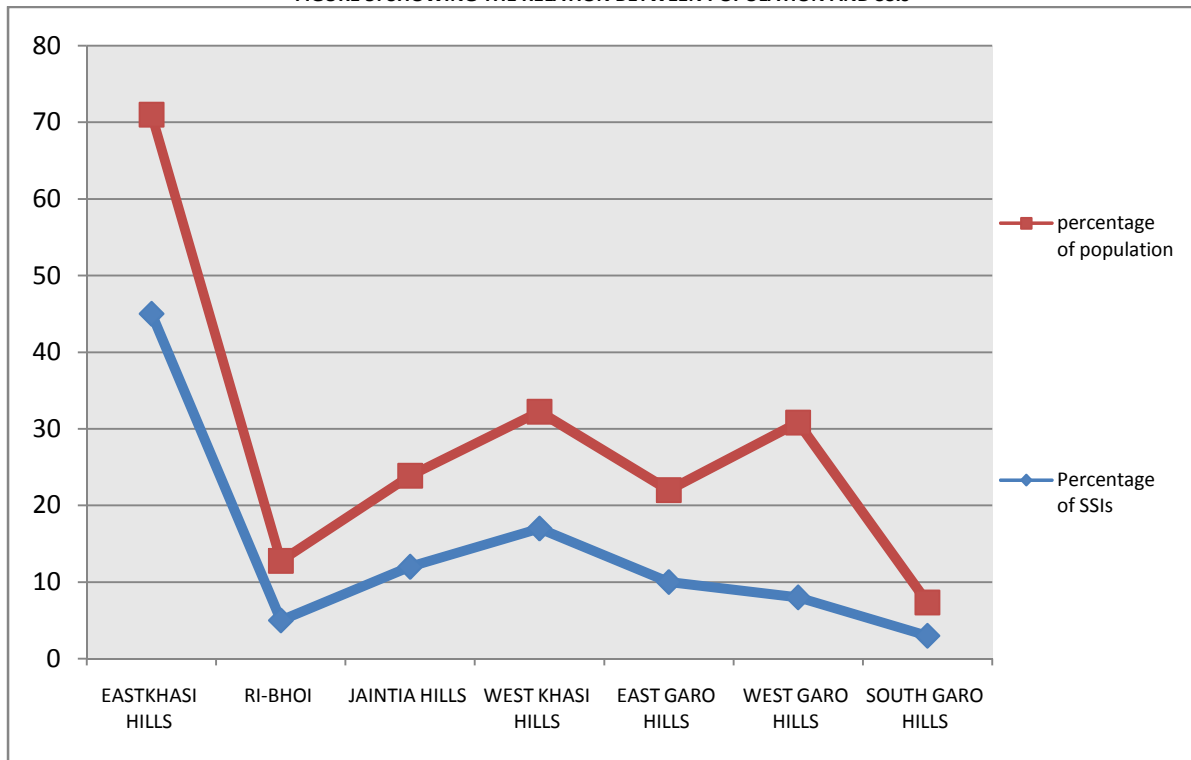**FIGURE 5: SHOWING THE RELATION BETWEEN POPULATION AND SSIs**

FIGURE 6: SHOWING THE RELATION BETWEEN POPULATION AND THE PER CAPITA INCOME IN VARIOUS DISTRICTS OF MEGHALAYA
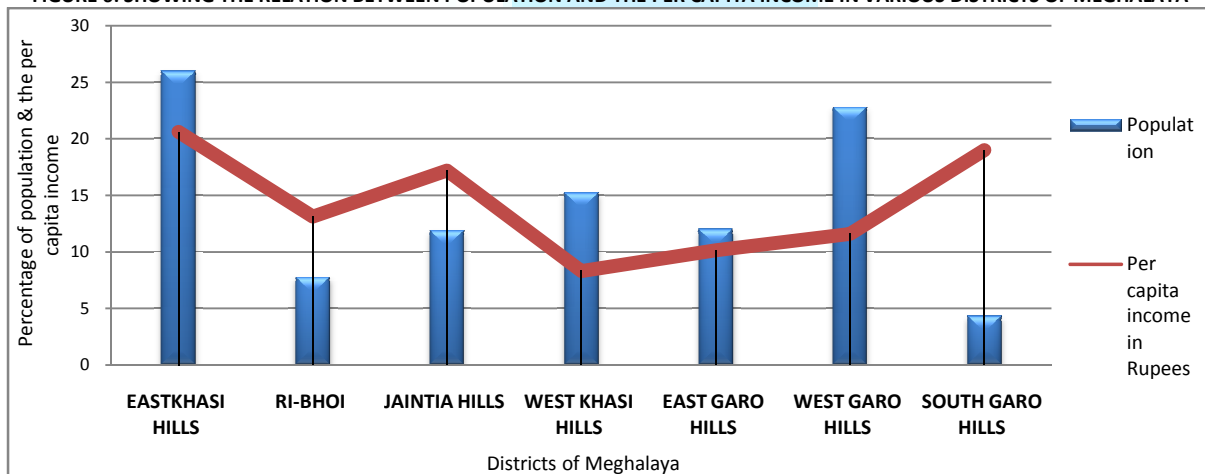

TABLE 5: SHOWING THE DISTRICT WISE GSDP IN MEGHALAYA, 2007-08

District	GSDP (amount in rupees crores)	Percentage GSDP
EASTKHASI HILLS	2240.60	39.81
RI-BHOI	415.92	7.39
JAINTIA HILLS	843.11	14.98
WEST KHASI HILLS	404.12	7.18
EAST GARO HILLS	418.75	7.44
WEST GARO HILLS	988.88	17.57
SOUTH GARO HILLS	316.87	5.63
Total	5628.25	100

Source: Directorate of economics and statistics, Meghalaya, 2007-08.

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FIGURE 7: SHOWING THE RELATION BETWEEN GSDP AND PER CAPITA INCOME IN ALL DISTRICTS OF MEGHALAYA
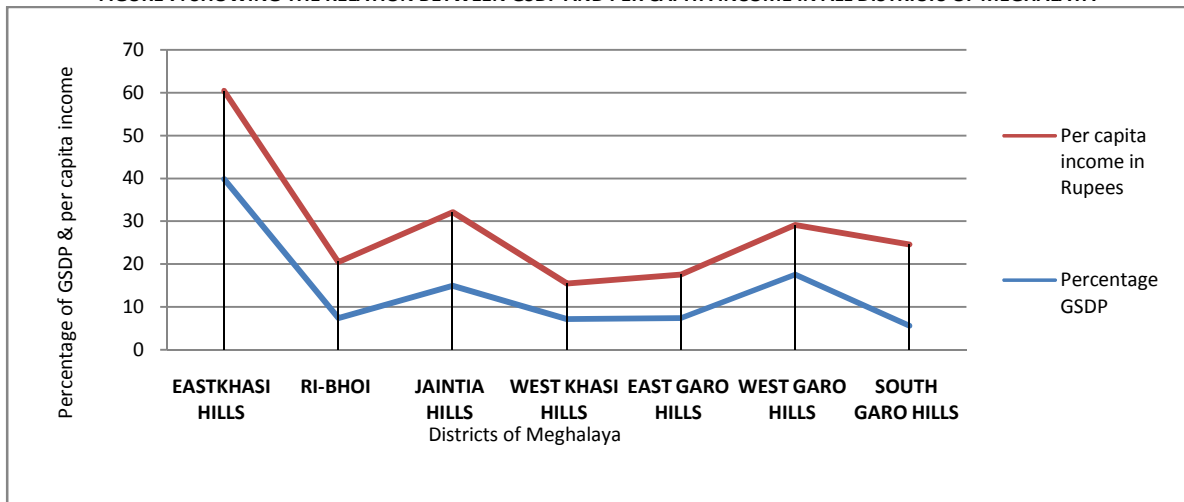

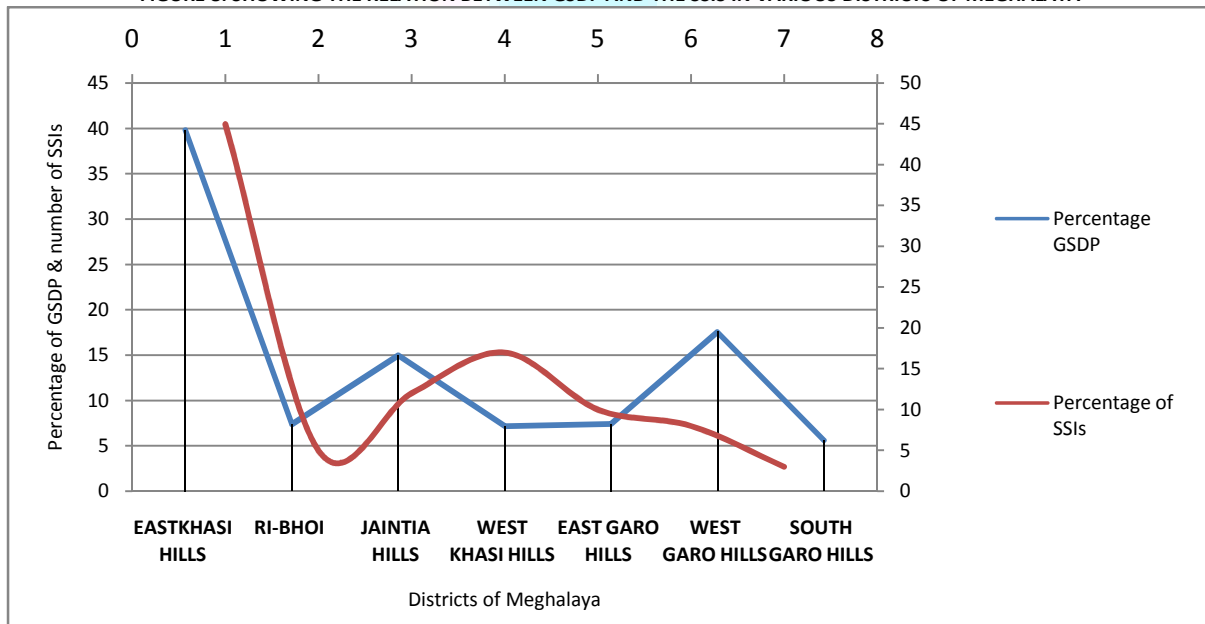FIGURE 8: SHOWING THE RELATION BETWEEN GSDP AND THE SSIS IN VARIOUS DISTRICTS OF MEGHALAYA

TABLE 6: SHOWING THE BPL HOUSEHOLDS IN MEGHALAYA

District	Total Households	BPL Households	Percentage of BPL Households in each district	Percentage of total BPL Households in Meghalaya
EASTKHASI HILLS	109115	50997	46.74	24.9
RI-BHOI	32590	16276	49.94	7.9
JAINTIA HILLS	49771	19663	39.51	9.6
WEST KHASI HILLS	63951	30480	47.66	14.9
EAST GARO HILLS	50398	28192	55.94	13.7
WEST GARO HILLS	95699	51400	53.71	25
SOUTH GARO HILLS	18148	8226	45.33	4
Total	**419672**	**205234**	**48.90**	**100**

Source: BPL census, 2002

FIGURE 9: SHOWING THE RELATION BETWEEN POPULATION AND BPL HOUSEHOLDS IN MEGHALAYA
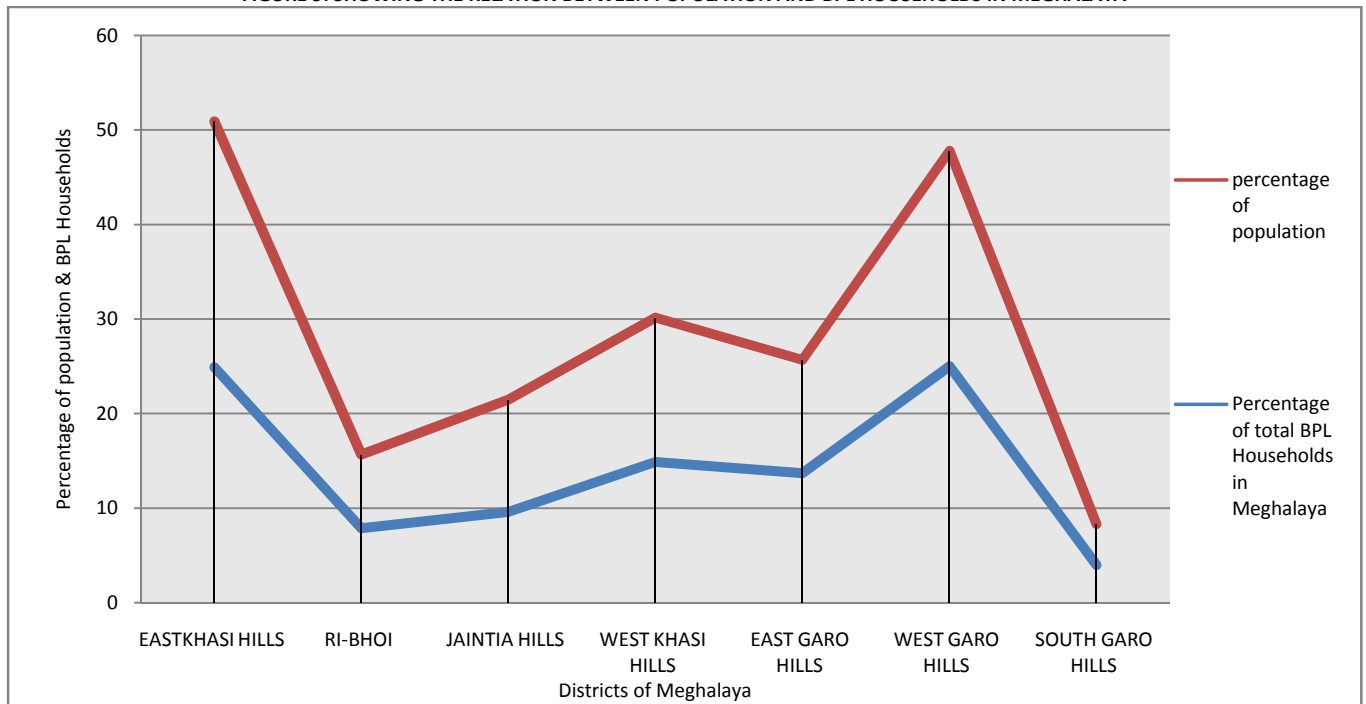
TYPES OF SMALL SCALE INDUSTRIES IN MEGHALAYA

There are 24 different types of small scale industries in Meghalaya involved in activities such as; Wooden furniture & fixtures, cement, leather, stone, tailoring, lime making, bakery, printing, Steel Based Industries, Stone products, Dry cleaning, Motor Vehicle repairing & servicing, Knitting & Embroidery, Black smithy, Atta Chakki, Rice mill, Flourmill, cane & bamboo, and handloom & handicrafts etc. but the business is mainly concentrated in the activities like; Wooden furniture & fixture, Steel Based Industries, Tailoring, Lime making, saw mills, Beetle nut preservation, Motor Vehicle repairing & servicing, Bakery, Cane & Bamboo works, Weaving/Handloom, Atta grinders, Rice mills & Flour mills. These twelve types of SSIs account for about 4,700 SSIs out of total 6,842 of the state and provide employment opportunity to about 26,673 persons where the total employment in all SSIs is about 37,656 persons.

SITUATION OF GROWTH WITH DIFFERENT TYPES OF SSIs

The number of small scale industries has increased during year 2007 to 2009. The total number in 2006-07 was 6107 which increased to 6511 and 6842 in 2008 and 2009 respectively, where some industries have shown more changes such as; wooden furniture and fixtures, tailoring, bakery, black smithy, cane and bamboo works etc. with passage of time but there are also some industries such as; leather based industry, lime making, printing press, knitting and embroidery, rice & the floor mills, saw mills etc. have shown slight or almost no change in the size during these three years. All the districts of Meghalaya are sharing the common pattern of type of these industries.

Employment in these industries has shown the proportional change with the change in number of the industries, therefore, the employment number increased in the SSIs like; wooden furniture and fixtures, tailoring, bakery, black smithy, cane and bamboo works etc. but it remained almost static in the industries like; leather based industry, lime making, printing press, knitting and embroidery, rice & the floor mills, saw mills etc.. The total employment in all type of industries was 34,158 persons during 2006-07 which increased to 36193 and 37656 persons during the years 2007-08 and 2008-09 respectively.

FIGURE 10: SHOWING THE CHANGE IN SIZE OF DIFFERENT TYPES OF SMALL SCALE INDUSTRIES DURING 2007, 2008 AND 2009
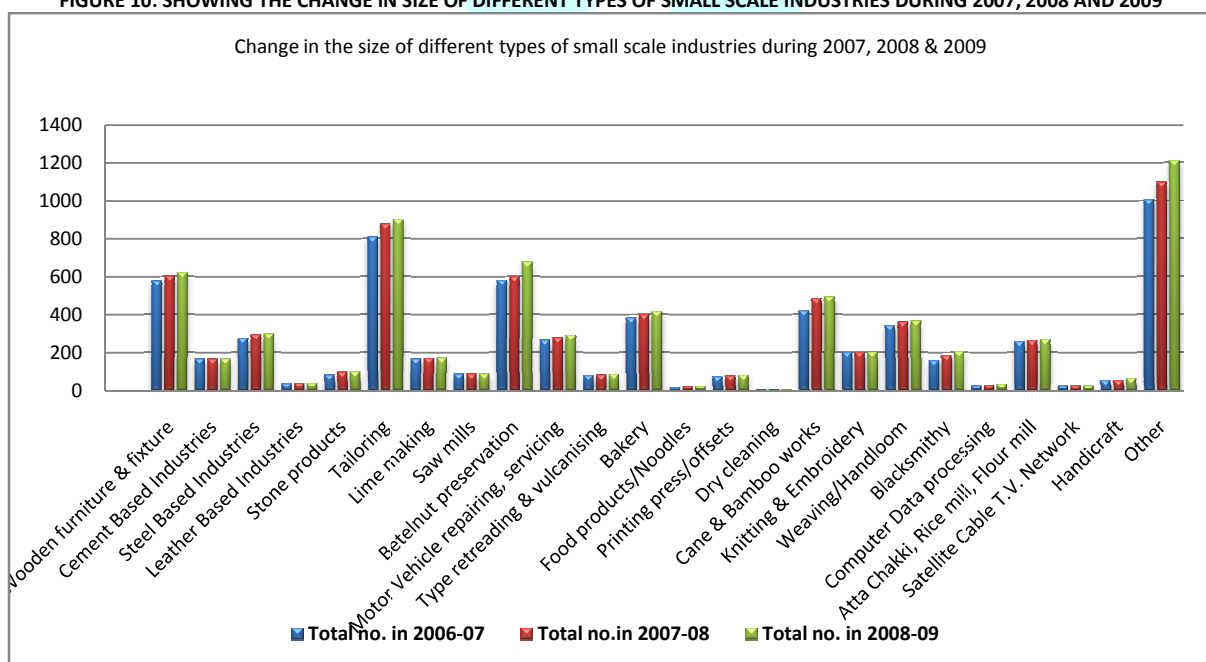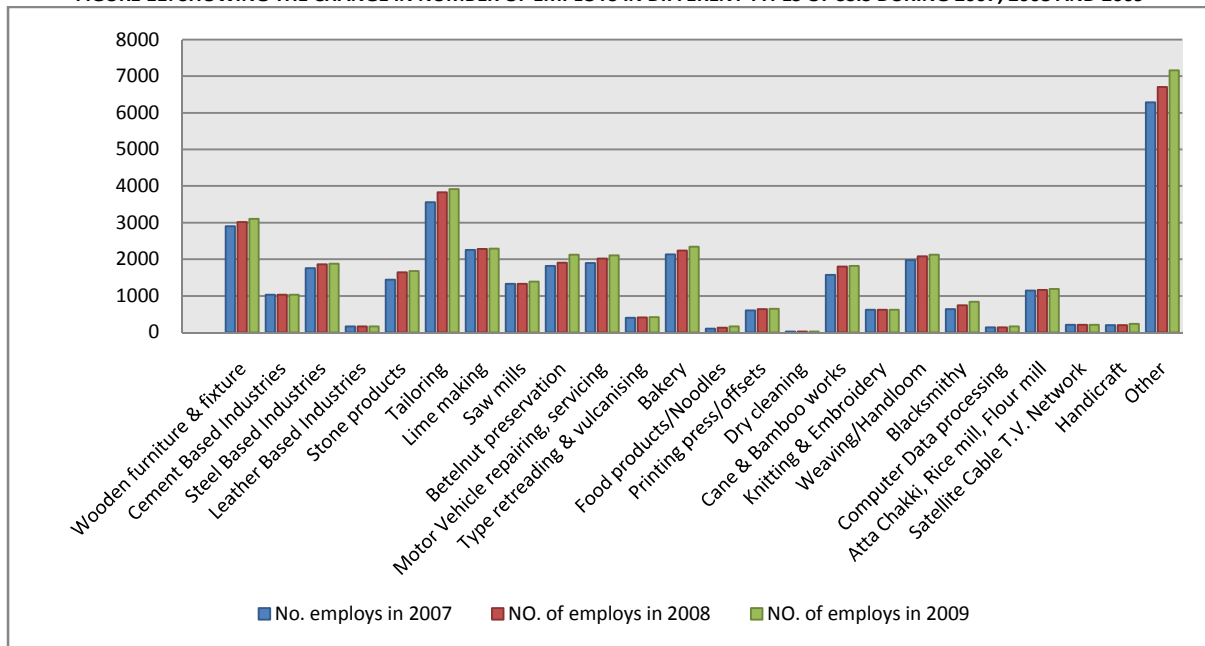
FIGURE 11: SHOWING THE CHANGE IN NUMBER OF EMPLOYS IN DIFFERENT TYPES OF SSIS DURING 2007, 2008 AND 2009

KHADI VILLAGE INDUSTRIES PROJECT

KHADI Village industry projects are being implemented under the rural employment generation program (REGP). REGP is the flagship program of KVIC/Ministry of MSME implemented in North Eastern Region. In Meghalaya the KVI projects cover the fields like; Agro-based & Food Processing, Forest, Mineral, Chemical based projects, rural engineering & bio-technology, service/textiles and handloom, paper & fiber industry projects. There were total 101 KVI projects in Meghalaya during the year 2006-07 which provided employment to over 1,063 persons from the seven fields i.e., Agro-based & Food Processing, Forest, Mineral, Chemical based projects, rural engineering & bio-technology, service/textiles and handloom, paper & fiber industry. The number of these projects went up to 382 in 2007-08 with employment capacity of 2,288 persons that means the 281 projects with employment capacity of 1,225 persons increased during the one year's duration.

FIGURE 12: SHOWING THE DIFFERENT TYPES OF KVI PROJECTS AND THEIR NUMBER IN SEVEN DISTRICTS OF MEGHALAYA DURING 2007-08
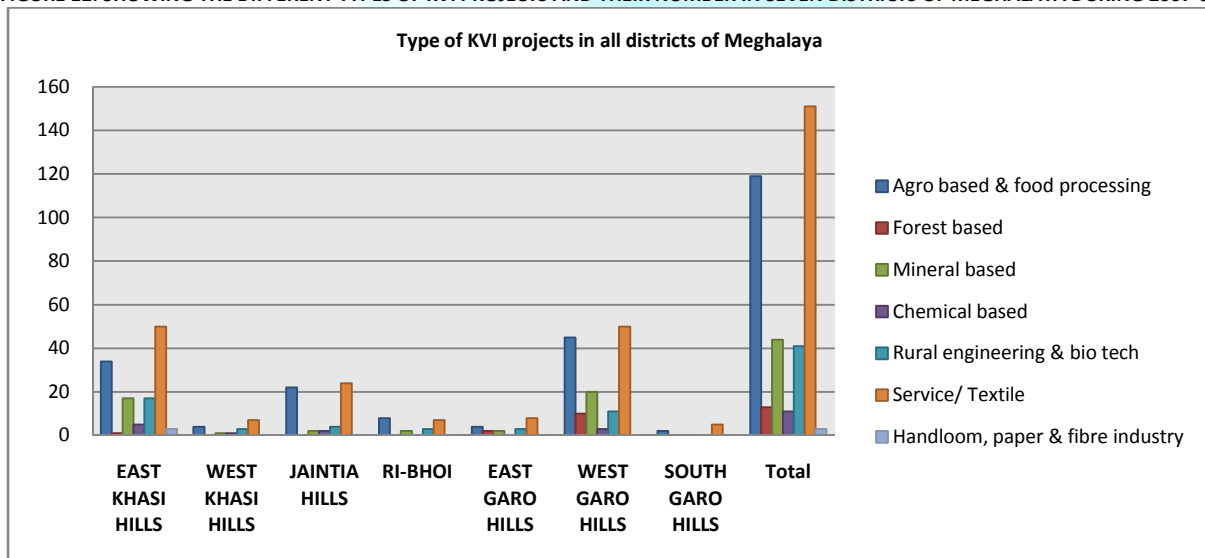
FIGURE 13: SHOWING THE DISTRICT WISE INCREASE IN THE NUMBER OF KVI PROJECTS DURING 2006-07 AND 2007-08
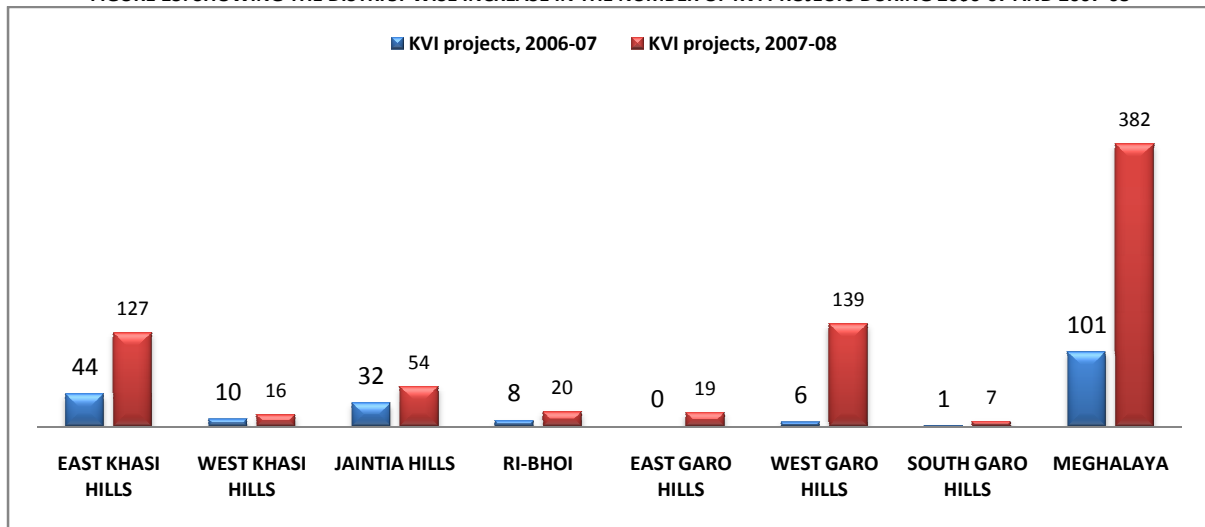

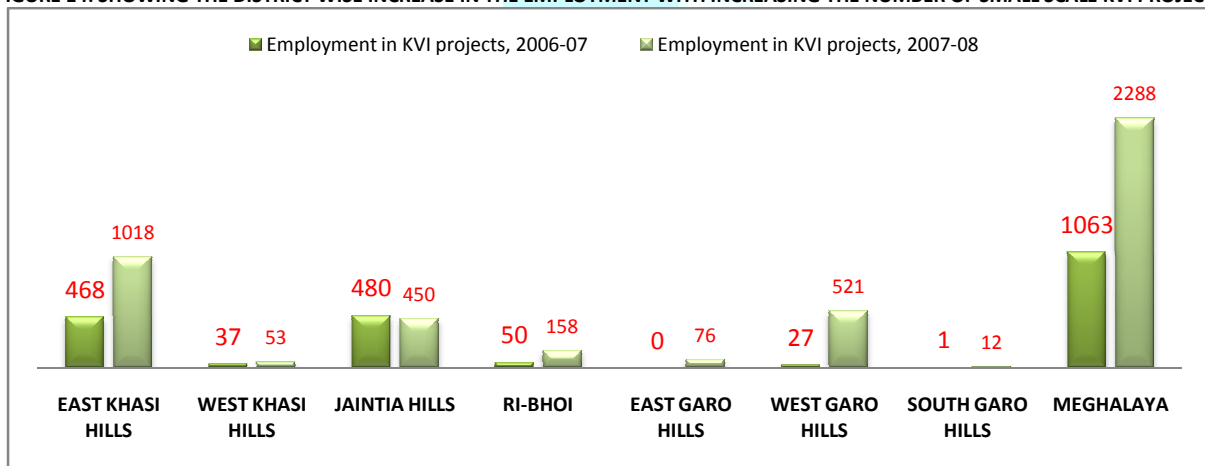**FIGURE 14: SHOWING THE DISTRICT WISE INCREASE IN THE EMPLOYMENT WITH INCREASING THE NUMBER OF SMALL SCALE KVI PROJECTS**
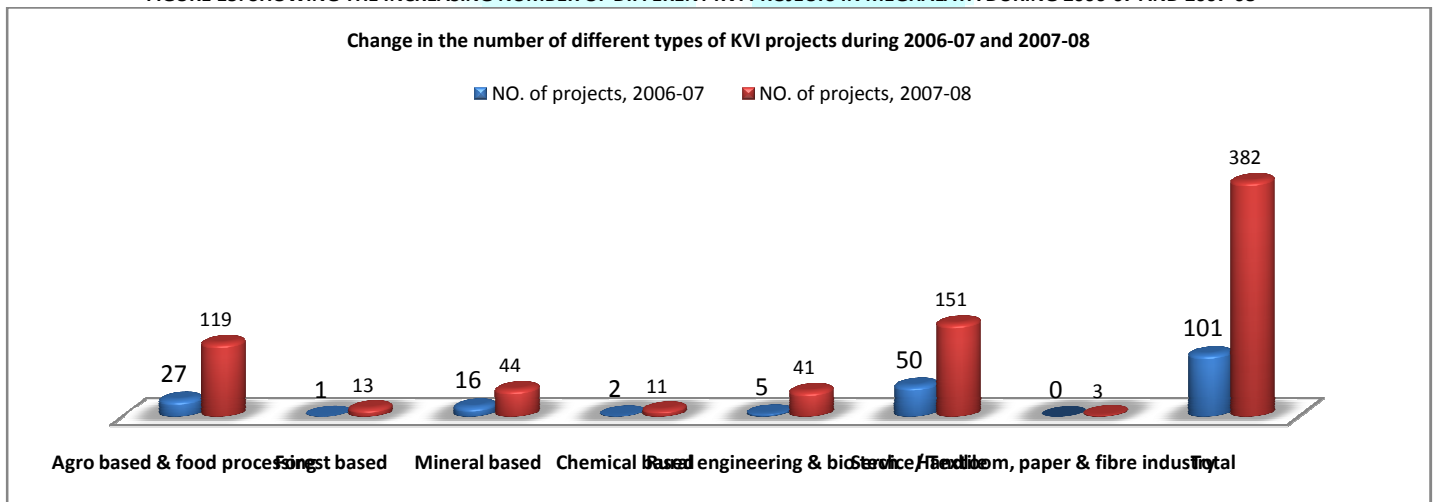

FIGURE 15: SHOWING THE INCREASING NUMBER OF DIFFERENT KVI PROJECTS IN MEGHALAYA DURING 2006-07 AND 2007-08

HANDICRAFTS

TABLE 7: CRAFTSMEN COVERED UNDER VARIOUS SCHEMES OF HANDICRAFTS SECTOR IN MEGHALAYA, (2008-2009)

Particular	(In Nos.)
Craftsmen Covered	15291

Source: LOK SABHA Starred Question No. 297, dated on 23.07.2009.

TABLE 8: HANDICRAFTS ARTISANS BENEFITED UNDER AHVY IN MEGHALAYA, (2003-2004 TO 2009-2010)

Year	No. of Artisans
2003-04	0
2004-05	0
2005-06	300
2006-07	300
2007-08	500
2008-09	500
2009-10	500

ABBR: AHVY: AMBEDKAR HASTSHILP VIKAS YOJANA.

SOURCE: LOK SABHA UNSTARRED QUESTION NO. 3772, DATED 19.12.2006 & LOK SABHA UNSTARRED QUESTION NO. 4862, 26.08.2010

HANDLOOMS AND TEXTILES

TABLE 9: DISTRIBUTION OF HANDLOOM IN MEGHALAYA

Working looms	Idle looms	Total looms
7,783	418	8, 201

Source: Census of Handloom in India

TABLE 10: NUMBER OF WEAVING TRAINING CENTERS, WEAVING DEMONSTRATION CENTERS, HANDLOOM DEMONSTRATION-CUM- PRODUCTION CENTERS

Year	Weaving Training Centers	Weaving Demonstration Centers	Handloom Demonstration Cum production Center	Handloom Production Centers
2002-2003	24	21	24	8
2003-2004	24	21	24	8
2004-2005	24	21	24	8
2005-2006	24	21	24	8
2006-2007	24	21	24	8
2007-2008	24	21	24	8
2008-2009	24	21	24	8

Source: Statistical Handbook Meghalaya 2010-11

SERICULTURE

The number of sericulture villages accounted to 1459 in 1985-86 with 9107 families engaged in sericulture activities. The number increased to 1812 villages by 1993-94 but remained constant till 2008-09. The number of families engaged in sericulture which was 14000 in 1993-94 increased to 28923 in 2008-09.

TABLE 11: YEAR-WISE NUMBER OF SERICULTURAL VILLAGES & FAMILIES ENGAGED IN MEGHALAYA

Year	SERICULTURAL VILLAGES	Families engaged in Sericulture
1985-1986	1459	9107
1993-1994	1812	14000
1996-1997	1812	14000
1997-1998	1812	14000
1998-1999	1812	14000
1999-2000	1812	14000
2000-2001	1812	14000
2001-2002	1812	14000
2002-2003	1812	16000
2003-2004	1812	16000
2004-2005	1812	16000
2005-2006	1812	16000
2006-2007	1812	28923
2007-2008	1812	28923
2008-2009	1812	28923

Source: Statistical Handbook Meghalaya 2010-2011 & Statistical Handbook Meghalaya 2008-2009

FINDINGS OF THE STUDY

1. It was found that the number of small-scale units has increased but the vast intra-regional disparities in the location of these units has continued
2. It was found that the development of small scale business in a particular region mostly depends upon the economic status of its people.
3. It was found that the SSIs are engaged in more than 24 different types of activities but the business is mainly concentrated in activities like; Wooden furniture & fixture, Steel Based Industries, Tailoring, Lime making, saw mills, Beetle nut preservation, Motor Vehicle repairing & servicing, Bakery, Cane & Bamboo works, Weaving/Handloom, Atta grinders, Rice mills & Flour mills these twelve types of SSIs have shown more changes in their size with the passage of time than SSIs associated with other activities and the employment in these SSIs has also shown the proportional change but all districts are sharing the common pattern of type of these industries.
4. It was found that the KHADI Village industry projects are being implemented under the rural employment generation program (REGP), These projects along with the handicraft, handloom & textiles and sericulture activities has evidenced the positive growth over past few years, the Government has also taken many initiatives to cover artisans from these industries under profitable schemes.

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CONCLUSION

In Meghalaya the number of small scale industries has increased with 41 percent growth during 2001-02 to 2008-09, the number of employs working in these SSIs also increased at the same pace but there is vast intra regional disparity associated with location of these small scale units because of population, economic and socio-cultural differences among hilly and plain areas of the state. The SSIs are engaged in more than 24 different types of activities but the business is mainly concentrated in activities like; Wooden furniture & fixture, Steel Based Industries, Tailoring, Lime making, saw mills, Beetle nut preservation, Motor Vehicle repairing & servicing, Bakery, Cane & Bamboo works, Weaving/Handloom, Atta grinders, Rice mills & Flour mills these twelve types of SSIs have shown more changes in their size with the passage of time than SSIs associated with other activities and the employment in these SSIs has also shown the proportional change but all districts are sharing the common pattern of type of these industries. The KHADI Village industry projects are being implemented under the rural employment generation program (REGP), These projects along with the handicraft, handloom & textiles and sericulture activities has evidenced the positive growth over past few years, the Government has also taken many initiatives to cover artisans from these industries under profitable schemes.

SUGGESTION FOR THE POLICY MAKERS

The non uniform growth of SSIs across the state need to be addressed, the Government support accounts for about only 14 percent which in addition of some other informal sources is all means support in hilly & backward areas due to their weak economic conditions where the plain and the forward areas have the financial access through various other sources as well, about 86 percent of their business finance is being arranged through own means, semiformal means, bank loans etc. To help the remaining areas in catching up the growth of small business of EAST KHASI HILLS, RI BHOI and WEST KHASI HILLS Government has to flip the existing schemes targeting the backward areas and formulate the new schemes where Government will stand the business projects and employ the masses their and finally handover the business to these tribal people on smooth & flexible pay back conditions and their performance should be brought under the supervision of newly opened and technically enhanced accounting centres. The Incubators and semiformal financial institutions should also be encouraged to invest in these projects under the attractive schemes such as; credit guarantee scheme, tax incentives etc.

FUTHER RESREACH DIRECTION

This research paves way for further researches on the development of small scale industries like the role of the pattern of microfinance schemes in the development of concerned pattern of cottage and small business types in the specific area.

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REGRESSION MODELS

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ABSTRACT

In statistics, Regression model is possibly the most important step in the model building sequence. It is also one of the most overlooked Often the validation of a model seems to consist of nothing more than quoting the R^2 statistic from the fit (which measures the fraction of the total variability in the response that is accounted for by the model).

KEYWORD

regression models.

INTRODUCTION

Regression models are used to predict one variable from one or more other variables. Regression models provide the scientist with a powerful tool, allowing predictions about past, present, or future events to be made with information about past or present events. The scientist employs these models either because it is less expensive in terms of time and/or money to collect the information to make the predictions than to collect the information about the event itself, or, more likely, because the event to be predicted will occur in some future time. Before describing the details of the modeling process, however, some examples of the use of regression models will be presented.

PROCEDURE FOR CONSTRUCTION OF A REGRESSION MODEL

In order to construct a regression model, both the information which is going to be used to make the prediction and the information which is to be predicted must be obtained from a sample of objects or individuals. The relationship between the two pieces of information is then modeled with a linear transformation. Then in the future, only the first information is necessary, and the regression model is used to transform this information into the predicted. In other words, it is necessary to have information on both variables before the model can be constructed.

For example, the personnel officer of the widget manufacturing company might give all applicants a test and predict the number of widgets made per hour on the basis of the test score. In order to create a regression model, the personnel officer would first have to give the test to a sample of applicants and hire all of them. Later, when the number of widgets made per hour had stabilized, the personnel officer could create a prediction model to predict the widget production of future applicants. All future applicants would be given the test and hiring decisions would be based on test performance.

A notational scheme is now necessary to describe the procedure:

X_i is the variable used to predict, and is sometimes called the independent variable. In the case of the widget manufacturing example, it would be the test score.

Y_i is the observed value of the predicted variable, and is sometimes called the dependent variable. In the example, it would be the number of widgets produced per hour by that individual.

Y'_i is the predicted value of the dependent variable. In the example it would be the predicted number of widgets per hour by that individual.

The goal in the regression procedure is to create a model where the predicted and observed values of the variable to be predicted are as similar as possible. For example, in the widget manufacturing situation, it is desired that the predicted number of widgets made per hour be as similar to observed values as possible. The more similar these two values, the better the model. The next section presents a method of measuring the similarity of the predicted and observed values of the predicted variable.

LINEAR REGRESSION

In statistics, **linear regression** is an approach to modeling the relationship between a scalar dependent variable y and one or more explanatory variables denoted X. The case of one explanatory variable is called simple regression. More than one explanatory variable is multiple regression. (This in turn should be distinguished from multivariate linear regression, where multiple correlated dependent variables are predicted,[citation needed] rather than a single scalar variable.)

In linear regression, data is modelled using linear predictor functions, and unknown model parameters are estimated from the data. Such models are called linear models. Most commonly, linear regression refers to a model in which the conditional mean of y given the value of X is an affine function of X. Less commonly, linear regression could refer to a model in which the median, or some other quantile of the conditional distribution of y given X is expressed as a linear function of X. Like all forms of regression analysis, linear regression focuses on the conditional probability distribution of y given X, rather than on the joint probability distribution of y and X, which is the domain of multivariate analysis.

Linear regression was the first type of regression analysis to be studied rigorously, and to be used extensively in practical applications. This is because models which depend linearly on their unknown parameters are easier to fit than models which are non-linearly related to their parameters and because the statistical properties of the resulting estimators are easier to determine.

Linear regression has many practical uses. Most applications of linear regression fall into one of the following two broad categories:

- If the goal is prediction, or forecasting, linear regression can be used to fit a predictive model to an observed data set of y and X values. After developing such a model, if an additional value of X is then given without its accompanying value of y, the fitted model can be used to make a prediction of the value of y.
- Given a variable y and a number of variables X_1, ..., X_p that may be related to y, linear regression analysis can be applied to quantify the strength of the relationship between y and the X_j, to assess which X_j may have no relationship with y at all, and to identify which subsets of the X_j contain redundant information about y.

Linear regression models are often fitted using the least squares approach, but they may also be fitted in other ways, such as by minimizing the "lack of fit" in some other norm (as with least absolute deviations regression), or by minimizing a penalized version of the least squares loss function as in ridge regression.

Conversely, the least squares approach can be used to fit models that are not linear models. Thus, while the terms "least squares" and "linear model" are closely linked, they are not synonymous.

SIMPLE AND MULTIPLE REGRESSION

The very simplest case of a single scalar predictor variable x and a single scalar response variable y is known as simple linear regression. The extension to multiple and/or vector-valued predictor variables (denoted with a capital X) is known as multiple linear regression. Nearly all real-world regression models involve multiple predictors, and basic descriptions of linear regression are often phrased in terms of the multiple regression model. Note, however, that in these cases the response variable y is still a scalar.

GENERAL LINEAR MODELS

The general linear model considers the situation when the response variable Y is not a scalar but a vector. Conditional linearity of $E(y|x) = Bx$ is still assumed, with a matrix B replacing the vector β of the classical linear regression model. Multivariate analogues of OLS and GLS have been developed.

HETEROSKEDASTIC MODELS

Various models have been created that allow for heteroskedasticity, i.e. the errors for different response variables may have different variances. For example, weighted least squares is a method for estimating linear regression models when the response variables may have different error variances, possibly with correlated errors. (See also Linear least squares (mathematics)#Weighted linear least squares, and generalized least squares.) Heteroscedasticity-consistent standard errors is an improved method for use with uncorrelated but potentially heteroskedastic errors.

GENERALIZED LINEAR MODELS

Generalized linear models (GLM's) are a framework for modeling a response variable y that is bounded or discrete. This is used, for example:

- when modeling positive quantities (e.g. prices or populations) that vary over a large scale — which are better described using a skewed distribution such as the log-normal distribution or Poisson distribution (although GLM's are not used for log-normal data, instead the response variable is simply transformed using the logarithm function);
- when modeling categorical data, such as the choice of a given candidate in an election (which is better described using a Bernoulli distribution/binomial distribution for binary choices, or a categorical distribution/multinomial distribution for multi-way choices), where there are a fixed number of choices that cannot be meaningfully ordered;
- when modeling ordinal data, e.g. ratings on a scale from 0 to 5, where the different outcomes can be ordered but where the quantity itself may not have any absolute meaning (e.g. a rating of 4 may not be "twice as good" in any objective sense as a rating of 2, but simply indicates that it is better than 2 or 3 but not as good as 5).

Generalized linear models allow for an arbitrary link function g that relates the mean of the response variable to the predictors, i.e. $E(y) = g(β'x)$. The link function is often related to the distribution of the response, and in particular it typically has the effect of transforming between the $(-\infty, \infty)$ range of the linear predictor and the range of the response variable.

Some common examples of GLM's are:

- Poisson regression for count data.
- Logistic regression and probit regression for binary data.
- Multinomial logistic regression and multinomial probit regression for categorical data.
- Ordered probit regression for ordinal data.

Single index models [clarification needed] allow some degree of nonlinearity in the relationship between x and y, while preserving the central role of the linear predictor β'x as in the classical linear regression model. Under certain conditions, simply applying OLS to data from a single-index model will consistently estimate β up to a proportionality constant.[6]

HIERARCHICAL LINEAR MODELS

Hierarchical linear models (or multilevel regression) organizes the data into a hierarchy of regressions, for example where A is regressed on B, and B is regressed on C. It is often used where the data have a natural hierarchical structure such as in educational statistics, where students are nested in classrooms, classrooms are nested in schools, and schools are nested in some administrative grouping such as a school district. The response variable might be a measure of student achievement such as a test score, and different covariates would be collected at the classroom, school, and school district levels.

ERRORS-IN-VARIABLES

Errors-in-variables models (or "measurement error models") extend the traditional linear regression model to allow the predictor variables X to be observed with error. This error causes standard estimators of β to become biased. Generally, the form of bias is an attenuation, meaning that the effects are biased toward zero.

OTHERS

- In Dumpster–Shafer theory, or a linear belief function in particular, a linear regression model may be represented as a partially swept matrix, which can be combined with similar matrices representing observations and other assumed normal distributions and state equations. The combination of swept or un swept matrices provides an alternative method for estimating linear regression models.

Evaluating Regression Models

- i.   *Good Models and "Explaining" Variance*
  - What do we mean when we say a model is "good" or "explains" the dependent variable?
    - Explanation exists in our theory, not in any data we might observe.
    - Thus "explained" variance cannot be measured with a statistic (or with data).
  - What do we mean when we say we have a "good model" of our data?
    - Changes in X have a large impact on changes in Y (That is, b is large)
    - Remaining error terms are small (That is, σ_u^2 is small)
- ii. *A Composite Measure of Model Quality*
  - Developed an overall measure of these concepts that is insensitive to the scale measuring X & Y
    - Measure is based on fundamental goal of the OLS estimator – minimize squared errors.
    - Take the ratio of "Explained" Sum of Squares (ESS) to Total Sum of Squares (TSS)
  - This ratio is known as the "coefficient of determination" or R^2
    - R^2 is literally just the correlation between Y and Yhat, squared

$$R^2 = \frac{ESS}{TSS} = 1 - \frac{USS}{TSS}$$

- iii. *What IS R^2 Really? The R^2 Stew*
  - Want a measure of model quality to compare across samples
    - Like correlation coefficients – R^2 cannot generalize
    - It depends on the variance of X and the variance of the errors

$$R^2 = \frac{ESS}{TSS} = \frac{ESS}{ESS + USS}$$

- R2 for bivariate regression can be written as:

$$R^2 = \frac{b^2 * \sigma_x^2}{b^2 * \sigma_x^2 + \sigma_u^2}$$

iv. *Don't Drink the R² Kool Aid*
- Thus R² conflates our two aspects of a "good model," combines them with σ_x^2, and places them on a dimensionless scale
- The resulting value is nearly uninterruptable
- Basically measures the shape of the cloud of observations around our regression line.
- R² tells us little we want to know – pay it no heed
  - Also avoid standardized regression coefficients
- We must make substantive evaluations of our models:
  - Size of Coefficients (hypothesis tests)
  - Size of Substantive Effects
  - Ability to forecast out-of-sample

v. *Standards of Model Evaluation*
- Statistical Significance of Coefficients
  - T-tests
- Substantive Size of Effects
  - Generate predictions from the model
- Size of Residuals
  - Compare to substantive effects
- Forecasting Out-of-Sample

vi. *Statistical Significance of Regression Coefficients*
- In general, our theories give us hypotheses that B>0 or B<0
  - We can estimate b, but we need a way to assess the validity of statements that B is positive or negative
  - We can rely on our estimate of b and its variance to use probability theory to test such statements.
- T-tests (or Z-scores) give us confidence that relationships we observe generalize to the population
  - Don't get too focused on .05 as a "magical" threshold for significance

vii. *Z-Scores & Hypothesis Tests*
- This variable is a "z-score" based on the standard normal distribution.
  - 95% of cases are within 1.96 standard deviations of the mean.
- If $b / \sigma_b > 1.96$ then there is a 95% chance that B>0
  - Conversely if $b / \sigma_b <- 1.96$ then there is a 95% chance that B<0
- Recall that since we don't know σ_b we estimate it
  - Thus we rely on the t distribution for small samples (N<100)

CONCLUSION

Regression models are powerful tools for predicting a score based on some other score. They involve a linear transformation of the predictor variable into the predicted variable. The parameters of the linear transformation are selected such that the least squares criterion is met, resulting in an "optimal" model. The model can then be used in the future to predict either exact scores, called point estimates, or intervals of scores, called interval estimates.

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EFFECTIVENESS OF EMPLOYEE RETENTION TECHNIQUES ADOPTED BY BPO COMPANIES WITH REFERENCE TO CHENNAI

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ABSTRACT

Employee retention is a process in which the employees are encouraged to remain with the organization for the maximum period of time or until the completion of the project. The present study examines the phenomenon of Employee Retention in the BPO sector in Chennai in order to develop appropriate strategies, which can help the organizations in this sector to retain their valuable talent. The major objectives of the research are to study: employee retention strategies followed in the BPO industry, significance of HR practices in the attainment of job satisfaction amongst the employees of the industry; extent of employee attrition prevalent; significance of individual, organizational and industry related factors in determining employee retention and identify different strategies adopted to reduce the monotony of work for the executive positions. The area of study is confined to employees of BPO Companies in Chennai. The questionnaire is framed for the research study is structured questionnaire. The form of question is of both closed and open type. The chi square test, correlation test and Anova are used for evaluation of the data.

KEYWORDS

Retention, Employee turnover or Attrition rate, Outsourcing, Retention techniques.

INTRODUCTION ABOUT THE STUDY

Effective employee retention is a systematic effort by employers to create and foster an environment that encourages current employees to remain employed, by having policies and practices in place that address their diverse needs. A strong retention strategy, therefore, becomes a powerful recruitment tool.

In India, there are few sectors where the attrition level is much larger compared to other sectors, for example, IT sector and BPO; whereas, there are organizations like Air India, HAL, DRDO, BARC where the attrition is much lower – nearly 5% or less than that. To keep employees and keep their satisfaction levels high, any organization needs to implement each of the three R's of employee retention: respect, recognition, and rewards.

REVIEW OF LITERATURE

RETENTION

Retention is defined by Get Les Mckeown's, Personnel Management, Edition-2, Page No.205, employee retention is a systematic effort by employers to create and foster an environment that encourages current employees to remain employed by having policies and practices in place that addresses their drivers needs. According to Zineldin 2000, p. 28 in an article Customer satisfaction and retention: the experiences of individual employees, "A commitment to continue to do business or exchange with a particular company on an ongoing basis". According to John W.Newstorm, Organizational Behaviour, Edition-11, Page No.305, employee retention refers to the efforts by which attempt of employers is to decrease employee turnovers, training costs, and loss of talent. By implementing lessons learned from key organizational behavior concepts employers can improve retention rates and decrease the associated costs of high turnover. Strategic Human Resources Management by Armstrong and Angel Baron Jaico Book House, 2nd Edition 2008Page Number-256, says that, Employee Retention involves taking measures to encourage employees to remain in the organization for the maximum period of time. According to Dr. Harry Bond, Training and Development, Edition – 2, Page No. 53 explains that, Employee retention refers to various policies and practices which let the employees to stick to an organization for a longer period of time.

EMPLOYEE TURNOVER OR ATTRITION RATE

Human Resources Management by H.John Bernardin,Tata McGraw-Hil Company 4th Edition 2009,Page Number-274, says that, Employee turnover affects the whole organization in terms of productivity. Managing the turnover, hence, becomes an important task.Human Resources Management Practice by Michael Armstrong Kogan Page Private Company 10th 2009Page Number-196, says that, When asked about why employees leave, low salary comes out to be a common excuse. Borkowski, N.(2005) Organizational behavior in healthcare. Jones and Bart let publishers says that the organization must first understand what types of things will motivate their staff because what works for one individual may not be a reward that is desirable to another individual. A lack of proper training on the new skills necessary for direct care staff has increased the stress that employees feel and has lead to increased turnover and low morale among workers (Larson and Hewitt, 2005). NYSACRA (2009) Direct support professionals voices from the frontlines, Albany, N.Y. says that Additionally, 62% of individuals stated the conduct of other workers, high turnover, and lack of support and recognition, all contributed to an extremely stressful job and providing services to clients served even more difficult. Wal-Mart (1999). Low employee turnover conducted research on new hire attitudes in 1999, aiming to reduce employee turnover by 50%. The critical link between orientation and employee turnover was highlighted in this research. Marx, Mary (1995, December). Keeping your best employees. Journal of Property Management, 26-29 says that, "the better the match between recruits and the organization the more likely you are to retain them."

BUSINESS PROCESS OUTSOURCING (BPO)

The article **"Outsourcing: Paving Way for Global Competitiveness"** by *N M Shanthi* and *E Naveen Kumar*, Icfai Press portrays the process of evolution of the BPO concept and its transformation into KPO in recent times. David Landes in his book, *The Wealth and Poverty of Nations* (1998, Norton) traces the origin of outsourcing to 13th century Europe The book titled Multisourcing - Concepts and Applications written by Jaya Krishna S published by icfai press, 2007aims to sensitize the respective professionals/community with the concept and value of 'multi-sourcing,' The book Business Process Outsourcing - Growth and Country Experiences by Rajmanohar T P Sivarajadhanavel traces the evolution and growth of the outsourcing industry from manufacturing to service. It delves into the practice of outsourcing related to manufacturing, BPO, and KPO business process transformation. S. Nakkiran and D. John Franklin in his edited book named Business Process Outsourcing: Concept, Current Trends, Management and Future Challenges Deep & Deep Publications, New Delhi, 2004 covers the areas relating to concept, current trends, management and future challenges

RETENTION TECHNIQUES

The article, "Retention Strategies in ITES-BPO Industry" written by *Sanjeev Sharma*. The article gives the reasons for the high attrition rates for BPO employees such as no growth opportunity/lack of promotion, better salary expectations, and pursuit of higher education, wrong guidance by the company, lack of personal life, physical strain and uneasy relationship with peers or managers. Col. PSV Ramana in his article, Motivational Strategies for Attracting and Retaining the Talent Indian Armed Forces Page No. 16 says that, motivational strategies to attract talent by way of providing an exciting service life and lucrative post-separation rehabilitation, as well as, 'Motivation and Morale'-related best practices while in service. Anandan pillai in his article, Motivation as Key Retention Strategy in Hospitality Industry Page No. 26 explains that, Employee motivational programs need not be always monetary-based, many times non-monetary based programs too yield substantial results. Human Resources Management by Wayne Cascio, Tata Mc Graw-HillCompany 7th Edition 2008,Page Number-245,

says that, Before joining the organization, tell the candidate what is expected from him. According to Jayanthi Kishore, Human Resource Management, Edition-2, Page N0. 49, says that, Employee retention is the effort by employers to encourage current employees to remain employed with the organization programs such as learning and development, rewards and recognition, succession planning and providing policies and practices that address their needs are examples of ways of retaining employees.

NEED OF THE STUDY

This study attempts to determine employee's retention in the BPO companies at Chennai. The study designed to explore the main retention factors and strategies for BPO sector employees. The project attempts to deepen our understanding about factors influencing employee's satisfaction and strategies to retain the talented workforce in the organization.

STATEMENT OF THE PROBLEM

The company is adopting various retention techniques to retain their employees. They wanted to analyze which technique can be adopted for retaining their employees more effectively. Hence they allowed me to undertake the project work in their organization.

OBJECTIVES OF THE STUDY

1. To find out the various retention techniques that exist in the organisations
2. To document the nature of employee turnover in the BPO Companies.
3. To study the impact of employee retention techniques on the reduction of employee turnover.
4. To suggest the plants in the development of a focused employee retention strategies.

HYPOTHESIS

The following hypotheses are used in this research.
H1: There is a significant difference between the Income and Workload in Organization.
H2: There is a significant difference between the age and Relationship with Superiors in Organization.
H3: there is no significant difference between Designation and the Organization treating their employees in a respectful manner.

RESEARCH METHODOLOGY

The research design used for this study is descriptive in nature. The major purpose of descriptive research is description of the state of affairs, as it exists at present.   The instrument used for the study is questionnaire. Questionnaire is widely used and important method to collect primary data for any research program. Each questionnaire was given to an individual and humbly requested to fill it in my present. Both the primary and secondary data has been collected. The primary data was collected through questionnaire by surveying the mentioned sample unit. The secondary source consists of readily available files and documents on BPO Companies in Chennai. Secondary data is also collected through books, periodicals, magazines, NASSCOM Reports and websites. The sample size is taken as 200 employees of BPO Companies in Chennai only. Sampling techniques used was Simple Random sampling for selecting the 20 Companies from the list through lottery method. Convenience sampling is been used for selecting the 200 employees of BPO from all 20 companies. The statistical tools used for the analysis are as percentage analysis, correlation, chi-square analysis and ANOVA.

FINDINGS ON DEMOGRAPHIC VARIABLES

Out of the 200 respondents, 58 % of the respondents are between the age 25-35 and only 2% of the respondents are between 45-55 years. It is clear that majority of the respondents (74.5%) are male candidates. It shows that 50% of the respondents are post-graduate and 49% of the respondents are graduates. The table shows that 54.5% of the respondents are Unmarried and 45.5% of the respondents are married. 30.5% of the respondents are having the income between 15,000-25000 and only 20.5% of the respondents get below 15,000 income.
The chart depicts the findings of demographic variables as below.

Sl.No.	Particulars	No. of Respondents	Percentage
Age	Below 25	57	28.5
	25 – 35	116	58
	35 – 45	22	11
	45 – 55	5	2.5
Gender	Male	149	74.5
	Female	51	25.5
Qualification	Graduate	98	49
	Post Graduate	102	51
Marital status	Married	91	45.5
	Unmarried	109	54.5
Income Level	below 15,000	41	20.5
	15,000 to 25,000	61	30.5
	25,0000 to 35,000	46	23
	above 35,000	52	26

FINDINGS ON EMPLOYEE RETENTION STRATEGIES

The organization follows many employee retention strategies to retain their employees for the future. Majority (89.5%) of the respondents have agreed that they are encouraged to participate in the training. Most (79%) of the respondents are satisfied with the recognition that they get for their performance**.** 75.5% of the respondents have stated that most of the times the implementation of 3R i.e. Respect, Reward and Recognition will increase the employee retention. Majority (69%) of the respondents have agreed that the organization comes forward to help the employees. Most **(**63%) of the respondents have agreed that the training program are linked with the career development. Around 78% of the respondents have agreed that the organization treats the employees in a respectful manner and only 1% have strongly disagreed. 63% of the respondents have agreed that they are rewarded periodically for their performance.

RESULTS ON CHI SQUARE TEST

Chi square test was used to find out the difference between the Income and Workload of the Respondents. There are two hypotheses were tested through this method as below.
H_0 : There is no significant difference between the Income and Workload of the Respondents.
H_1 : There is a significant difference between the Income and Workload of the Respondents.

Applying χ^2 Test:

O	E	O-E	(O-E)^2	(O-E)^2/E
0	0.44	-0.44	0.1936	0.44
2	0.64	1.36	1.8496	2.89
0	0.46	-0.46	0.2116	0.46
0	0.46	-0.46	0.2116	0.46
18	20.24	-2.24	5.0176	0.24791
20	29.44	-9.44	89.1136	3.02696
28	21.16	6.84	46.7856	2.21104
26	21.16	4.84	23.4256	1.10707
26	22.44	3.56	12.6736	0.56478
38	32.64	5.36	28.7296	0.8802
18	23.46	-5.46	29.8116	1.27074
20	23.46	-3.46	11.9716	0.5103
0	0.88	-0.88	0.7744	0.88
4	1.28	2.72	7.3984	5.78
0	0.92	-0.92	0.8464	0.92
0	0.92	-0.92	0.8464	0.92
			Total	**22.569**

γ = (r-1) (c-1)
γ = (5-1) (4-1)
γ = 4*3
γ = 12
Calculated value is higher than the Tabulated value.
$\therefore$ Calculated $\chi^2 \geq$ Tabulated χ^2
22.57 $\geq$ 21.026
There fore H$_1$is accepted (i.e.) There is a significant difference between the Income and Workload in Organization.

AGE AND RELATIONSHIP WITH THE SUPERVISOR

The two variables namely Age and relationship with the superiors are tested thorough chi square method as below. The following hypotheses are used for the test.
H$_0$: There is no significant difference between the Age and relationship with the Supervisors.
H$_1$: There is significant difference between the Age and relationship with the Supervisors.

Applying χ^2 Test

O	E	O-E	(O-E)^2	(O-E)^2/E
0	0.58	-0.58	0.3364	0.58
2	1.18	0.82	0.6724	0.56983
0	0.2	-0.2	0.04	0.2
0	0.04	-0.04	0.0016	0.04
4	1.74	2.26	5.1076	2.9354
2	3.54	-1.54	2.3716	0.66994
0	0.6	-0.6	0.36	0.6
0	0.12	-0.12	0.0144	0.12
12	12.76	-0.76	0.5776	0.04527
28	25.96	2.04	4.1616	0.16031
0	4.4	-4.4	19.36	4.4
4	0.88	3.12	9.7344	11.0618
28	31.32	-3.32	11.0224	0.35193
64	63.72	0.28	0.0784	0.00123
16	10.8	5.2	27.04	2.5037
0	2.16	-2.16	4.6656	2.16
14	11.6	2.4	5.76	0.49655
22	23.6	-1.6	2.56	0.10847
4	4	0	0	0
0	0.8	-0.8	0.64	0.8
			Total	**27.8045**

γ = (r-1) (c-1)
γ = (5-1) (4-1)
γ = 4*3
γ = 12
Calculated value is higher than the Tabulated value.
$\therefore$ Calculated $\chi^2 \geq$ Tabulated χ^2
27.80 $\geq$ 21.026
There fore H$_1$is accepted (i.e.) There is a significant difference between the age and Relationship with Superiors in Organization.

FINDINGS ON CORRELATION ANALYSIS

The correlation test is used to analyze the relationship between two variables as designation of the respondents and the support rendered by the management to their employees. Designation of the respondents denoted as 'x' and the management support is expressed as 'y' in the analysis.

X	y	x^2	y^2	Xy
48	16	2304	256	768
52	20	2704	400	1040
14	57	196	3249	798
40	97	1600	9409	3880
46	10	2116	100	460
ΣX=200	ΣY=200	Σ x^2=8920	Σ y^2=13414	Σ xy=6946

$$\frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{n\sum x^2 - (\sum x)^2}\ \sqrt{n\sum y^2 - (\sum y)^2}}$$

$$\frac{5*6946 - (200*200)}{\sqrt{5*8920 - (200)^2}\ \sqrt{5*13414 - (200)^2}}$$

γ= 0.4723

$$\frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{n\sum x^2 - (\sum x)^2}\ \sqrt{n\sum y^2 - (\sum y)^2}}$$
5*6946-(200*200)
$\sqrt{5*8920 - (200)^2}\ \sqrt{5*13414 - (200)^2}$
γ= 0.4723

Designation of the respondents has the negative correlation with Management Support i.e. the support rendered by the management is not dependent on the designation of the respondents.

FINDINGS ON ANOVA ANALYSIS

ANOVA used to know the variance between two variables like designation of the respondents and the respect they get from the organization. Let us take the null hypothesis that there is no significant different between designation and respect in the organization.
Level Of Significance = 5%

Designation I	Organization II
48	2
52	14
14	34
40	124
46	26
T1= 200	T2= 200

$Grand\ Total\ G = \sum\sum y_{ij}$
= 200 + 200
G = 400

$Correction\ Factor = \frac{G^2}{N} = \frac{400^2}{10} = 16,000$

Total Sum of Squares,
$SST = \sum\sum y_{ij}^2 = \frac{G^2}{N}$
$= ((48)^2 + 52^2 + 14^2 + 40^2 + 46^2 + 2^2 + 14^2 + 34^2 + 124^2 + 26^2) - 16,000$
Total Sum of Squares (TSS) = 10,328
Between sample sum of square

$R_1 = SSB = \sum_{i=0}^{k}\frac{T_i^2}{r_i} - \frac{G^2}{N}$
$R_1 = \frac{200^2}{5} + \frac{200^2}{5} - \frac{G^2}{N}$
R_1 = 8000 +8000 − 16,000
R_1 = 0.
Error Sum of square
$R_2 = SSW = SST - R_1$
=10.328.
ANOVA

Source of variation	Degrees of Freedom	Sum of Squares (SS)	Mean square (MS)	Variance Ratio (F Ratio)
Between Samples	1	0	MSB = R1/K1 = 0	F= 0
Without Samples	8	10,328	MSW = R2/ (N-K) = 10328 / 8 = 1291	

F(0.05)   = (2-1), (10-3)
= 1, 8
Table Value of F @ 5% significant level = 5.32.
The calculated value is less than the table value of F, hence we accept the null hypothesis and concluded that there is no significant difference between the Designation of the respondents and the Organization treating their employees in a respectful manner.

SUGGESTIONS

Most of the respondents feel that training helps them to develop themselves. So the training program can be conducted very often to increase the satisfaction level of employees and to enhance their career development. Since many organizations provide these benefits, they need to focus on the specific needs or

desires of the employees and try to satisfy them as much as possible. Also, they could provide the employees with various financial benefits like Employee Stock Option Plans (ESOP) which would bind the employees with the organization for a long period. Attrition is a major challenge faced by the BPO Sectors. In order to avoid that they need to carry out strategic selection and training procedures to recruit the right type of candidates at the right time. Management can take more steps to listen towards the problems faced by the employees because only 36% are satisfied with the management regarding the problems. The companies could implement knowledge management system in the organization. The companies could create some more levels in the hierarchy. The career advancement in the ITES & BPO sectors is very limited because only few personnel hierarchical levels are there in these sectors like: agent, team leader, supervisor, Center Manager. They could follow flexible work options like Flexi Time, Flexi Place, Alternative Work Schedule, Part time Employment, Compressed Work Week, Job Rotation, Job Enlargement etc. in order to boost the satisfaction level of the employees.

CONCLUSION

The main objective of the study is to analyze the techniques undertaken in the organization in case of retention. Hence the organization adopts Career advancement opportunities, Challenging work, Salary, Employee benefits, Motivation etc. The company follows effective retention practices, so the turnover is very less in the organization. The study was conducted in a successful manner and the suggestions were given for the betterment of the organization. The project was conducted to analyze the factors that are influencing retention rate. Thus the organization needs to implement the various strategies to retain the employees.

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ROLE OF FOREIGN DIRECT INVESTMENT IN EDUCATION INSTITUTIONS IN INDIA

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ABSTRACT

This paper will examine the current status of foreign direct investment (FDI) in education institutions in the India and the issues facing educational institutes seeking to FDI in India. The paper concludes with a brief econometric examination of the factors influencing the level of FDI in the Indian education institutions. The liberalization in India included the gradual granting of authority for foreign direct investment in specific sectors of the economy. In the early 1990s India began to open up an economy that was previously closed to foreign direct investment (FDI). India has received significant inflows of foreign direct investment after liberalizing its economy in 1991.

KEYWORDS

FDI, Higher Education, Universities.

INTRODUCTION

Foreign direct investment or foreign investment refers to the net inflows of investment to acquire a lasting management interest (10% or more of voting stock)in an enterprise operating in an economy other than that of the investor.It is the sum of equity capital,other long term capital,and short term capital as shown in the balance of payments.So the main objective of this paper is to examine the long run relationship of Foreign Direct Investment with the Gross Output(GO),Export(EX) and labour Productivity(LPR) in the indian economy at the sectoral level by using the annual data from 1990-91 to 2010-11.The results of this study is to demonstrate that the flow of FDI into the sectors has helped to raise the output,labour productivity and export in some sectors but a better role of FDI at the sectoral level is still expected.Results also reveal that there is no significant co-integrating relationship among the variables like FDI,GO,EX and LPR in core sectors of the economy.This implies that when there is an increase in the out put, export or labour productivity of the sectors it is not due to the advent of FDI. Thus,it could be concluded that the advent of FDI has not helped to weild a positive impact on the Indian Economy at the sectoral level.Thus,in the eve of India's plan for further opening up of the economy,it is advisable to open up the export oriented sectors so that a higher growth of the economy could be achieved through the growth of these sectors.

Foreign direct investment (FDI) has played an important role in the process of globalisation during the past two decades. The rapid expansion in FDI by multinational enterprises since the mid-eighties may be attributed to significant changes in technologies, greater liberalisation of trade and investment regimes, and deregulation and privatisation of markets in many countries including developing countries like India. Capital formation is an important determinant of economic growth. While domestic investments add to the capital stock in an economy, FDI plays a complementary role in overall capital formation and in filling the gap between domestic savings and investment. At the macro-level, FDI is a non-debt-creating source of additional external finances. At the micro-level, FDI is expected to boost output, technology, skill levels, employment and linkages with other sectors and regions of the host economy.

FDI IN INDIA AND ITS GROWTH LINKAGES

FDI in manufacturing is generally believed to have a positive and significant effect on a country's economic growth (Alfaro, 2003). However, based on empirical analysis of data from cross-country FDI flows for 1981-1999, Alfaro (2003) points out that the impact of FDI on growth is ambiguous. FDI in the primary sector tends to have a negative impact on growth, while investment in manufacturing has a positive effect, and the impact of FDI in services is ambiguous. In general, multinational enterprises have increasingly contributed to capacity addition and total sales of manufacturing. Further, FDI plays an important role in raising productivity growth in sectors in which investment has taken place. In fact, sectors with a higher presence of foreign firms have lower dispersion of productivity among firms, thus indicating that the spill-over effects had helped local firms to attain higher levels of productivity growth (Haddad and Harrison, 1993). Besides being an important source for diffusion of technology and new ideas, FDI plays more of a complementary role than of substitution for domestic investment (Borenzstein et al., 1998). FDI tends to expand the local market, attracting large domestic private investment. This "crowding in" effect creates additional employment in the economy (Jenkins and Thomas, 2002). Further, FDI has a strong relation with increased exports from host countries. FDI also tends to improve the productive efficiency of resource allocation by facilitating the transfer of resources across different sectors of the economy (Chen, 1999).

Little empirical evidence is available on the impact of FDI on the rural economy, in general, and on poverty, in particular. However, in recent times, there has been increasing interest in studying the linkage between growth and poverty. FDI inflows are associated with higher economic growth (Jalilian and Weiss, 2001; Klein et al., 2001), which is critically important for poverty reduction. But the pattern and nature of the growth process in an economy also assumes importance. It has been found that FDI had a positive impact on poverty reduction in areas where the concentration of labour-intensive industries was relatively high (Doanh, 2002).

It has been shown by Bajpai (2004) that India's labour-intensive manufacturing can potentially absorb a major section of the labour force and it holds the key to achieve dynamic growth in the country. Further, Aggarwal (2001) showed that high-tech industries are not attracting efficiency-seeking FDI; medium- and low-tech industries with foreign stakes seem to have performed better, indicating that India'scomparative advantage in exports lies with low-tech industries. However, Siddharthan and Nollen (2004) showed that in the information technology sector, exports by MNE affiliates are greater when they have larger foreign equity stakes.

Though it is expected that growth tends to benefit the poor, this has not happened in many countries. There is no clear picture whether growth reduces poverty (World Bank, 2000). It is believed that increased flow of capital raises capital intensity in production, resulting in lower employment generation. However, a higher level of investment accelerates economic growth, showing wider positive effects across the economy. Tambunan (2005) found that FDI has positive effects on poverty reduction mainly through three important ways, viz., labour-intensive growth with export growth as the most important engine; technological, innovation and knowledge spill-over effects from FDI-based firms on the local economy; and poverty alleviation programmes or projects financed by tax revenues collected from FDI-based firms. However, the host country's policies and institutions, the quality of investment, the nature of the regulatory framework and the flexibility of labour markets are important to attain the expected benefits from FDI (De Melo, 1999; Klein et al., 2001). The impact of FDI has been found to be the strongest in countries with higher education levels (Borenzstein et al., 1998; Jalilian and Weiss, 2001). However, FDI may indirectly benefit the poor by creating better employment and earning opportunities for the unskilled workforce in developing countries (ODI, 2002).

India-specific studies on FDI have dealt with determinants of FDI, technology spill-overs, export growth and good governance practices transferred from foreign to domestic firms (Banga, 2003; Kumar, 2002, 2003; Pant, 1995; Siddharthan and Nollen, 2004). These effects have been estimated through firm-level case studies and through cross sectional analysis.

ROLE OF EDUCATION IN INDIA

The education sector in India is one of the most important sectors, as it holds the key to social and economic development of the country. The Indian government formulated the National Policy on Education in 1986 and modified it in 1992.

The major objectives of the policy are to empower women, correct the regional and social imbalances that are there in the country, and also to ensure the development of the minorities of India. The government of India allotted funds to school education that came to around ` 17,133 crores in 2006- 2007 and the next year, this figure increased to ` 23,142 crores.

There have been significant changes in the growth models of developing economies during the past two decades. Many of these economies, including India, have moved away from inward-oriented import substitution policies to outward-oriented and market-determined export-oriented strategies. The scepticism about the role of FDI in reinforcing domestic growth has given way to greater openness to FDI, with a view to supporting investment and productivity of the host countries. While developing countries have started accepting FDI inflows with some caution, which is obvious, the developed countries have moved their investments to foreign locations, subject to safety and profitability of their business operations in foreign lands.

FDI plays an important role in the transmission of capital and technology across home and host countries. Benefits from FDI inflows in education sectors are expected to be positive, although not automatic. A facilitating policy regime with minimal interventions may be ideal to maximise the benefits of FDI inflows. The debate on its pros and cons has not yet been settled and is likely to continue. It is not possible to reach a decisive value judgement on whether FDI is good or bad for the developing country/host economy. It may or may not have the desired and expected growth-enhancing impact on the host economy. Even more difficult is the question of whether it brings about equity along with growth effects. FDI might enter a labour-abundant country with capital-intensive technologies; however, if the labour laws are not flexible, this would have a relatively small impact on employment generation. On the other hand, the entry of FDI in labour-intensive firms would have a positive impact on equity and poverty reduction if the FDI-enabled firms choose to locate close to suburban/rural areas.

BENEFITS OF FDI IN EDUCATION SECTORS IN INDIA

Role of FDI in Education sector in India has been allowed by the Indian government. However, these are some certain strict regulations. In India are expected to provide significant benefits to Indian students through FDI education. Many foreign educational institutions and universities have expressed interest in setting up branches in India. Following are some benefits of FDI in education sectors in India:-

- If international educational institutions come to India, then students would be able to get foreign education in India, cheaper.
- The seats are limited in the Indian educational institutions and so foreign direct investment in the educational sector would result in more opportunities for the Indian students.
- The Indian students will get libraries and labs that are of world class standards.
- The setting up of international educational institutions in India will attract students from the neighboring countries to come and study in those institutions in India and this will help the country to become an important destination for education.
- It will enable the Indian students to come in touch with the best professors from across the globe.
- FDI in education will also lead to higher number of Indian students getting jobs in internationally acclaimed companies.
- Availability of world class research facilities.
- It will attract the topmost universities across the world to set up their branches in the country.

POLICY ON PRIVATE INVESTMENT IN HIGHER EDUCATION

NPE, 1986:The commercialisation of technical and professional education will be curbed. private and voluntary effort in conformity with accepted norms and goals.

10th Plan: increased private participation in the management of colleges and deemed to be universities. Strategy of liberalisation of higher education system would be adopted.

NKC on Higher Education, 2006: public-private partnerships where the government provides the land and the private sector provides the finances.

Approach to the 11th Five Year Plan" 2006: healthy development of quality private sector education, to be allowed to charge reasonable fees- a cautious view for inclusive development which is the philosophy of 11th plan.

ROLE OF SOME INDIAN DESTINATIONS

- Very few reputed government universities. For example - UK University established under royal charter - 40% of them are government funded. Out of that 10% are looking for operation internationally. Again only 10% of that may be looking at FDI in foreign country.
- Very few reputed research universities
- Not even reputed private universities
- May be few universities and colleges and private institutions to market selected programmes
- Asymmetry of interests of foreign providers – from pure collaborative teaching and research (UKEIRI) for advancement of knowledge to commercial interests

PROMOTING FDI IN TESTING AND SKILL

- If India is looking for FDI or foreign partnership then it should look for testing and skill certificate and diploma programme.
- National Registry System (NRS) is required where foreign institutions get to register themselves that will be available to public.
- Credibility of courses specially its certification acceptability will really promote foreign investor. For example MCSE (Microsoft Certificate Software Engineer) certified person is eligible to apply any where in world because of worldwide acceptability.

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FDI POLICY AND ENABLING REGULATION IN EDUCATION

- Policy: If India wants FDI in education sector then it needs to have enabling policy – that welcomes FDI with a reasonable surplus but without commercialisation.
- Act: Foreign university bill (presently in draft form) needs to be passed to allow foreign university to confer a degree in India
- Regulatory Structure: As per the Act
- Institutional facilitation: As per the regulatory structure's mechanism to monitor quality, fair practices
- Structural facilitation: to establish trust to purchase land, permission to get international funding.

ARGUMENTS FOR THE PROPOSAL

- There is a shortage of funds in higher education sector. And there are not many ways in which this investment in this sector can be increased domestically.
- Since a large number of students go abroad for their higher education, it is sensible to allow foreign universities to set up their campuses here, in India. This would help in arresting the outflow of monetary and human capital.
- Further, foreign higher educational institutes would create competition with the local institutes making them internationally competitive.
- Also FDI in education would create new institutes and infrastructure and generate employment.

ARGUMENTS AGAINST THE PROPOSAL

- FDI in any field does not have an attached objective of fulfilling social agenda of the welfare state. It is guided by profit and market. This would result in commoditization of education.
- As per past observations, most foreign institutes invest in technical courses which market needs rather than in quality education and research which is important for creating and developing human resource.
- It has also been observed that only 2nd and 3rd tier universities are interested in setting up their campuses in the country.

CONCLUSION

Foreign direct investment (FDI) plays a multidimensional role in the overall development of the host economies. It may generate benefits through bringing in non-debt-creating foreign capital resources, technological upgrading, skill enhancement, new employment, spill-overs and allocative efficiency effects. While FDI is expected to create positive outcomes, it may also generate negative effects on the host economy. The costs to the host economy can arise from the market power of large firms and their associated ability to generate high profits. Much of the existing empirical evidence suggests that the positive effects offset negatives, thus providing net economic benefits for the host economies. While empirical and econometric work on testing various theoretical hypotheses is embedded in the extant literature on FDI, there is lack of information on the plant-level spatial and sectoral spread of FDI-enabled production facilities in India and their linkages with rural and suburban areas. The majority of the population, both urban and rural, is expected to gain, indirectly and differentially, from FDI. While FDI may benefit the economy at both macroeconomic and microeconomic levels, it is equally important to probe whether people in the rural and suburban areas get affected through such benefits. FDI in relatively labour-intensive sectors including food processing, textiles and readymade garments, leather and leather products, and light machine tools, with plants set up in small cities close to rural and subuDI-enabled plants in India are spread across various states with relatively high concentration in Maharashtra, Gujarat, tamil Nadu, Karnataka and West Bengal. A significant proportion of manufacturing plants are located in small cities (population less than 5,00,000). More than two-fifth of the market capitalisation originates in small cities. Thus, FDI is creating a positive imact on indian economy's performance.

There is thus an urgent need to address the deficiencies facing our higher education sector. However, one sided response to it won't solve the problem. The best option is the middle path. Government should allow foreign universities to invest in education sector but under strict regulation. It should shortlist the preferred universities for investment and then invite them to set campus in India. Low grade universities should not be allowed entry in the country. Moreover government should provide incentives to foreign universities to setup institutes in areas of research and academics, which is much needed in the country. Thus government needs to act with strictness and discretion in development of higher education.

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AN EXAMINATION OF LONG-RUN AND SHORT-RUN RELATIONSHIP BETWEEN CRUDE OIL PRICE, GOLD PRICE, EXCHANGE RATE AND INDIAN STOCK MARKET

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ABSTRACT

This study was to examine the long-run and short-run relationships between the crude oil prices, Gold prices, Exchange rate and BSE SENSEX an Indian data. The monthly data from January 1995 to September 2012 was used in this study. This study entails the use of ADF Test, PP test and KPSS test for testing the stationarity of variables, Johensen multivariate cointegration test to examine the existence of long run relationships among the variables. In order to capture the short run dynamics, VEC model is established. Granger causality test is carried out to study the direction of causality between the variables. The variance decomposition method is used to find out the proportion of the forecast error of one variable due to the other variables. The results show that all the variables were stationary at first difference with constant and trend, one cointegrating equation was present. The results of the causality test indicate that there is no causal relation between BSE SENSEX and Gold Price and also between BSE SENSEX and Exchange Rate. The results of variance decompositions revealed that out of three macroeconomic variables crude oil price showed larger importance in the interpretation of changes in BSE SENSEX.

KEYWORDS
BSE, Granger causality, Macroeconomic variables, Variance Decomposition, VECM.

JEL CODE
C32, E37, F31.

1. INTRODUCTION

　　owadays, stock exchange is the main component of economy in most developed and developing countries. Many researchers have been done long run and short run relationship among stock price index and macroeconomic variables in developed and developing countries. Many Empirical results show that oil price, gold price and Exchange rate greatly affect the Economy and stock market. Therefore this paper attempts to examine the long run and short run relationships between Macroeconomic variables such as crude oil price, gold price and Exchange rate on Indian Stock Market. The study employs the econometric technique of co integration and VEC Model in order to estimate the long-run and short-run relationships between variables.

The rest of the paper is organised as follows: section 2, the past literature is reviewed. While in section 3, provided the data sources and methodology to examine the long-run and short-run relationships between Indian Stock Market and selected variables. The empirical results are discussed in section 4 and finally the conclusion is stated in the section 5.

2. REVIEW OF LITERATURE

The relationship between macroeconomic variables and stock market movements has dominated the academic and practitioner's literature since long. Due to shortage of time and inability to cover all the past studies, some of relevant literatures on the macroeconomic determinants of stock prices have been reviewed in this section that has provided a base for this paper.

Mukherjee and Naga (1995) employed the Johansen co integration test , Vector Error Correction Model(VCEM) and found that the Japanese Stock market was co integrated with six macroeconomic variables , namely, exchange rate, money supply , exchange rate inflation rate ,industrial production index, long term government bond rate and the short term call money rate . The results of the long run coefficients of the macroeconomic variables were consistent with the hypothesised equilibrium relationship. **Abdalla and Murinde (1997)** investigated interactions between exchange rate and stock prices in the emerging financial markets of India, Korea and Pakistan and Philippines. They found that the results for India, Korea, Pakistan suggest that Exchange rate Granger Cause on stock prices. **Hamilton (2000)** defines an oil price shock as net oil price increase –a long change in the nominal price of oil relative to its previous three years high if positive or zero otherwise. **Ahmed(2008)** investigated the nature of causal relationship between stock prices and key macroeconomic variables (i.e., IIP, Exports, FDI, Money Supply, Exchange Rate, Interest rate)representing real and financial sector of the Indian economy. Using quarterly data, Johansen approach of co integration indicated the presence of a long relationship between stock prices and IIP. In case of short run BSE SENSEX caused to exchange rate . **Gogineni (2008)** explored the reaction of the US stock market as a whole and of different industries to daily oil price changes. It was found that the direction and magnitude of the market's reaction to oil price changes depended on the magnitude of the price changes. Oil price changes most likely caused by supply shocks had a negative impact while oil price changes . **Ghosh, Roy, Bandyopadhyay and Choudhuri (2010)** examined the primary factors responsible for affecting Bombay Stock Exchange (BSE) in India. The paper investigated the relative influence of the factors affecting BSE and thereby categorizing them. With the help of multiple regression models and applying Factor analysis the primary factors were traced out. The relationship between BSE SENSEX and some other important economical factors like, Oil prices, Gold price, Cash Reserve Ratio, Food price inflation, Dollar price, Foreign Capital Inflows has been estimated taking into consideration the Multicollinearity problem among different independent variables and attempted to eliminate it. The results revealed that dollar price along with "Factor 1"i.e; "External Reserve" and "Factor score 2"i.e; "Inflation inertia" are significantly affecting BSE SENSEX. The fluctuations in SENSEX due to Oil and CRR are significant. Any rise in Oil price will create inflation inertia which will generate stochasticity in SENSEX. The External reserves taken together will act as

resource generating Factor in attracting Foreign Capital inflows, which will make SENSEX more sensitive. *Wang and Huang (2010)* analysed the daily data and employed time series method to explore the impacts of fluctuations in crude oil price, gold price, and exchange rates of the US dollar vs. Various currencies on the stock price indices of the United States, Germany, Japan, Taiwan, and China respectively, as well as the long and short-term correlations among these variables. The empirical results showed that there exist co-integrations among fluctuations in oil price, gold price and exchange rates of the dollar vs. various currencies, and the stock markets in Germany, Japan, Taiwan and China. This indicated that there existed long-term stable relationships among these variables. Whereas there was no co-integration relationship among these variables and the U.S. stock market indices. *Kumar (2011)* aimed at studying the nature of the causal relationship between stock prices and macroeconomic variables in India. For this purpose the techniques of unit root tests,cointegration and Granger causality test has been applied betweenthe NSE Index and macroeconomic variables , viz., REER, Foreign exchange reserve, balance of trade ,FDI,IIP,WPI using monthly data for the period from 1st April 2006 to 31st March 2010.The major findings of te study are that there was no co integration between Nifty and all other variables except WPI as per the Johansen co integration test as per the Johansen co integration test. Nifty did not Granger cause WPI and WPI also did not Granger NIFTY.

3. DATA AND METHODOLOGY
The following methodological approach is adopted in this study for establishing the relationship between variables and Indian Stock market.

3.1 DATA DESCRIPTION
The present study uses monthly data from January, 1995 to September, 2012 to examine the relationships between selected variables and BSE SENSEX INDEX (i.e., BSENX)(Used as a proxy to Indian Stock markets) . The variables, Crude oil price (i.e., COP), Gold price (i. e., GP) and Exchange rate (i.e., EXRT) where used in this study. The data are obtained from websites of World Bank Data base, RBI, Bombay stock exchange Ltd.

3.2 VARIABLES
A vast amount of studies document that significant relationship exists between Macroeconomic variables and Stock market. In this study three Macroeconomic variables were selected. These variables are Crude oil prices, Gold prices and Exchange Rate.

3.2.1 BSE SENSEX INDEX
The Indian Stock market has been through a lot of phases in a span of few years and the investors have had their share of surprises too. The SENSEX crash of January 2008 swept with it a large number of small scale investors while registering a record dip of 2062 points in a day. The major cause of this crash was attributed to the recession in the global economies, especially with the US dollar losing its strength to the Indian rupee. A large amount of equity in the form of shares was floated in the Indian economy as an impact of Foreign Institutional Investors (FII's) withdrawing their money from the Indian markets. In 2009 the market was in a recovery mode, in 2010 it consolidated. After maintaining a range of 17,500-20,500 for more than a year, the SENSEX finally crashed. This crash was triggered by major global events, such as the S&P downgrading US debt from AAA to AA+, concern about the AAA rating status of French debt, sovereign debt crisis spreading to bigger Euro zone economies like Italy, Greece and Spain. Hence, several global indices, like the Dow Jones Industrial Average (US), DAX (Germany), CAC (France), and FTSE (UK), broke their major supports. The Bombay Stock Exchange (BSE) is known to be the oldest exchange in Asia. The Bombay Stock Exchange developed the BSE SENSEX in 1986, giving the BSE a means to measure overall performance of the exchange. The SENSEX is the benchmark for the Indian Stock exchange, which captures the price movement. It is considered to be the pulse of the Indian stock markets. Theoretically, the rising SENSEX is an indicator of economic growth and is considered good for the market. So BSE SENSEX has been selected for this study as the representative of Indian stock markets

3.2.2 GOLD PRICE
The gold rate in today's market depends entirely on the demand and availability of the metal. Gold prices hit its all-time high of $1,895 an ounce in September 2011. Investors were worried about both the U.S. debt crisis and the euro zone crisis. It seemed neither the dollar nor the euro were safe investments. When other investments look too risky, gold always looks like a good hedge. It is not possible to state that gold's value changes as a result of activity within the stock market and it is also not possible to state that the level of the stock market changes as a result of activity in the gold market. But the historical evidence is overwhelming. Over the long-term, gold and stocks tend to move in opposite directions. This has been born out in research done by the World Gold Council for decades which shows that there is indeed a negative long-term correlation between gold and stocks, as measured by all of the major stock indices, namely the Dow Jones Industrial Average, the Standard & Poor's 500, and the Wilshire 5000. Whether the stocks being compared to gold are large blue chips or small, aggressive growth companies, the correlation to gold is still negative over the long-term.

3.2.3 CRUDE OIL PRICE
Oil is one of the most precious commodities on earth and is available only in limited amounts. Crude oil is the basic form of oil from which is used to extract other useful form of oils like petroleum, diesel, jet-fuel after refining. Companies involved in oil production are exploration and production (E &P) companies (back-end) and refining and marketing companies (front-end). In India, ONGC and Oil India are the leading front-end players while IOC, HPCL, BPCL and Reliance are major back-end players. There are a number of reasons leading to a rise in the oil prices like, a weak dollar. As oil exporting nations get money in terms of dollar for their oil, their profits decreases as dollar becomes weak. So, to protect their margins, they increase oil cost. Also the prices of crude oil are determined by the demand and supply gaps. Higher growth in developing countries like India and China increases demand for oil thereby leading to a price rise. Lastly, war between an oil exporting nations and an oil importing nation (like US and Iran).

Oil prices have significant impact on financial markets. Initially stock market rises in tandem with oil prices as it is the economic growth which is creating more demand for oil in the first place. Because of this increased demand, oil prices are increasing (sometimes they increase because of just speculation which is a dangerous situation and a warning signal). But if oil prices keep on increasing and sustain at higher values for a longer period of times, it will have detrimental effects on the economy. Higher the oil price increase and longer the higher prices are sustained, the bigger the macro economic impact.

3.2.4 EXCHANGE RATE
When it comes to the US being a consumer, it has one of the largest appetites in the world. To keep up its demand for consumption, its imports are huge when compared to exports. This created pressure since there were more payments. in dollars than receipt of any other currency, which made the supply of the dollar greater for imports payment and less receipt of foreign currency from exports. This resulted in the depreciation of the dollar's value, which again caused more outflow of dollar for import payments. This created a state of inflation and made consumables costlier to US. To control inflation US resorted to increase in interest rates to cool down pressure on demand side of consumption. This factor along with recession in all other sectors, particularly real estate, is causing the mighty US dollar to shake. Until the 70s and 80s India aimed at to be self-reliant by concentrating more on imports and allowing very little exports to cover import costs. However, this could not last long because the oil price rise in the 1970s and 80s created a big gap in India's balance of payment. Balance of payment (BOP) of any country is the balance resulting from the flow of payments/receipts between an individual country and all other countries as a result of import/exports happening between an individual country, in our case India and rest of the world. This gap widened during Iraq's attempt to take over Kuwait. Thereafter, exports also contributed to FX reserve along with Foreign Direct Investment into the Indian economy and reduced the BOP gap. Indian rupee appreciation against dollar impacted the Indian economy heavily. The advent of floating exchange rate in 1973, reforms of financial markets in the early 1990s and the Asian currency crisis of 1997-98 have jointly made a strong pitch for the dynamic linkage between stock and foreign exchange market. Both the markets are considered as the most sensitive segment of the financial markets because the impact of any such deviation is associated with policy variables as well as macroeconomic variables. However, in the case of foreign exchange market, the impact is direct whereas in the case of stock market there is an indirect impact.

3.3 RESEARCH METHODOLOGY
The main objectives of this paper is how macroeconomic variables affected stock market movement and to what extent or proportion will be explained when there is a shock of error in each variable on stock price indices during this study period and to study the long run and short run relationship that exist between the macroeconomic variables and BSE Sensex Index. First, variables are to be converted in to its log natural form to avoid the problem of hetroscedasticity. Second Unit root tests (ADF, PP, and KPSS) on time series data are to be carried out to ascertain the integration property of the variables. Thirdly, Johansen

cointegration test to be carried out to examine the co integrating relationship if the variables are of integrated of same order and then   VCE model,   Causality and variance decompositions analysis are to be used for further proceedings.

3.3.1 UNIT ROOT TEST

Many of variables studied in macroeconomics, monetary economics and financial economics were non stationary time series. It is compulsory to test the selected time series data for stationary before proceeding for cointegration test and establishing long run relationships. This paper used three different tests. They are Augmented Fuller test, Phillips Perron test and KPSS test. . It is decided upon rejection or acceptance of the null hypothesis by comparing the statistics obtained by the test with critical value. The null hypothesis is that series is not stationary and has a unit root test in the first two tests. If the calculated value is greater than the critical value then null hypothesis is rejected and the series is decided to be stationary. The lag length of the time series analysis is determined by choosing the lag length given by minimum Akaike Information Criteria and Schwarz Information Criteria. KPSS test is preferred in recent studies because ADF test is often criticised for not being able to make distinction between unit root and near unit root process in case of short time series. Null hypothesis of KPSS stationarity test is reverse of the null hypothesis of ADF and PP unit root test. Thus, hypothesis to be built for KPSS test means that null hypothesis time series is stationary and on the other hand alternative hypothesis means that time series is not stationary.

3.3.2 JOHANSEN CO- INTEGRATION TEST

Johanson co-integration test has developed by Johansen and Juselious (1990) in order to investigate of long run equilibrium relationship between the variables of same integrated order. In applying econometrics techniques determination of lag length of an autoregressive process is a difficult task. To overcome this problem various lag length selection criteria such as Akaike Information criterion, Schwarz Information Criterion, Hannan Quinn Criterion, Final Prediction Error, and corrected version of AIC have been suggested in the literature.

. The number of lags in cointegration analysis is chosen on the basis 0f Hannan Quinn Information criterion in this paper. He derives a test on the number of characteristic roots that are different from zero by considering the two following statistics : the trace value statistics(λ trace)and maximum Eigen value statistics(λ max). The null hypothesis of trace test is that the number of cointegrating vector is less than or equal to 'r' against the alternative hypothesis that more than 'r'. The null hypothesis for Eigen value test is atmost 'r' cointegrating vector against 'r+1' cointegrating vector.

3.3.3 VECTOR ERROR CORRECTION MODEL(VCEM)

After the co integration relationship between the selected variables is established, a vector error correction model(VCEM) can be conceived using these variables. It explains the short run dynamics between the variables to show the short term relationship of variables. Before estimation of VCEM model with associated co integration vector . In this study optimal lag length of VAR was chosen p=1according to BIC criterion

3.3.4 GRANGER CAUSALITY ANALYSIS

Granger causality test has been performed in the study in order to determine the direction of the relationship between the variables used in the model. It was proposed by C.J.Granger(1969). This study has applied Granger Causality with 2 lags.

3.3.5 VARIANCE DECOMPOSITION

The variance decomposition provided further evidence of relationship among the variables under investigation. The variance decomposition showed the proposition of the forecast error of one variable due to the other variable. Therefore, the variance decomposition makes possible to determine the relative importance of each variable in creating fluctuation in other variables.

4. RESULTS ANALYSIS AND DISCUSSION

This section presents the results of Econometric techniques on monthly data of Macroeconomic variables and Indian Stock market for the period from January 1995 to September 2012.

4.1 DESCRIPTIVE STATISTICS

The descriptive statistics for all the four variables under study, namely ,BSE Sensex proxy for Indian stock market index, crude oil price, Gold price ,Exchange rate are presented in table 1. Generally values for zero Skewness and Kurtosis at 3 represents that the observed distribution is normally distributed . It is observed that all the selected series have non-symmetric distributions(Even if the median values of variables are close to the average values). The kurtosis value indicates that all the selected series except Exchange rate are less peaked than the normal distribution. The value of Standard Deviation indicates that the exchange rate is less volatile compare to BSE Sensex ,Crude oil price and gold price. The Jarque-Bera statistic confirmed that the none of the series is normally distributed.

TABLE 1: DESCRIPTIVE STATISTICS RESULTS

Variables	LnBSESENX	LnCOP	LnGP	LnEXRT
Mean	8.810043	7.412537	10.0078	3.773461
Median	8.557308	7.296284	9.782255	3.802451
Maximum	9.915898	8.687366	11.46367	4.024323
Minimum	7.960864	6.093547	9.313327	3.44634
Std. Dev.	0.689362	0.746405	0.642023	0.118279
Skewness	0.341854	0.001815	0.795438	-0.858144
Kurtosis	1.451931	1.767792	2.297474	3.500911
Jarque-Bera	25.1791	13.34883	26.58976	28.10304
Probability	0.000003	0.001263	0.000002	0.000001
Sum	1858.919	1564.045	2111.647	796.2003
Sum Sq. Dev.	99.79615	116.9952	86.56061	2.937888
Observations	213	213	213	213

4.2 UNIT ROOT TEST RESULTS

The first simplest type of test are can apply to check for stationarity is actually plot the time series and may look for possibility of trend in mean and variance, evidence of auto correlation and seasonality in the data. If these patterns are found in the series that the series can be regarded as non –stationary. The graph of selected variables at log levels and first differences of variables is displayed in figure 1(a), – (h).

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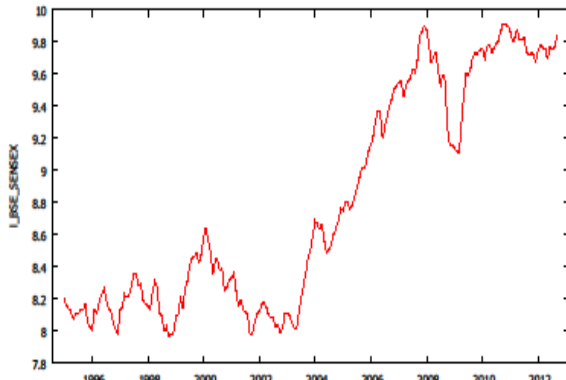
http://ijrcm.org.in/

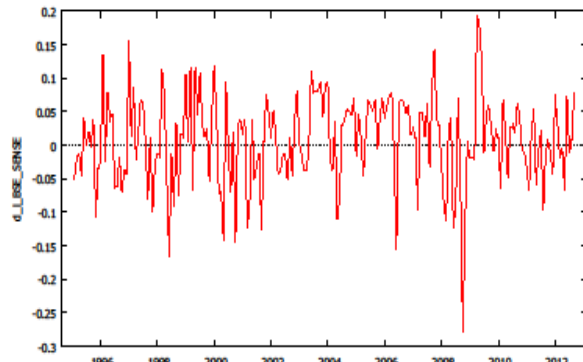Fig.1(a). Log Level BSE SENSEX Index , 1995-2012(Monthly)

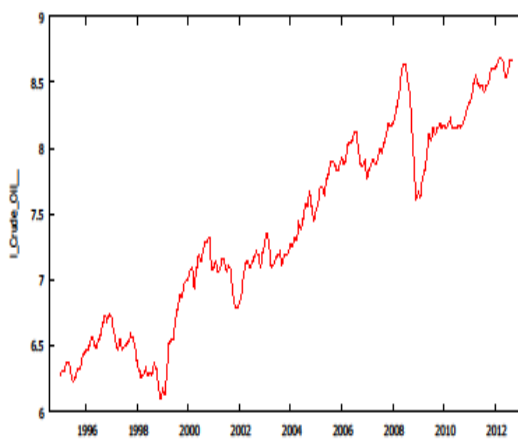Fig.1(b).First Difference of BSE SENSEX Index , 1995-2012

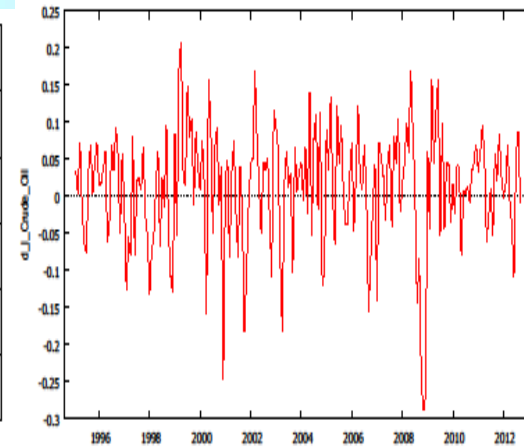Fig.1(c). Log Level Crude Oil Prices , 1995-2012(Monthly)

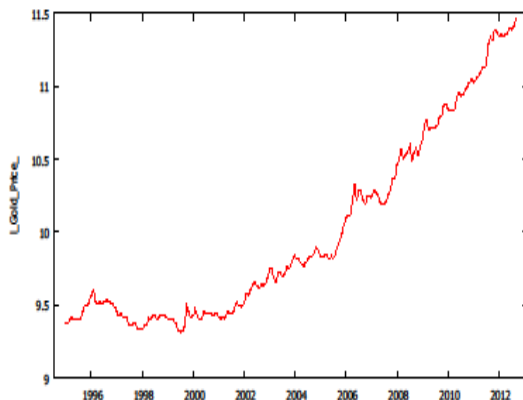Fig.1(d)First Difference of Crude Oil Prices , 1995-2012(Monthly)

Fig.1(e)Log Level Gold Prices , 1995-2012(Monthly)

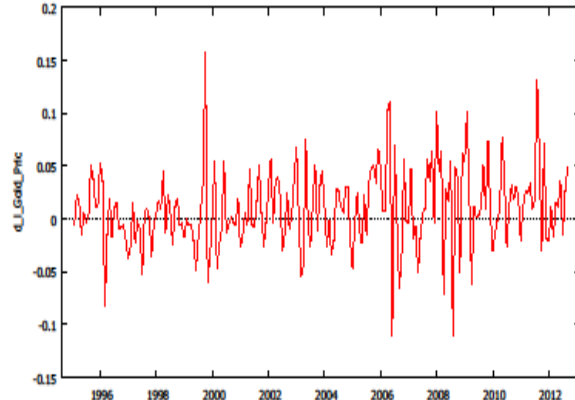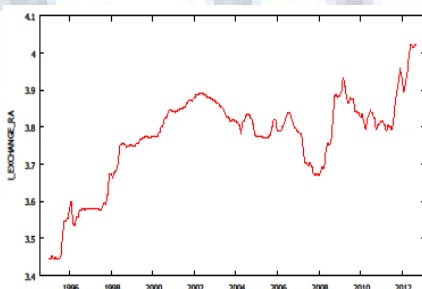Fig.1(f)First Difference of Gold Prices , 1995-2012(Monthly)

Fig.1(g). Log Level Exchange Rate , 1995-2012(Monthly)
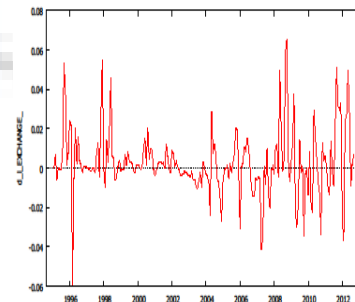
Fig.1 (h)First Difference of Exchange Rate, 1995-2012(Monthly)

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Apart from visual inspection, formal test for stationary is essential to opt for appropriate methodological structure .As a first step; we tested all the variables (BSE SENSEX, Crude oil Prices, Gold Prices and Exchange Rate) for stationarity by applying ADF, PP unit root test and KPSS stationarity test. The results of ADF, PP and KPSS Statistics are given in Table 2(a) and2 (b). On the basis of these three tests, all the series are found to be non-stationary at levels with intercept and also all the series are found to be non- stationary at level with intercept and trend at 1% significance level. However , after taking the first difference , ADF test, PP test and KPSS test results gives us all the series are stationary with constant and trend at 1% level of significance. Thus all the three stationary test indicate that all the series are individually integrated by order I (1).

TABLE 2 (a): ADF, PP, AND KPSS TEST RESULTS (LEVELS)

variables	ADF TEST		PP TEST		KPSS TEST	
	H_0: variable is non-stationary		H_0: variable is non-stationary		H_0: variable is stationary	
	constant	Constant and Trend	constant	Constant and Trend	constant	Constant and Trend
LnBSENX	-0.492728	-2.268816	-0.431482	-2.328079	1.639000	0.259613
LnCOP	-0.804077	-3.604086	-0.781605	-3.472291	1.807709	0.071641
LnGP	2.114126	-1.019385	2.285970	-0.951307	1.6992	0.4475
LnEXRT	-1.980940	-2.367136	-1.812863	-2.103454	1.002228	0.282516

TABLE 2 (b): ADF, PP, AND KPSS TEST RESULTS (FIRST DIFFERENCES)

variables	ADF TEST		PP TEST		KPSS TEST	
	H_0: variable is non-stationary		H_0: variable is non-stationary		H_0: variable is stationary	
	constant	Constant and Trend	constant	Constant and Trend	constant	Constant and Trend
LnBSENX	-11.3367	-11.386	-11.40006	-11.39385	0.110992	0.064867
LnCOP	-11.65305	-11.62759	-11.64223	-11.61667	0.025517	0.023280
LnGP	-14.06049	-14.50268	-14.05184	-14.53970	0.801932	0.023568
LnEXRT	-9.848383	-9.836195	-9.935139	-9.916202	0.178918	0.152232
Asymptotic critical values						
	ADF TEST		PP TEST		KPSS TEST	
Significance level %	constant	Constant and Trend	constant	Constant and Trend	constant	Constant and Trend
1%	-3.46	-4.00	-3.46	-4.00	0.74	0.22
5%	-2.87	-3.43	-2.87	-3.43	0.46	0.15
10%	-2.57	-3.13	-2.57	-3.13	0.35	0.12

Note: The Number of lag length selection in ADF test based on Schwarz information criterion and PP test based on bernnet kernel and KPSS Newly- west

4.3 MULTIVARIATE CO INTEGRATION TEST RESULTS

The Multivariate cointegration analysis using Johensen method, the first step is the appropriate lag selection for the variables. Two lag length has been selected l in this study on the basis of HQC(See Table 3(a))

TABLE 3 (a): VAR LAG ORDER SELECTION CRITERIA

lags	loglik	p(LR)	AIC	BIC	HQC
1	1350.62349	NA	-14.080672	-13.737630*	-13.941697
2	1378.30540	0.00000	-14.204290*	-13.586814	-13.954136*
3	1390.63092	0.07622	-14.165407	-13.273497	-13.804073

VAR system,
The asterisks below indicate the best (that is, minimized) values
of the respective information criteria, AIC = Akaike criterion,
BIC = Schwarz Bayesian criterion and HQC = Hannan-Quinn criterion.

Johansen's test of co integration is applied to discover any long run relationship between BSE SENSEX and Chosen macroeconomic variables i.e. Crude oil Price, Gold Price and Exchange Rate .The number of lags in co integration analysis chosen on the basis of Hannan –Qannan Information Criterion. Johasen derives a test on the number of characteristic roots that are different from zero by considering the two following statistics ; the trace Eigen value statistics(λ trace) maximum Eigen value statistics(λ max).the results for both Trace statistics and Maximal Eigen statistic were reported in Tables 3(b) and3 (c) respectively.

TABLE 3 (b): UNRESTRICTED CO INTEGRATION RANK TEST (TRACE)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value	Prob.**
None *	0.120253	47.85211	40.17493	0.0071
At most 1	0.060671	20.94679	24.27596	0.1242
At most 2	0.033469	7.802989	12.3209	0.2523
At most 3	0.00311	0.654126	4.129906	0.4789
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

TABLE 3 (c): UNRESTRICTED CO INTEGRATION RANK TEST (MAXIMUM EIGEN VALUE)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.120253	26.90532	24.15921	0.0208
At most 1	0.060671	13.1438	17.7973	0.2187
At most 2	0.033469	7.148862	11.2248	0.2368
At most 3	0.00311	0.654126	4.129906	0.4789
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

From the above tables 3 (b) and 3(c) , both test recognised one co integrating vector ,therefore , the study used one co integrating vector in order to establish the long run relationship among the variables. The co integration equation will be chosen based on log likelihood ratio. From the Johansen co integration result all three log likelihood ratio is 1522.902. The estimated co integration vector, normalised on Ln BSESENX is presented in Table 3(d).

TABLE 3 (d): NORMALIZED COINTEGRATING COEFFICIENTS

Panel A:Normalized cointegrating coefficients			
LnBSENX	LnCOP	LnGP	LnEXRT
1	-1.848027	-1.357616	4.152478
	(-1.48661)	(-1.69547)	(-2.67826)

Notes: standard error in parentheses ( )

The estimated equation and coefficient is as follows:

LnBSESENX= 1.84LnCOP+1.358 LnGP-4.153 LnEXRT

From the above normalised co integration equation which reveals that Exchange Rate have negative effect on BSE SENSEX in the long run. Exchange Rate and BES SENSEX are inversely related. BSE SENSEX decrease in the long run by 4.135 units if Exchange rate increase by a unit. On the other hand Crude oil Price and Gold price has a positive effect on BSE SENSEX. The crude oil price coefficient is +1.4 showing significant , implying that 1% increase in crude oil price while others keep constant contributes 1.84% increase in BSE SENSEX, similarly Gold Price co-efficient +1.35 showing significant implying that 1% increase in Gold Price in India leads to 1.35% increase in BSE SENSEX index.

4.4 VECTOR ERROR CORRECTION MODEL

After the co integration relationship between the selected variables is established, a Vector Error Correction Model(VCEM) can be conceived using these variables . The VCEM output obtained and given in Table 4 . An error correction equation depicting relationship of BSE SENSEX with other variables is presented below.

D(LnBSENX) =- 0.00071*[LnBSENX(-1)-0.87835 *LnCOP(-1)-0.23448 *LnGP(-1)+2.125018 *LnEXRT +7.96966] + 0.201867*D(LnBSENX(-1) -0.01455* D(LnCOP(-1)) - 0.174828*D(LnGP(-1))- 0.35792 *D(LnEXRT(-1))+ 0.009307 .

TABLE 4: VECTOR ERROR CORRECTION ESTIMATES

Cointegrating Eq:	CointEq1			
LnBSENX(-1)	1			
LnCOP(-1)	-0.87835			
	(-0.18862)			
	[-4.65660]			
LnGP(-1)	-0.23448			
	(-0.20637)			
	[-1.13623]			
LnEXRT(-1)	2.125018			
	(-0.58374)			
	[3.64034]			
C	-7.96966			
Error Correction:	D(BSENX)	D(COP)	D(GP)	D(EXRT)
CointEq1	-0.00071	0.077583*	0.010177	-0.00745
	(-0.02093)	(-0.02483)	(-0.01235)	(-0.00513)
	[-0.03402]	[3.12413]	[0.82393]	[-1.45338]
D(LnBSENX(-1))	0.201867 *	0.052742	0.006943	-0.01315
	(-0.07643)	(-0.09067)	(-0.0451)	(-0.01872)
	[2.64114]	[0.58170]	[0.15396]	[-0.70249]
D(LnCOP(-1))	-0.01455	0.207367*	0.0217	0.007315
	(-0.0567)	(-0.06726)	(-0.03345)	(-0.01389)
	[-0.25661]	[3.08328]	[0.64868]	[0.52677]
D(LnGP(-1))	-0.17389	0.081639	0.01301	-0.01374
	(-0.12342)	(-0.1464)	(-0.07282)	(-0.03023)
	[-1.40899]	[0.55763]	[0.17866]	[-0.45444]
D(LnEXRT(-1))	-0.35792	-0.62059	0.053762	0.321341
	(-0.29926)	(-0.355)	(-0.17658)	(-0.0733)
	[-1.19599]	[-1.74812]	[0.30447]	[4.38396]
C	0.009307	0.009331	0.009319	0.002015
	(-0.0047)	(-0.00557)	(-0.00277)	(-0.00115)
	[1.98133]	[1.67445]	[3.36199]	[1.75147]
R-squared	0.075874	0.121719	0.00646	0.132792
Adj. R-squared	0.053335	0.100297	-0.01777	0.11164
Sum sq. resids	0.856782	1.205668	0.298278	0.051399
S.E. equation	0.064648	0.07669	0.038145	0.015834
F-statistic	3.366267	5.68208	0.266582	6.278151

According to cointegrating coefficient in the long run it can be expected 0.88% increase of crude oil price, 0.23% increase of Gold price if BSE SENSEX increases for 1%.On the other hand 1% increases of Exchange rate would decrease BSE sensex for 2.13% in the long run.

In the short run, all the variables confirms to the signs (negative) and statistically insignificant except BSE SENSEX. The error coefficient confirms present short run disequilibrium i.e., the error will corrected 0.07% in the next period and also a weak relationship exist because the coefficient of determination (7.6%) shows small proportion explained by all the selected variables. This suggest that in the process of the short run adjustment for the Bombay stock market only DLnBSENX(-1) is significant at 1% level of significance but others are not even at 10% level of significance .This means that Bombay Stock Market price are being adjusted each month dominated by the influence of the market's own performance rather than selected Macro economic variables. The results are interesting and useful in understanding the Indian stock market mechanism as well as its return generating process. The VCEM analysis presented in above Table4 shows that two out of the three variables are relatively integrated in the long run and these variables are influencing in the pricing process .These variables are crude oil prices and gold prices.

4.5 GRANGER CAUSALITY TESTS

The Results of the Granger causality test are given table 5. The results suggest that to reject the null hypothesis of Granger non causality between BSESENSEX and Gold Prices , Exchange Rate in any direction. It also shows that the unidirection granger causalith exist at 5% level of significance between BSE Sensex and Crude Oil Prices. This implies that the BSE Sensex cannot be used as a leading indicator for further growth in gold price and exchange rate in India.

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TABLE 5: PAIR WISE GRANGER CAUSALITY TESTS

Sample: 213			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
DLnBSENX does not Granger Cause DLnCOP	210	3.89533	0.0219
DLnCOP does not Granger Cause DLnBSENX		0.11347	0.8928
DLnEXRT does not Granger Cause DLnBSENX	210	1.68548	0.1879
DLnBSENX does not Granger Cause DLnEXRT		0.72363	0.4862
DLnGP does not Granger Cause DLnBSENX	210	1.89619	0.1528
DLnBSE NXdoes not Granger Cause DLnGP		0.50129	0.6065

4.6 VARIANCE DECOMPOSITION

The results of variance decompositions presented in Table 6. Its shows that when analysing the components of the BSE SENSEX explains 100% of the components of variation in the 1st period when the shock by a standard deviation of one in the variable itself and take back down out of reach in the second period to 99.26% of the error prediction of the variability while about0.13%, 0.48% and 0.11 % error in predicting the dynamic contrast in due to crude oil price, gold price and exchange rate respectively. This means that during the 2nd period can change the BSE SENSEX explain about 99.26% of the forecast error in the BSE SENSEX itself, While the changes in Gold prices explains about 0.48% of forecast error in BSE SENSEX followed by dynamic changes in crude oil price, which explains about 0.13% of forecast error in BSE SENSEX and changes in the Exchange Rate that explains about 0.11%of the forecast error in the BSE SENSEX. While noting the increase with proposition attributable to Crude oil price, Gold Price and Exchange rate during the 6th period of up to about 0.50%, 0.30%and 1.72%respectively and then continue to fluctuate with tendency to increase or decrease that about 3.83%, 0.11% and 1.40%respectively on the Crude oil price, Gold price and Exchange rate in the 24th period. As is also noted that Crude oil price is ranked first in terms of impact on the BSE SENSEX in this period followed the exchange rate and then Gold price.

TABLE 6: VARIANCE DECOMPOSITION IN BSE SENSEX

Period	S.E.	DLnBSENX	DLnCOP	DLnGP	DLnEXRT
1	0.065006	100.0000	0.000000	0.000000	0.000000
2	0.100538	99.2606	0.1383	0.4822	0.1189
6	0.200234	97.46184	0.509665	0.304479	1.724015
24	0.398814	94.6518	3.8252	0.1154	1.4076

The analysis of the components of variance clearly shows that the relative importance of exchange rate in interpreting the BSE SENSEX is the largest in the short term which runs for six periods followed by the relative importance of crude oil price while the relative importance gold price is the least in the interpretation of changes with BSE SENSEX. In the long run , these relative importance are subject to certain changes , Which occupies the crude oil price ranked first followed by the relative importance of Exchange Rate while remainder of this relative importance of the Gold price is least in the interpretation of changes in BSE SENSEX.

5. CONCLUSION

This study examined the long run and short run relationship between Crude oil price, Gold price, Exchange rate and BSE Sensex Index. All series used in this study were found that at log level data was non- stationary but stationary at first difference with constant and trend. Using Multivariate co-integration analysis, only one co integrating equation between the variable was found. In the long run Exchange rate had a negative impact on Stock market index, While Crude oil price and Gold price affected stock Index positively. The VCEM analysis depicted that the coefficients of VCEM was insignificant showing adjustment. The results of Variance decomposition illustrated that among the variables, Crude Oil price was explaining the maximum Variance and most of the changes in BSE SENSEX are explained by itself so, BSE SENSEX is found exogenous among these variables because 95% change in BSE SENSEX in comes from itself. The test of Granger Causality suggests that the direction of causality from BSE SENSEX to Crude oil price since the estimated F statistics is significant at 5% level. On the hand, there is no reverse causation from Crude oil to BSE SENSEX. This indicates that we can use BSE SENSEX index to better predict the Crude oil price than simply by the past history of Crude oil price.

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MYSTERY SHOPPING– THE MIRACLE TOOL IN BUSINESS RESEARCH

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ABSTRACT

Satisfied customers are an important advantage for almost every company. Every company tries its level best to deliver better services to make the customers satisfied. A customer must be satisfied up to the highest possible level. Mystery shopping is a type of research tool to measure the level of satisfaction, a customer experiences through impartial way. The present paper tries to bring out the conceptual understanding of mystery shopping - tries to explain the openness of mystery shopping to various arenas whether public or private and how it creates attention for improving performance of the company.

KEYWORDS

Mystery Shopping, Mystery Shopper, Customer Services, Customer Satisfaction, Employee Appraisal, Competitive Advantage.

INTRODUCTION

Knowing the customer satisfaction is always the top prerogative in any business. Getting to know the level of satisfaction and (or) the changing expectations of customers' is a continuous process. Though there are various methods and tools available for this, mystery shopping is considered as unique and undeniable tool in any organisation. As defined by Wilson (2001), mystery shopping is "a form of participant observation that uses researchers to deceive customer-service personnel into believing that they are serving real customers or potential customers". Mystery shopping is a technique that involves looking at your business from outside and measure the efficiency of your own key processes from the view point of customers.

Mystery Shopping can be carried out in person, by telephone, or less commonly by email. It can recognize strengths and weaknesses and aid to show exactly where service delivery can be improved. In instances where excellent service is provided, the service may be considered an example of best practice and specific staff members can be singled out for recognition and reward. Initially set up in retail and private sector service industries, now mystery shopping is used increasingly in the private as well as public sector to gain a better understanding of how service users are taken care of when they approach front line offices.

Research is the foundation stone of effective marketing planning and is vital for implementing successful marketing strategies. Mystery shopping is a research to know about company in customer point of view. It is the use of individuals, skilled to measure any customer service process, by acting as potential customers and in some way reporting back on their experiences in a detailed and objective way. It is also an act of purchasing goods and services for collecting information for market research.

REVIEW OF LITERATURE

Although the concept of mystery shopping is old, there are very less literature available in its field. Since the use mystery shopping as a tool of research has got much concern in the present business competition, investigating through the literature becomes imperative.

As the use of mystery shopping is gaining much importance in the present chase of competition. The literature obtained by the investigator, in the form of various reports and research studies is briefly reviewed in this part.

Banks and Murphy (1985) have noted that organizations prolong to articulate discontent in performance assessment systems even though advances in appraisal technology. Appraisal reliability and validity still remain a major problem in most assessment systems.

Mystery shopping is the collection of facts, not perceptions. The mystery customer questionnaire or checklist should emphasize objective questions with a view to collecting factual data, again negating another weakness of customer surveys, i.e. that customers only remember their overall impression of a service and not the individual elements or transactions (Wilson, 1998).

Finn & Kayande, 1999 found that the process mystery shopping uses a form of member observation to observe the behavior of employees, usually in the process of providing services; the resulting data are then used for evaluation purposes. The process usually includes a structured interaction between the representative and the service provider; an employee whose behavior is being assessed. It is followed by an evaluation interview in which the manager gives the employee feedback about the data collected during the interaction. This procedure is intended to increase the accuracy of the service provider.

Bromage, (2000) found it as an integral training tool in that it can be used to identify training needs.

Wilson, (2001) defined mystery shopping as a form of participant observation that uses researchers to deceive customer-service personnel into believing that they are serving real customers or potential customers.

Shing and Spence (2002) argue that their use to gather competitive intelligence is parallel to industrial espionage and conclude that in such cases mystery shopping is difficult to defend ethically.

Karia, 2005 stated that mystery shopping in India is of not a much scope but some of the big corporate have started to do mystery shopping for increasing their service delivery.

Brender-Ilan, B. and Shultz, T. (2005) found that the procedure of mystery shopping research is intended to increase the accuracy of the service provider valuation, as this type of jobs is considered rigid to appraise impartially. Obviously, the process is used differently in different organizations, and for different purposes.

CONCEPTUAL UNDERSTANDING

Mystery shopping is necessary for companies to get an objective opinion on how their business is doing. If they used their own employees to evaluate their service and operations, it would be biased. So mystery shoppers, who don't already have a connection with the company, are used to provide honest and unbiased feedback. In the UK mystery, shopping is increasingly used to provide feedback on customer services provided by local authorities, and other non-profit organizations such as housing associations and churches.

Mystery shopping is a term that describes a field based research technique of using independent auditors posing as customers to gather information about product quality and service delivery by a retail firm. The mystery shopper poses as a customer in order to objectively gather information on the business being

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studied. Getting a customer's view of one's business is a widely recognized tool in both the marketing and customer service arenas. When mystery shoppers are dispatched to visit a business, they use criteria developed by the client to evaluate the business and focus primarily on service delivery and the sales skills of employees. Their reports, usually written, are forwarded to the client and can be used in a number of ways. Mystery shoppers can also objectively evaluate competitors and their service delivery and product mix for comparisons and benchmarking.

Mystery Shopping is also known as Ghost Shopping where industry serves to evaluate the customer service for any company that deals with customer satisfaction. By sending an anonymous ghost shopper, that forms the base on their visits to client locations. Ghost shopping helps in evaluating the service provided by the company's' channel members to its customers. From this information companies can understand whether it is meeting, or failing to meet, it's customer's needs. Ghost shoppers are everyday people who are visiting stores as anonymous customers, and in the process helping these stores to better understand how they can meet customers' needs.

METHODS OF IMPLEMENTATION

Mystery shopping can be done by two methods a) A company uses its own employees to perform the mystery shopping, in which company trains its own employees to collect the customer related enquires from the market and b) Some companies can engage marketing research companies to evaluate the superiority of service in their stores; these companies use mystery shoppers to get the information in disguise. They disperse a mystery shopper to make a particular purchase in a shop or store, for example, and then report on the experience and understanding. Typically, the shopper is compensated, and can keep the product or service.

Mystery shopping can be used in any industry, with the most common venue being retail stores, hotels, movie theaters, restaurants, fast food chains, banks, gas stations, automobile dealerships, apartments, health clubs and health care services

Mystery shopping can allow a firm to create a competitive edge. It can also assist retailers in developing and evaluating strategies to retain current customers. The first step in mystery shopping is to identify your firm's important customer service characteristics and objectives often flowing from your strategy and overall goals and objectives. Next a firm uses these variables to develop a mystery shopping questionnaire, either alone or with the help or a consultant or mystery shopping firm. The survey can include a mix of description and check-off questions.

WHY & WHERE MYSTERY SHOPPING?

In this growing severely competitive environment, there is an ever-increasing need for companies to gather evidence on whether their policy initiatives have had the intended outcomes and whether retail firms treat their customers fairly. In particular, the need is to measure and evaluate the impact of company policies, assess levels of firms' compliance with rules and examine the experience consumers have of the market. Mystery shopping is regarded as a necessary means of gathering such information. This is because of the problems inherent to surveying those who have recently purchased products – consumers don't always exactly recall all the particulars.

Some of the benefits of mystery shopping are; Product Placement, Point of Selling, Visibility, Customer Demand, Repurchases, Brand Recall, Awareness. Mystery shopping is useful to know about the awareness of that brand, how many outlets are having this product? Through it one can get the information about the competitors like their new product launches, market share, new promotions, campaigns, etc. Even you can check the placement of the product in the outlet, whether the product has got right place on shelf, visibility of product, how fast product is moving, impulse buying appeal of the product, etc. A "conformist" mystery shopper in-person visits more of business locations. The assessments are typically discrete questions along with the correlated point values, as well as some narratives for amplification. However, due to advances in technology as well as evolving customer service requirements, the ability to gather data and other materials relating to a customer's experience has been significantly increased.

Mystery shopping can allow a firm to create a competitive edge. It can also assist retailers in developing and evaluating strategies to retain current customers. Typical areas of assessment are customer service, suggestive selling and up-selling techniques, teamwork, employee and management activities, head-count, store appearance and organization, merchandise displays and stock, cleanliness of the location, signage and advertising compliance, time in line and time elapsed for service, product quality, order accuracy, customer's preferences, cash handling, and return policies. After pre-testing the questionnaire, mystery shoppers are hired to do an assessment. Assessments can be on-site or via the telephone or even the Internet. A sample size as well as a period of time for the mystery shopping program is determined and results are used for feedback.

BENEFITING RANGE OF BUSINESS

Mystery shopping is more visible in developing countries and it is mostly prevailing in retail sector. But other sectors also use it as a tool to measure their customer satisfaction, competition, new technology advancements etc. some of the areas where mystery shopping is seen commonly are Banks, Restaurants, Hotels, Supermarkets, Automobile shops, Repair shops, Bars, Clubs, Theaters, Shopping malls, Retail chain operators. FMCG companies, Consumer durable companies, Apparel retailers.

Mystery shoppers are professional in this field as he charges a reasonable amount from the companies for doing this service of conducting research. A feedback is given by them to the client whether the services are being performed according to expectations or not and gives a chance for the further improvements that company thinks necessary for its survival. On the other hand they tries to offer a better delivery to the customers to make them satisfied and a company can attract more and more customers if it is efficient in the market

USE AND EXECUTION OF MYSTERY SHOPPING

Managers can use the reports from mystery shoppers to evaluate their position in the industry, and the results can be used to provide employee recognition and other positive reinforcements of loyalty and morale through incentive programs. Many restaurants, banks, supermarkets, and clothing retailers have used the techniques, along with hotels, furniture stores, grocery stores, gas stations, movie theaters, automotive repair shops, bars, athletic clubs, bowling alleys, and almost any business where customer service is important. As the service sector of the economy has increased, so has the demand for mystery shoppers.

Some retailers are large enough to have their own in-house program in place. Other smaller companies who do not have the resources to develop a quality mystery shopping program in-house use mystery shopping contractors. These contractors directly hire and train the mystery shoppers, who work as independent contractors. The reports from mystery shoppers can measure training and levels of customer service pre- and post-training. Mystery shopping allows managers to determine if the services provided by employees are appropriate. Shopping reports can assess promotional campaigns and even verify employees' honesty in handling cash and charges.

Reports over time can give up a longitudinal database of averages. Some industries share findings so that managers can know regional or national averages of the industry. At the Web site Managerspot.com, for example, restaurant owners can compare their numbers from mystery shopping reports with a pool of similar, but anonymous, restaurants. The use of mystery shopping is just one part of a company-wide program to develop and enhance employee performance. The idea is to find out from a consumer's point of view which areas of service and product quality are most important and what areas need improvement. Data from the shopping results can be used by the company to make necessary changes on a timely basis. The results should be used for developmental and reward purposes and not for punishment. Mystery shopping is a valuable tool to businesses and is especially helpful for small, start-up businesses that need accurate and fast information to assess their employees and compare their products and services to the competition. So mystery shopping is a process for exploring everyday experiences, one person's view at a snapshot in time, a way of identifying strengths and weaknesses in dealing with customers, a method of measuring employees' performance against set customer service standards, a useful aid for identifying training needs.

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Mystery shopping can be used for various purposes. Most of the time the goal is to measure the quality of the service delivery to the customer. In this situation the mystery guest can be focused on the compliance to specific standards, guidelines or demands, or the mystery guest can be instructed to position the quality of the service on a scale. If a mystery guest visits locations of competitors, benchmarking becomes a way to judge your own activities against those.

GROWING NECESSITY OF MYSTERY SHOPPERS

Managers can use the reports from mystery shoppers to evaluate their status among its competitors and the scope of increasing the business. Also this tool is highly reliable, and the results can be used to provide employee recognition and other positive reinforcements of loyalty and morale through incentive programs.

The use of mystery shopping is just one part of a company-wide program to develop and augment employee performance. The idea is to learn from a consumer's point of view which areas of service and product quality are most important and what areas need improvement. Data from the shopping results can be used by the company to make necessary changes on a timely basis. The results should be used for developmental and reward purposes and not for punishment. Mystery shopping is a valuable tool to businesses and is especially helpful for small, start-up businesses that need accurate and fast information to assess their employees and compare their products and services to the competition.

MYSTERY SHOPPING IN INDIA

Mystery shopping is not much practiced in India; some of the organizations who have initially used this type of research are ICICI Bank, Titan, Arrow and Reliance communications. ICICI Bank used mystery shopping initially in Pune to check the services offered by one of its branches, it conducted survey by telephone through mystery shoppers to find out the different services provided to different age groups by the bank (Karia, P.M., 2005)

CONCLUSION

In the present age of competition there are various tools of research available for the companies to measure their service level from the customer point of view. One such efficient tool is mystery shopping, which is also called as ghost shopping. It can be viewed as an efficient tool in measuring the customer satisfaction with the company. No doubt, companies are spending lot of resources in ensuring customer satisfaction and to know what actually customers want. Mystery shopping can be chosen as an efficient tool in knowing the overall details of positive and negative aspects of services provided to customers. It can also be used to rectify the problems a company actually faces in dealing with the customers.

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THE EMPIRICAL INVESTIGATION BETWEEN EMOTIONAL COMPETENCE AND WORK PERFORMANCE OF INDIAN SALES PEOPLE

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ABSTRACT

The objective of this paper is to study; if any association exists between the emotional competence level of Indian salespeople with their performance. For this purpose, a questionnaire pertaining to emotional competence and performance were administered to 400 salespeople(representing 100 each from Insurance, Automobiles, Pharmaceuticals and Telecom Industries). We have used internal consistency for estimating the reliability of scale used in the present study for performance of sales people. Six emotional competence proficiencies have been identified by the technique factor analysis- Ironic Perspective, Authentic Dealing, Empathy with Customers, Emotional Acceptability, Ethical Emotional Flexibility and Self Presentations. Further Cluster Analysis was run to group respondents into relatively homogeneous segments based on their emotional competence, using six proficiencies. Based on the two groups of sales people, the performance have been measured for selective salespeople .It was found that overall performance was significantly different between the MEC and LEC salespeople. This calls for improving the performance of LEC salespeople.

KEYWORDS

Authentic Dealing, Emotional Acceptability, Emotional Competence, Empathy with Customers, Ethical Emotional Flexibility, Ironic Perspective, Salespeople, Self Presentations, Performance.

INTRODUCTION

The diverse and interdependent responsibilities frequently result in sales representatives facing work environments characterized by considerable uncertainty. The responsibilities of salespersons necessitate that they work effectively both within and outside the boundaries of their work unit. Therefore, although salespersons' performance is partly a function of their own abilities and effort their success is also contingent upon the behaviour of others.

Given their interdependence with others, it is critical that salespersons be sensitive to the expectations of the various persons with whom they interact. However, the very nature of the salespersons' task environment frequently leads to a lack of clarity regarding such expectations. The salespersons' work environment necessitates that they work in a complex role set and successfully manage the interdependent relationships comprising that role set. A first step in the direction of managing these interdependencies is to establish a clear understanding of mutual expectations. However, the very nature of salespersons' task environment makes this difficult to accomplish.

Even though millions of rupees are spent on annual sales training expenses, there is only limited knowledge about what is most effective in customer interactions. A conceptual framework for variable related to salesperson performance is shown in Figure-I.1.

Macro environmental variables include territorial characteristics such as potential and workload and the level of effort expended by the salesperson in covering the territory. However, the objective of the framework is to delineate factors related to the effectiveness of salespeople in influencing customers during interpersonal interactions. The framework focuses on the effectiveness of sales behaviours in the microenvironment of the sales interaction. Variables related to effectiveness in the microenvironment are further classified into those related to the salespersons. The fundamental idea behind the framework is that effectiveness in sales interactions can be understood best by examining the interaction between sales behaviours, resources of the salesperson, the nature of the customer's buying task, and characteristics of the salesperson-customer relationship. This framework provides a mechanism for integrating previous research and a direction for future research.

The way salespeople cope with emotions and their effects has a direct relationship to job performance **(Bagozzi, 2006)**. Self-conscious emotions generally are triggered automatically; and salespeople who cannot control them may become aroused, angry, anxious or despondent during a sales call, which may cause customers to question their credibility. Sales-call anxiety, for example, is commonly accompanied by a protective urge to withdraw from the sales encounter — to avoid contact with customers or, when contact is made, to be submissive and avoid taking steps to close the sale.

Unquestionably, many factors affect sales performance, both controllable (e.g. skill level, territory quality) and uncontrollable (e.g. environmental and customer factors, luck). However, the one means to directly impact salesperson performance is for managers to ensure that their salespeople are provided with experiences and training that develop appropriate closing techniques as well as flexibility in handling different types of customers across different selling situations. Salesperson skills at using active listening, handling objections, and negotiating can instead be quite important in building relational factors (e.g. role performance, synergistic solutions) as well as the customer's perceptions of trust and credibility in that salesperson.

FIGURE-I.1: VARIABLES RELATED TO SALESPERSON PERFORMANCE
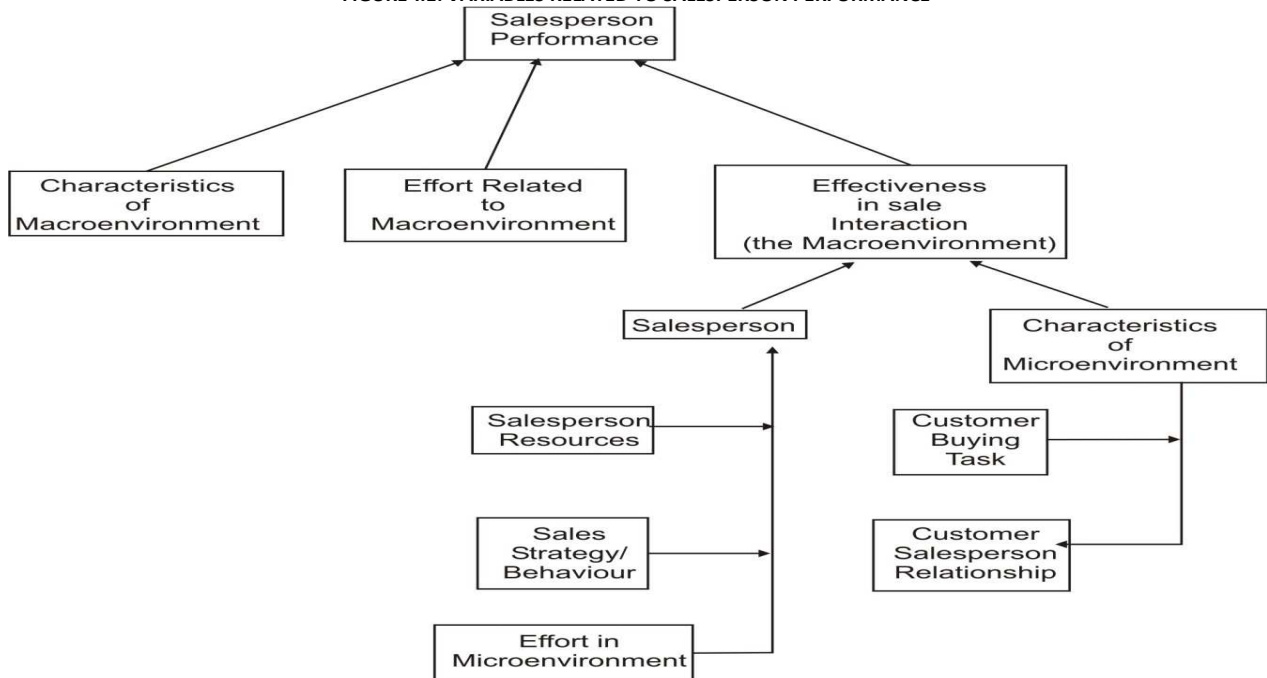
(Source: Journal of Marketing, Vol. 45, Winter 1981, p.86)

The evaluation of salesperson performance remains a critical and central issue in sales force management. The significance of the performance evaluation issue is underlined both by the need for information for effective control - to support decisions on salesperson termination, promotion, remuneration and in sales employment disputes **(Lublin, 1994)** - as well as the need for management to have some basis to facilitate decision making to improve salesperson performance and enhance sales organization effectiveness **(Cravens, 1995; Cravens et al., 1993).** Both types of management information requirements demonstrate a high priority for understanding the determinants or drivers of sales performance, as a highly significant issue for sales management.

Indeed, while effort has been expended in attempts to identify valid and reliable predictors of salesperson performance that would be useful to managers, the large number of studies conducted have made only a limited contribution to improving understanding of salesperson performance and have produced only relatively poor predictors of performance **(Churchill et al., 1985).** However, it remains unclear whether this shortfall reflects attention to inappropriate performance indicators, selecting the wrong dimensions or elements of performance, or simply the application of poor measures.

In terms of identifying the underlying drivers of salespeople performance, a promising approach based on theoretical and empirical studies, suggests that insights into salesperson performance come from evaluating salesperson work behaviour, rather than just the outcome results attributed to them **(Anderson and Oliver, 1987; Challagalla and Shervani, 1996; Cravens et al., 1993).** This approach suggests that salesperson behaviour performance in such activities as: planning sales calls, making sales presentations and involvement in team-based selling efforts; may be a highly significant contributor to salespersons' effectiveness

Organisations can systematically enhance the emotional competence of salespeople by 1) assessing their current level of emotional competence; 2) improve their emotional competence by proper training for emotional competence skills; 3) evaluating sales performance for feedback purposes. By establishing a baseline, each individual salesperson will have an idea as to which aspects of emotional competence he/she needs to improve the most. A salesperson may be very strong in the intrapersonal dimensions of self-regulation and self-awareness, but may need to improve the interpersonal skill of perceiving others' emotions. By using an individual assessment, salespeople can tailor the program of exercises to most accurately fit their needs.

PREVIOUS STUDIES

There is supposed to be relation between job performance and the way salespeople cope with the emotions during sales interactions. The job performance of salespeople may depend upon many factors e.g. ability to adapt one's sales approach to fit the sales situation, effective listening skills, technical skills like customer knowledge etc. Ability to perceive, interpret and react to one's own and others' emotions is very critical skill that enables salespeople to enhance their sales performance. One of the objectives of the present study is to analyse the impact of emotional competence on the job performance of the salespeople. With this in mind, review of studies has been done to identify the factors determining the performance of salespeople.

The most important factors found by **Barkar (1997)** are building long-term relations, inter-departmental co-ordination, training for both salespeople and field managers and information capabilities. High performance firms and field managers consider team selling to be the most important determinant of sales force effectiveness. A search of the published and unpublished literature uncovered 116 articles that yielded 1653 reported associations between performance and determinants of that performance by **Churchill et al. (1985)** The results of meta-analysis of 116 studies indicate that the determinants can be ordered in the following way in terms of the average size of their association with sales performance: (1) role variables, (2) skill, (3) motivation, (4) personal factors, (5) aptitude, and (6) organizational/ environmental factors. The results indicate that the strength of the relationship between the major determinants and salespeople performance is affected by the type of products salespeople sell. A salesperson's aptitude, for example, has a stronger impact on that individual's performance when he or she is selling products rather than services. The differences in attitudes, motivation, and behavioural strategies should result in varying levels of performance across control system philosophies **(Anderson and Oliver 1987). Spencer and Spencer (1993)** claim that differentiating competencies distinguish superior performance from average performance. These can be developed through training and are relatively easy to identify. These include self-concepts, traits and motives and although hard to develop, can determine long-term success on the job. A 16-item scale to measure the degree to which salespeople practice adaptive selling. The ADAPTS scale by **Spiro and Weitz (1990)**, with additional assessment of its predictive validity, it can be a useful diagnostic tool for sales management. In sales environments benefiting from adaptive selling, the measures can be used to indicate whether poor sales performance is due to a lack of flexibility in sales approaches. In addition, the scale can serve as a method for evaluating sales management programs. Relationships among job image, job satisfaction, and job performance are also investigated by **Wotruba and Tyagi (1991).**In another study by **Boles et al. (2000)** have examined the effect of relationship selling activities (includes interaction intensity, mutual disclosure, and cooperative intentions on salesperson's performance). In one more study by **Lee and Dubinsky (2003)** have examined potential precursors of customers' emotions that arise during interaction with retail sales personnel, as well as consequences of those emotions. Sales managers with a higher predisposition to self-monitoring (frequently when people are in unfamiliar situations they look to others for cues to determine appropriate behaviour, a process described as self-monitoring) were the higher performers according to a studt by **Conrad et al. (2007).**

Hunter (2004) reports that a greater number of offerings increase sales performance, but the enlarged product line should result in increased information requirements for salespeople. Strategies of sales force specialization imply that too much information can reduce sales performance. Yet theoretical and practical guidance regarding when information becomes detrimental to sales performance is sparse. Information overload theory is used to identify when performance suffers because of large amounts of information. In the study by **Joshi (2010)** on 149 product managers in small manufacturing organizations suggest that two influence strategies - rationality and exchange - have a positive impact and that two influence strategies - coalition building and upward appeal - have an inverse impact on product modification implementation. The results also show that salesperson trustworthiness enhances the positive effects of rationality and exchange while mitigating the inverse effects of coalition building and upward appeal. Finally, the results show that product modification implementation has a positive effect on the product's performance in the marketplace. Collectively, the results suggest that salespeople should adopt the rationality and exchange strategies to get their desired product modifications implemented while also developing a reputation for trustworthiness and that it pays for organizations to listen to their salespeople.

The review of literature reveals that the impact of perceived organizational support (POS) on the relationship between boundary spanner role stressors (i.e., role conflict and role ambiguity) and both work attitudes (i.e., job satisfaction and intent to remain) and behavior (i.e., task performance). Results indicate that POS has strong effects on role ambiguity and role conflict, as well as job satisfaction and intent to remain. However, POS is not related to task performance (**Johlke,2006).** Salesperson's customer orientation completely mediates the relationship between company customer orientation and salesperson performance. Thus, the influence of a company's customer orientation on salesperson performance acts through the customer orientation of the salespeople. The study by **Cross et al. (2007)** reinforced the importance of customer orientation and the role of salespeople in putting customer orientation into practice.

RESEARCH GAPS

The forgoing survey of literature reveals that emotional competence proficiencies have not been identified for the domain of salespeople in India. Though EC skills have been identified for the domain of salespeople in other countries, we cannot be sure if the same EC skills are applicable to the Indian sales force or not. There is need to explore the specific EC proficiencies of the Indian salespeople. There is also a need to identify the determinants of higher performance of salespeople. This study has endeavoured to fill these research gaps.

DATA BASE AND RESEARCH METHODOLOGY

The objective of this paper is to study; if any association exists between the emotional competence level of Indian salespeople with their performance. In other words, does higher emotional competence level of salesperson's effects their performance across various industry groups.

HYPOTHESES

In order to study the above objectives, following hypotheses have been framed on the basis of prior research and intuition:

H_0 : Performance of the salespeople is not significantly related to their emotional competence.

H_1 : Performance of the salespeople is significantly related to their emotional competence.

For this purpose, a questionnaire pertaining to emotional competence and performance were administered to 400 salespeople(representing 100 each from Insurance, Automobiles, Pharmaceuticals and Telecom Industries). The data was collected from field offices of various companies located in cities of Northern India- Lucknow, Delhi, Gurgaon, Panipat, Ludhiana, Ambala, Jalandhar, Amritsar, Chandigarh, Shimla, Dharamshala, Kangra and Jammu.

7 point Likert scale, salespeople performance scale, developed by Behrman and Perreault (1984) was used. This scale measures the performance vis-à-vis on 5 parameters.

1. Sales Objectives
2. Technical Knowledge
3. Providing Information
4. Controlling expenses
5. Sales presentations

The sales objectives were studied with the help of 7 variables, like producing a high market share for my company in my territory. ,selling products with the highest profit margins, generating a high level of rupee sales, quickly generating sales of new company products, identifying and selling to major accounts in my territory, producing sales or blanket contracts with long-term profitability, exceeding sales targets for my territory during the year.

The Technical Knowledge was studied with help of 6 variables, like knowing the design and specifications of company products, knowing the applications and functions of company products, being able to detect causes of operating failure of company products, keeping abreast of company's production and technological developments, acting as a special resource to other departments that need assistance, troubleshooting system problems and conducting minor field service to correct product misapplications or product failure. Same way Providing Information, Controlling expenses ,Sales presentations are studied with help of carrying the company policies, procedures and programmes for providing information ,providing accurate and complete paperwork related to order, expenses and other routine reports, recommending initiative how company operations and procedures can be improved, submitting required reports on time, maintaining company specified records that are accurate, complete and up to date,(Providing Information)operating within the budgets set by the company, using expense accounts with integrity, using business gift and promotional allowances responsibly, spending travel and lodging money carefully, arranging sales call patterns and frequency to cover the territory economically, entertaining only when it is clearly in the best interest of the company to do so, controlling costs in other areas of company when taking sales order,(Controlling expenses);listening attentively to identify and understand the real concerns of the customer, convincing customers that I understand their unique problems and concerns, using established contacts to develop new customers, communicating sales presentation clearly and concisely, making effective use of audio visual aids in improving sales presentation, working out solutions to a customer's questions of objections.

To measure the emotional proficiencies of salespeople that constitutes emotional competence , we have adopted a 17 item 5 point Likert scale(developed by Verbeke, Belschak and Bagozzi, 2004). The development of the items is mainly based on the work of Saarni(1999). The seventeen statements are listed below :-

I can easily put myself in the place of my customers and their needs, I can tune my emotions to those of the customer, I feel little or no guilt about the way I manage my emotions, I feel little guilt when showing my enthusiasm during a sales interaction, I feel that my expressed emotions are part of my sincere and deeper self. , My expressed emotions are part of what I see as my truthful way dealing with people, I am acquainted with creating emotions to facilitate the process of a sales interaction, I can easily show a variety of emotions when the situation asks for it, Others have learned to accept the way I manage my emotions, People accept how I manage my emotions, I feel that people can quickly feel my emotions, When I laugh at myself – It helps me in not getting too emotional, When I laugh, I am relieved of the worry - if my emotions are adequate for the given social context, Whatever happens, I have learned to accept my emotions and look at them with some humor / irony, I can easily laugh at myself when my emotions get too strong, Although I am flexible with my emotions but only up to a limit, I manage my emotions keeping in mind certain societal / moral norms.

We have used internal consistency for estimating the reliability of scale **(Table-1)** for performance of sales people.

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TABLE- 1: ESTIMATES OF INTERNAL CONSISTENCY RELIABILITY OF SCALES

S.No.	Scale	Cronbach's Alpha
1.	Performance	0.949
1.1	Sales Objectives	0.851
1.2	Technical Knowledge	0.841
1.3	Providing Information	0.795
1.4	Controlling Expenses	0.875
1.5	Sales Presentations	0.795
2.	Emotional Competence	0.674

Source: Sharma Ritika (2008), "A Study of Exploring Emotional Competence: Its Effect on Coping, Social Capital and Performance of Sales People", Unpublished Ph.D Thesis: Panjab University, Chandigarh (India).

All Cronbach's alpha values were significant and hence questionnaire was tested for both realibility and validity.

The Cronbach's alpha coefficient value for two scales used in the present study is listed in the **Table -1**. It clearly shows that two scales, though developed in different settings are reliable for Indian Salespeople as well.

Average scores have been used for measuring the degree of agreement or disagreement with particular variables / group / total of performance and emotional competence of Indian Salespeople.

Independent sample t-test has been applied for measuring the significance of differences between mean scores for performance (based on five dimensions) and emotional competence (high and low).

Factor analysis has been applied to the scale to identify few emotional competence proficiencies of Indian salespeople.

Hierarchical cluster analysis procedure has been used to identify the homogenous segments in the population.

Similarly, K means cluster analysis procedure has been used to identify relatively homogenous group of cases based on selected characteristics (identified by factor analysis), using algorithm method. In a nutshell, with the help of emotional competence scale, two groups of salespeople could be identified (on the basis of certain emotional proficiencies – as more emotionally competent (MEC) and less emotionally competent (LEC).Similarly, performance of Indian salespeople (measured on 5 parameters) could be identified for each industry group namely Insurance, Auto, Pharma and Telecom.

ANALYSIS AND RESULT

Table 2 shows the average score of the salesperson's performance. For four industry groups, it is seen that pharmaceutical sector's salespeople performance is relatively high , while for the telecom sector it is the lowest.

Pharma salespeople are the best in controlling expenses and making good sales presentations. The telecom salespeople, the technical knowledge is least amongst all the groups. Across the industry groups controlling expenses have maximum variance while, in providing information, the variance is least.

Within the 5 sub parameters of the performance indicators of the salespeople, a lot of variation does exist within the group and amongst the industry groups. But if we see the average score of emotional competence of salespeople, it is found that the variance across 4 industry groups is relatively quite low. But insurance salespeople are emotionally more competent ; while pharma sector salespeople are least within the four industries. But amongst all the four groups, emotionally competentce level is above average.

1.   Ironic Perspective (X_1)
2.   Authentic Dealing (X_2)
3.   Empathy with Customers (X_3)
4.   Emotional Acceptability (X_4)
5.   Ethical Emotional Flexibility (X_5)
6.   Self Presentations (X_6)

From the results of factor analysis for overall sample, it is revealed that following six factors explain the emotional

TABLE – 2: INDUSTRY WISE AVERAGE SCORES (AS) FOR PERFORMANCE

Construct / Variable	Insurance	Automobile	Pharma	Telecom	All	S.D.	C.V.
Performance**	5.52	5.44	5.76	5.09	5.45	0.28	5.09
Sales Objectives	5.55	5.25	5.66	5.05	5.38	0.28	5.18
Technical Knowledge	5.47	5.23	5.46	4.92	5.27	0.26	4.90
Providing Information	5.44	5.60	5.67	5.13	5.46	0.24	4.40
Controlling Expenses	5.54	5.51	6.03	5.12	5.55	0.37	6.72
Sales Presentations	5.61	5.60	5.97	5.25	5.61	0.29	5.24
Emotional*** Competence	3.81	3.75	3.69	3.77	3.76	0.05	1.33

*measure on a 7-point likert scale, Mean Value=4
*** measure on a 5-point likert scale, Mean Value=3

Source: Sharma Ritika (2008), "A Study of Exploring Emotional Competence: Its Effect on Coping, Social Capital and Performance of Sales People", Unpublished Ph.D Thesis: Panjab University, Chandigarh (India).

The relative contribution of each factor is explaining the variance across the emotional competence is 17.99%, 9.58%, 7.88%, 7.09%, 6.05% and 5.98% respectively. These four factors together explain 55% of variance in the level of emotional competence of Indian Salespeople.

Since the six dimensions (factors) identified above are independent; they can be used to identify the segments with distinguishing emotional competence profiles; within the given population group.A Cluster Analysis was run to group respondents into relatively homogeneous segments based on their emotional competence, using six dimensions , identified by factor analysis.

For Cluster Analysis, a composite measure (i.e. average summated scale) for each of these six factors was computed by averaging the scores for their constituent statements. Alternative approach of using factor scores was also considered but it had to be rejected because it captures variance from diverse sources (because of cross-loadings) which impedes conceptual clarity in case of defining the clusters.

In the first stage, to identify the number of existing clusters, hierarchical clustering procedure available in the "SPSS 10.0.1 for Windows" application program has been employed. The clustering procedure was applied with squared Euclidean distance[1] as the measure of between-groups similarity and the 'average linkage'[2] method as the clustering algorithm which combines clusters, based upon the average distance between members of the two clusters .This distance is reported as a coefficient for each iterative step, and an examination of the agglomeration schedule for this coefficient shows as to when the successive clusters are being combined into a larger group at an average distance.

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[1] Euclidean Distance is the most commonly used measure of the similarity between two objects. It is a measure of the length of a straight line drawn between two objects.
[2] Average Linkage is the agglomerative algorithm using the average distance from all objects (or individuals) in one cluster to all objects in another. At each stage, the two clusters with the smallest average distance are combined. This approach tends to combine clusters with small variances.

It is clear from the **Table-3** that hierarchical cluster analysis suggests a 2-cluster solution because the largest increase (16.557%) in change in percentage of fusion coefficient was observed in going from two to one cluster.

Another choice could be 4-cluster solution as next highest change in percentage (10.37%) is for going from four to three clusters. we have decided in favour of 2-cluster solution for quick clustering procedure. Before deciding in favor of 2-cluster solution, we calculated constrained and unconstrained solutions for 2-cluter, 3-cluster and 4-cluster solutions. The chance corrected coefficient of agreement of the constrained and the unconstrained solutions (Kappa) were computed to identify an optimum number of clusters. A Maximum Kappa represents the solutions with the highest internal validity i.e. maximum stability and reproducibility. The Kappa for 2, 3 and 4 cluster solutions was 0.539, 0.429 and 0.329 respectively. Therefore, a 2-cluster solution was employed for k-means clustering.

TABLE- 3: ANALYSIS OF AGGLOMERATION COEFFICIENT FOR HIERARCHICAL CLUSTER ANALYSIS*

Stage	Number of Clusters	Fusion Coefficient	Change in Coefficient to Next Level	Percentage Change
392	8	6.58	.050	0.759
393	7	6.638	.202	3.043
394	6	6.840	.165	2.412
395	5	7.005	.254	3.625
396	4	7.259	.753	10.37
397	3	8.012	.516	6.44
398	2	8.528	1.412	16.557
399	1	9.494	-	-

Source: Sharma Ritika (2008), "A Study of Exploring Emotional Competence: Its Effect on Coping, Social Capital and Performance of Sales People", Unpublished Ph.D Thesis: Panjab University, Chandigarh (India).

In the second stage, K-means clustering (quick clustering), a non-hierarchical procedure, was employed using SPSS 10.0.1 for Windows with predetermined number of clusters (2-clusters) with the results given in **Table -4.**

TABLE- 4: RESULTS OF NON-HIERARCHICAL CLUSTER ANALYSIS (K-MEANS CLUSTERING)

Mean Values							
Clusters	X_1	X_2	X_3	X_4	X_5	X_6	Cluster Size
Final Cluster Centers (Total Sample, N=400)							
1	3.09	3.89	3.80	3.22	3.39	3.20	166
2	3.92	4.20	4.37	3.87	4.06	3.69	234
Final Cluster Centers (Sub-sample1, N=200)							
1	2.94	3.83	3.85	3.33	3.29	3.03	62
2	3.90	4.18	4.35	3.80	4.03	3.68	138
Final Cluster Centers (Sub-sample2, N=200)							
1	3.13	3.90	3.73	3.09	3.42	3.27	89
2	3.88	4.20	4.33	3.92	4.02	3.67	111

Source: Sharma Ritika (2008), "A Study of Exploring Emotional Competence: It's Effect on Coping, Social Capital and Performance of Sales People", Unpublished Ph.D Thesis: Panjab University, Chandigarh (India).

VALIDATION AND PROFILING OF CLUSTERS

Validation is required to assure that the cluster solution is representative of the general population and, thus, is generalisable to other objects and stable over time (**Hair *et al.* 1995; p.444**).

VALIDATION

For checking the validity of clusters, out of the total sample of 400 respondents, two sub-samples of equal size of 200 each were drawn. K-means clustering procedure was applied separately upon both of them with strikingly similar results (as shown in **Table – 3**), thereby establishing the validity of the clusters formed.

LABELLING OF SEGMENTS

A comparison of pro-factor mean scores, as shown in Table-4, reveals that cluster-1 scores low on all the emotional competence proficiencies and cluster-2 scores high on all emotional competence proficiencies. Based upon this observation, the two segments have been labeled as '**Less Emotionally Competent**' salespeople and '**More Emotionally Competent**' salespeople. In all 166 salespeople were clubbed on LEC while 234 were in MEC category i.e. 41.5% of salespeople are in the category of less emotionally competent while 58.5% are in more emotionally competent category.

TABLE- 5: T-TEST TEST FOR MEASURING THE DIFFERENCES IN EMOTIONAL COMPETENCE SEGMENT FOR PERFORMANCE

Test ➝	t-test		
PERFORMANCE Variable ↓	**Mean Score**		
	Less Emotionally Competent	More Emotionally Competent	p-value
Sales Objectives	5.00	5.58	.000*
Technical Knowledge	5.05	5.43	.000*
Providing Information	5.31	5.56	.010*
Controlling Expenses	5.40	5.65	.007*
Sales Presentations	5.43	5.73	.001*

* Significant at p< 0.05

Source: Sharma Ritika (2008), "A Study of Exploring Emotional Competence: Its Effect on Coping, Social Capital and Performance of Sales People", Unpublished Ph.D Thesis: Panjab University, Chandigarh (India).

In this study, we have measured the self reported perception of salespeople about their comparative performance; in comparison with an average sales account manager. The performance has been measured on five performance parameters: sales objectives, technical knowledge, providing information, controlling expenses and sales presentation.

Bagozzi (2006) suggests that the way salespeople cope with emotions and their effects has a direct relationship to job performance. The results of this study also support this proposition. **Table-5** shows that more emotionally competent (MEC) salespeople achieve higher levels of performance than less emotionally competent (LEC) salespeople with respect to all the five performance indicators ,significantly.

MEC salespeople (5.58) score higher than LEC salespeople (5.00) on **sales objectives**. MEC salespeople produce higher market share, sell products with highest profit margins, successfully sell the new products of the company and achieve the sales targets with ease. The difference between mean scores of emotional competence segments is significant at 5% level; for this variable.

MEC salespeople (5.43) score higher than LEC salespeople (5.05) on **technical knowledge.** It shows that MEC salespeople are comparatively sounder in terms of technical knowledge about the company products. They keep themselves abreast of company's product and technological developments.

MEC salespeople (5.56) score higher than LEC salespeople (5.31) on **providing information.** It indicates that MEC salespeople are more punctual in submitting their reports and take initiative in improving the company operations and procedures through efficient management of information.

MEC salespeople (5.65) score higher than LEC salespeople (5.40) on **controlling expenses.** It shows that MEC salespeople are better than LEC salespeople in operating within budgets set by the company, using expense accounts with integrity, using business gift and promotional allowances responsibly, spending travel and lodging money carefully, and saving company money wherever possible during the sales interactions.

MEC salespeople (5.73) score higher than LEC salespeople (5.43) on **sales presentations.** It implies that MEC salespeople are comparatively better in assimilating the real concerns of the existing customers, convincing and developing new customers. They achieve this feat by their comparatively effective communication skills.

Thus, MEC salespeople are higher on job performance also. MEC salespeople are comparatively higher on EC Proficiencies 'Empathy with Customers', and 'Management of Emotions'. These proficiencies are probably the reason for better customer satisfaction and higher job performance of more emotionally competent salespeople.

To address this question, we have compared the mean scores of MEC salespeople and LEC salespeople belonging to Insurance, Automobile, Pharma and Telecom industries separately for variable performance; by applying Independent samples t-test at 95% level of confidence.

> *Will emotional competence of salespeople belonging to different industries effect performance differently?*

TABLE- 6: INDEPENDENT SAMPLES T-TEST FOR SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN SCORES FOR PERFORMANCE OF EMOTIONAL COMPETENCE GROUPS (INDUSTRY WISE)

INDUSTRY / VARIABLES	INSURANCE			AUTOMOBILE			PHARMACEUTICAL			TELECOM		
	Less Emotionally Competent	More Emotionally Competent	t-Value	Less Emotionally Competent	More Emotionally Competent	t-Value	Less Emotionally Competent	More Emotionally Competent	t-Value	Less Emotionally Competent	More Emotionally Competent	t-Value
Sales Objectives	5.19	5.74	-3.424*	4.93	5.45	-3.285*	5.46	5.87	-2.383*	4.73	5.28	-2.624*
Technical Knowledge	5.18	5.61	-2.477*	5.15	5.28	-.767	5.15	5.77	-3.462*	4.74	5.06	-1.412
Providing Information	5.18	5.57	-2.268*	5.64	5.56	.479	5.58	5.77	-1.017	4.80	5.38	-2.521*
Controlling Expenses	5.24	5.68	-2.901*	5.52	5.50	.196	5.82	6.25	-2.260*	4.91	5.26	-1.636
Sales Presentations	5.29	5.77	-3.134*	5.61	5.59	.189	5.83	6.10	-1.602	4.90	5.51	-2.800*

* Significant at p< 0.05

Table -6 shows the results of t-test for significance of differences between mean scores for performance of EC segments of salespeople of four industries. It shows that MEC salespeople of all the four industries are better than LEC salespeople in producing higher market share, selling products with highest profit margins, successfully selling the new products of the company and achieving the sales targets with ease, as mean difference are significant for the variable 'Sales Objective'. Salespeople of both segments of Automobile and Telecom industries are equally good in technical knowledge about the company products, as differences of their mean scores are not significant. MEC salespeople of Insurance and Pharma industries are better than LEC salespeople of these industries in keeping themselves abreast of company's product and technological developments, as mean differences are significant for the variable 'Technical Knowledge'. MEC salespeople of Insurance and Telecom industry are comparatively more punctual in submitting their reports through better information management, as compared with LEC salespeople of these industries. However, both segments of Automobile and Pharma industry are equally good in 'Providing Information', as mean differences are not significant. MEC salespeople of Insurance and Pharma industries are better than LEC salespeople in controlling expenses. But in case of Automobile and Telecom industries, both segments are equally good, as mean differences for 'Controlling Expenses' are not significant. MEC salespeople of Insurance and Telecom industries are better than LEC salespeople in sales presentations. However, both segments of Automobile and Pharma industries are equally good in effective communication and presentation skills, as there is no significant difference in their mean scores for variable 'Sales Presentations'. In fact, salespeople of Pharma industry are the best in sales presentations, as evident from the highest mean score (6.10).

CONCLUSION

The present study tries to investigate the association between emotional competence and performance of Indian sales people. It is quite clear that six factors - Ironic Perspective, Authentic Dealing, Empathy with Customers, Emotional Acceptability, Ethical Emotional Flexibility and Self Presentations have been identified as major components of emotional competence proficiencies .Based on the six proficiencies two group of sales people have been identified on MEC (254) and LEC (166). It was found that for the total sample, MEC sales people performed significantly much better in all the five indicators of performance. But, the industry wise analysis, clearly show that in insurance sector MEC sales people are significantly better than LEC salespeople. In case of automobile sector, significant difference existed for the factor sales objective. But the other indicators both MEC and LEC salespeople found equally well. This is due to the fact that all sales people are supposed to have uniform technical knowledge of information as well as same for controlling expenses and sales presentation. Both (controlling expenses and sales presentation) are more based on the mean aspect of industry level, rather than individual aspect. But in Pharma sector sales people performance is equal to MEC and LEC salespeople in respect of providing information and sales presentation. This is quite understandable as on both these parameter minimum benchmark is required in Pharma sector. But on sales objective, Technical knowledge and controlling expenses ,significant difference do emerge between MEC and LEC salespeople. For Telecom sales people Technical knowledge and controlling expenses are uniformly distributed between MEC and LEC salespeople. But on sales presentation, sales objective and providing information, MEC and LEC salespeople differ significantly. Thus, efforts must be made to bridge the gap between proficiencies of emotional competence, which can be improved with training. This can go a long way on improving the performance of salespeople.

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MARKETING OF BRANDED PRODUCT IN RURAL AREA: A CONCEPTUAL BASED STUDY ON RURAL MARKET

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ABSTRACT

The mantra for marketers is innovation. New marketing and advertising models have yet to tap India's multicultural heritage, and the process of globalization has yet to spring from the bottom-up i.e. from rural India. In addition, the rural way of speaking is different from the urban manner of communicating. This difference needs to be addressed in order to avoid incorrect conclusions that associate rural verbal behavior with linguistic deficiency, especially in relation to brand recognition. The study attempts to understand the company strategy for increasing the marketability of their branded product in rural area. In present paper researcher had analyzed the rural market behavior, through descriptive study an attempt had been made to look the hinterland at different perspective. Apart from study of various research report and survey results, detailed study of CPG and Consumer Durable Industry had been made. In this paper a new approach, 4R's had been highlighted and presented. It also aims to analyze the impact of communication and campaigning process on consumer buying behavior. While focusing on specific areas of departures and inadequacies in past and current research in the area, the paper discusses the possibility of creating an effective model for enhancing marketability of the product. Although no pre test and post test had been made to check the validity of model in rural market. The proposed model is designed keeping in mind the technological advancements that have taken place in the marketing environment in rural India. It may also provide key insight and opportunities to marketers to frame their 4R's strategy.

KEYWORDS

Rural Marketing, 4 R Principles, Consumer Durable, Marketing Strategy.

1.   INTRODUCTION

The long term is the sum of short terms. If you are not able to perform outstandingly well in the short term you will never succeeded in long run"
Marco Bizzarri, CEO, BOTTEGA VENETA
'As rural India starts to become more and more like, urban India, providing distribution of product and service across the hinterland is a big opportunity. However, more and more rural retailers want urban model of servicing, not compromised servicing, just because they are in rural areas'
Hemant Bakshi , Executive Director , HUL.

Rural markets, as part of any economy, have untapped potential. There are several difficulties confronting the effort to fully explore rural markets. The concept of rural markets in India is still in evolving shape, and the sector poses a variety of challenges, including understanding the dynamics of the rural markets and strategies to supply and satisfy the rural consumers.[11] Understanding and forecasting about Indian rural market as always been considered as complex because of its special uniqueness. However many companies were been successful in entering the rural markets. They proved that with proper understanding of the market and innovative marketing ideas, it is possible to tap the potential of rural markets. By introducing the products in to rural markets, companies are not changing and challenging customers' tastes and preferences but their life style and habits. Marketers are working out to understand the social dynamics and attitude variations in different rural areas. They know that the future in rural areas is very promising only for those who understand the dynamics of rural markets and exploit them to their best advantage.[14]

TABLE.1 USAGE GROWING FASTER IN RURAL AREAS

VILLAGES HAVE BEEN THE ENGINE OF GROWTH		
	Between 2001 & 2011	
	Rural	Urban
Increase in homes using	Absolute Percentage	
Two wheelers	161	110
LPG Cylinders for cooking	144	99
Banking Services	119	101
Television Sets	114	75
Mosaic/Tile Floor	85	71

Source: Census 2001-11

At 9.3 crore, more homes in rural India had electricity than in urban regions (7.3 crore). Of course, the number of rural households at 16.8 crore dwarfed the number of urban ones (7.9 crore). The households owning a scooter/motor cycle rose by 161 per cent in rural India compared with an increase of 110 per cent in urban India. Probably due to more electricity connections, the number of homes owning a television set has jumped by 114 per cent in rural areas, while the growth was only 75 per cent in the cities. Thanks to the increase in welfare spending by the Government, the income of rural consumers has risen, and improved their lifestyle. [20]

2.   CHANGING BUYING PATTERN TOWARDS BRANDED PRODUCT: FAST MOVING CONSUMER GOODS (FMCG) AND CONSUMER DURABLE

Driven by changing consumption patterns and higher disposable income, the rural consumption market is expected to expand three-fold from the current level of US$ 190 billion to US$ 600 billion by 2020. Greater attention from marketers in every sector, intense government support, and increasing self-reliance are strengthening the rural sector in India. The fact that about 72 per cent of the Indian population resides in hinterlands brings home the point that the Indian consumer base is highly supported by the rural population; which is eventually driving revenues for many major conglomerates operating in diverse markets in India.

Today we notice this shift in branded product in rural area as a result of socio-economic and political changes in last 5 years. This had made rural area more viable market as compare to urban market. The introduction of sachet made rural people who are traditionally not accustomed for bulk purchase, too buy branded rural products like 1rs shampoo, nut powder, oil beverage, readily available in the ready availability of instant food, beverage, cosmetic products, edible

oil, bath soap, detergent, cleaning powder and liquid tooth paste etc. in rural shops. This changed the pattern of buying from traditional product to branded products. A report by National Sample Survey Office (NSSO) has also revealed that rural households' expenditure on durable goods has increased from 3.1 per cent (1987-88) to 4.8 per cent (2009-10), confirming that the expenditure on non-food items like durable goods has increased over the past few decades. [18]

2.1. FMCG IN INDIAN CONTEXT

FMCG sector is a corner stone of Indian economy. This sector touches every aspects of human life. The rural markets were the main growth drivers. The number of households in rural areas using FMCG products went up from 136 m in 2004 to 143 m in 2007 implying a CAGR of 1.7% on the back of higher penetration. In 2009, the rural areas grew at a robust rate of 18% as compared to 11% growth in urban retail market. According to a McKinsey, rural India would become bigger than the total consumer market in countries such as South Korea or Canada in another twenty years. While the per capita income in rural areas is lower than that in urban areas, the customer base is thrice that of urban areas. With the economy on a high growth flight, robust consumerism, greater rural penetration and rapidly growing organized retail FMCG growth had been fasten up. There had been an increase in value growth led by demand of premium products at rural regions which had led to higher consumption. There had been shift from unorganized to organize, unbranded to branded which had added impetus to growth in FMCG segment. [10]

As per the AC Nielsen's report, the FMCG sector saw a growth of 16.2% YoY during April-May '09. As per the FICCI-Technopak report, the industry's size is expected to reach US$ 47 bn by 2013 and US$ 95 bn by 2018. The continued focus of the government on rural areas, lower penetration and consumerism would aid the FMCG sector in its growth. Further, implementation of the proposed Goods and Services Tax (GST) and opening of Foreign Direct Investment (FDI) would fuel growth. [11]

### 2.2. CONSUMER DURABLE: BRIEF NOTE ON CONSUMER DURABLE INDUSTRY

The consumer durable sector which contributes around 8% in the Index of Industrial Production (IIP) and which provides jobs to professionals, skilled, semi skilled and unskilled workers, particularly women in the rural and semi-urban areas every year. According to a study "Rise of Consumer Durables in Rural India" undertaken by the Associated Chambers of Commerce and Industry of India (ASSOCHAM), India's rural consumer durable market will witness an annual growth o 40 per cent in the next fiscal 2011-12, as against the current growth rate of 30% owing to the change in lifestyle and higher disposable income of rural India which has fascinated the consumer durable market.

According to the President of ASSOCHAM, around 35% of the total sales of consumer durable items come from rural and semi-urban markets, which will grow by 40 to 45 per cent in the near future. The consumer durable industry is growing at a fast pace and sees a strong demand in the coming period with the growing affordability of products as well as general buoyancy in the economy.

The urban consumer durables market is growing at an annual rate of nine to 12%, the rural durables market is growing at 30% annually. Some high-growth categories within this segment include mobile phones, TVs (LEDs) and music systems (IPODs). The segment improves the quality of life of people by providing entertainment / information / education / comfort and also helps to reduce daily chores. But the importance of the sector in national economy remains unnoticed.

According to ASSOCHAM Research Bureau, the Indian consumer durables segment can be segregated into consumer electronics (LCDs, home theater systems, laptops & PCs etc.) and consumer appliances (white goods) like refrigerators, washing machines, air conditioners, microwave ovens, dishwashers and small home appliances. Television, Refrigerator and Air-conditioner have penetration of around 25%, 17% & 4% respectively in the rural. The study revealed that in the coming five years it would be a new era for rural, by 2015 it is expected that every village will be connected by an all weather road, every village will get the internet connectivity and almost every home will have electricity and possess a mobile phone.

FIGURE 1: INDUSTRIAL DURABLE INDUSTRY - SEGMENT
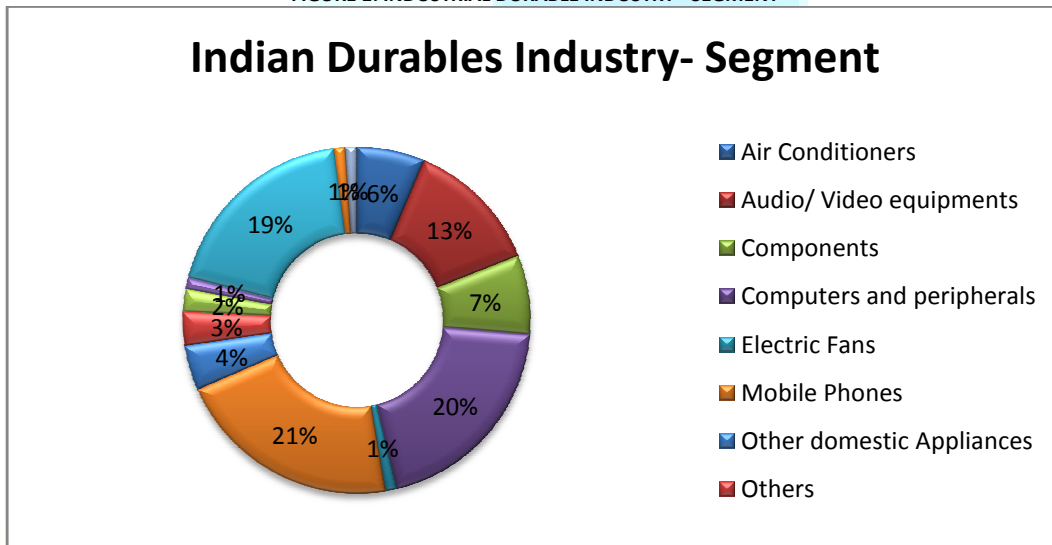
The Central Statistics Office of the Ministry of Statistics and Programme Implementation released the estimates of Index of Industrial Production (IIP) with base 2004-05 for the month of December 2011 which illustrates the Consumer durables having growth of 5.3%, with the overall growth in Consumer goods being 10.0%. [24]

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http://ijrcm.org.in/

Table 2: IIP

Month	Consumer goods (298.08)		Consumer durables (84.60)	
	2010-2011	2011-2012	2010-2011	2011-2012
Apr	175.2	180.8	286.0	290.5
May	167.3	179.3	268.9	282.6
Jun	173.7	179.1	277.3	281.7
Jul	171.1	182.0	279.4	304.6
Aug	163.7	167.2	263.5	278.0
Sep	168.2	177.8	283.1	308.4
Oct	168.3	168.7	289.2	288.6
Nov	163.7	185.0	269.8	300.7
Dec*	188.9	207.7	283.5	298.4
Jan	197.3		310.8	
Feb	200.0		317.2	
Mar	202.5		323.3	
Average Apr-Dec	171.1	180.8	277.9	292.6
Growth over the corresponding period of previous year				
December	3.5	10.0	7.8	5.3
Apr-Dec	7.4	5.7	13.8	5.3
* Indices for December 2011 are Quick Estimates.				

NOTE: Indices for the months of Sep'11 and Nov'11 incorporate updated production data.

TABLE 3: WEIGHTED MEASURE OF CONSUMER DURABLE GOODS

Description	Weight	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Electrical machinery & apparatus	19.80	116.8	131.6	373.0	530.8	459.2	472.1
Radio, TV and communication equipment & apparatus	9.89	122.7	312.8	604.2	726.7	809.1	911.5

3.   INDIAN RURAL CONSUMER MARKET SURVEY AND REPORT'S

Indian Rural Consumer Market reaches $6 Billion. The Consumer Market, especially Fast Moving Consumer Goods (FMCG), sector in rural and semi-urban India is estimated to cross $20 billion by 2018 and $100 billion by 2025, according to an AC Nielsen survey. Some of the most popular consumer goods included fruit drinks, shampoos and biscuits are among the most bought items in rural and semi-urban India and will continue to be so.

The Nielsen study was conducted across 81 FMCG categories. It revealed that $6 billion were consumed by rural and semi-urban towns of India out of the $30 billion FMCG sales in 2010. It also revealed that growth in the FMCG sector in rural India increased 3.5 times from 2000 to 2010, as compared to 3.2 times in urban India. Ranjeet Laungani, Executive Director, Nielsen, said, "The demand revolution has percolated down to middle India and these towns will behave like the metros of tomorrow," as quoted by an MXM India. He said that rural India would prove "to be critical for volumes in the long run." The study also revealed 4 prime trends that have led to increased consumption in India, namely, premiumization - customers switching from commodities to brands, going from indulgence to regular consumption and greater acceptability. The survey stated that FMCG sector contributes to 2 percent of the nation's GDP and is steadily growing; rural and semi-urban markets are growing at the rate of 10 percent annually (about $1,063 billion by 2012) and account for 60 percent of the FMCG sales.

In the Annual Global Investor Conference, 2011, conducted by Motilal Oswal, it is stated that the FMCG sector in India has registered a Compound Annual Growth Rate (CAGR) of 11.2 percent from 2000 to 2010, with an average annual volume growth of 8.5 percent. This growth has been attributed to factors like, increased consumption, rise in income levels, changes in lifestyles and demographic changes. The conference highlighted data from an AC Nielsen survey, which stated how the rural sector in India accounts for about 33 percent of the total revenue every year. It stated that the FMCG sector stood at $30 billion in 2010. Food occupies the major chunk in this sector, with about 52 percent, followed by non-food 45 percent and Over the Counter (OTC) 3 percent.

According to Booz & Company, the Indian FMCG sector is expected to grow between 12 to 17 percent by 2020 and would reach a market size of 4,000 to 6,200 billion. According to a study by McKinsey Global Institute (MGI), incomes in India are likely to grow 3 times over the next two decades and India will become the world's fifth largest consumer market by 2025 [17]

TABLE 4 - MNC SALE FIGURE OF LCDS IN CHHATTISGARH

LCD Brands	Yearly LCD *unit sales*			
	2009	2010	2011	2012 *(estimated)*
Sony India Pvt Ltd	4800	7500	9800	12500
Samsung India Pvt Ltd.	3900	7100	9300	11200
LG Electronics	2100	4000	10200	12200

FIGURE 2: SALES FIGURE OF LEADING COMPANY
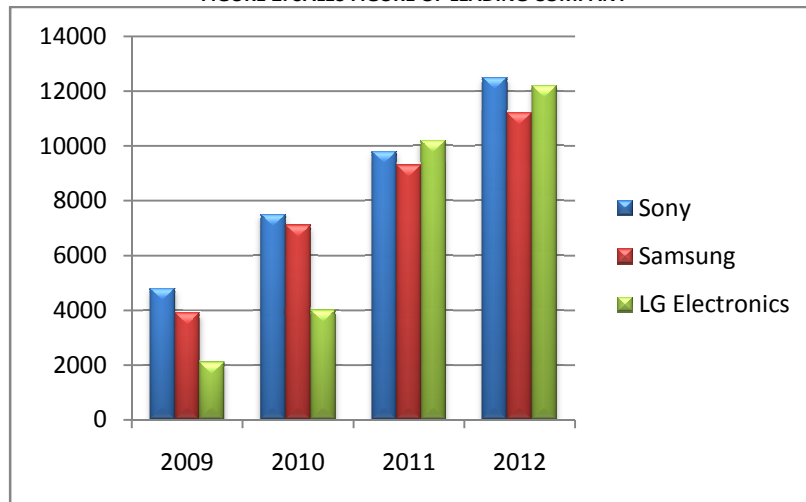
Source: Company officials of Chhattisgarh State

4.   MARKETING TO RURAL INDIA

While marketing to rural people it must be remembered that the rural consumer does not have a budget problem. He has a cash flow problem. This is because the village folk receive funds only twice a year. At these times, he is capable of making high volume purchases. At all times, however, the unit price is critical and so is the pack size. Because of this, in the lean season when there is a cash flow crunch, marketers need to provide financial products, schemes or solutions that suit the needs of the rural population.

Penetration in rural would be attainable only if the organizations keep in mind the psyche of rural consumers, the cultural and social dynamics and above all cater to the diverse yet unique requirements of this segment. Different target segments require different marketing approach and rural market is no exception to it. Experience suggests that mere extension of urban marketing strategies in rural India will fail unless they are customized to the needs, ethos of rural India. In the rural context, one of the best ways to capture the audience is through Event Management. Since rural areas have limited venues for entertainment, conducting an event in rural areas can bring a good response. Some of the interesting events that can be conducted are Road Shows, Melas, Street Theatre, and Film Shows and so on. Several Agrochemical companies such as Rallis India Limited, Wockhardt and tractor companies like Escort, Mahindras have successfully employed melas, local communication to get higher sales.

Jagmohan Singh Raju, a professor of marketing at Wharton, says: "No consumer goods company today can afford to forget that the rural market is a very big part of the Indian consumer market. You can't build a presence for a brand in India unless you have a strategy for reaching the villages." Several European multinational firms -- and a few U.S. firms -- have been making inroads into rural India for years. Companies such as Unilever, Phillips and Nestle have long been known to India's rustic dukaandaars, or merchants. Among U.S. firms, companies such as Colgate and Gillette have made considerable headway. According to Raju, marketing to rural customers often involves building categories by persuading them to try and adopt products they may not have used before. "A company like Colgate has to build toothpaste as a category, which means convincing people to change to toothpaste instead of using neem twigs to clean their teeth, which was the traditional practice," he says. "This is difficult to do and requires patience and investment by companies. It's not like getting someone to switch brands." [14] [22] The overall marketing mix framework for rural markets must therefore focus around plugging the segments with the right product, using value for money pricing, selecting the most appropriate channel of distribution, building long term relationships with the customers and finally, using the power of emotional brands.[9]

4.1   FIVE REASONS FOR GREATER BUSINESS CONFIDENCE IN RURAL INDIA

4.1.1   Rural spending is now less dependent on farm income, which constitute to the 50 percent of the total rural Income. Income remittances from migrant rural populations and increase in nonfarm activities such as trading and agro-processing are boosting non-farm income.

4.1.2   The increase in procurement prices (the minimum price that the farmers earn on produce sold to the government) is putting more money into the hands of the rural population. A series of good harvest, on the back of several good monsoons from 2005 to 2009 has accelerated rural employment in agricultural and allied activities.

4.1.3   The government has increased spending in rural areas from US $ 9 billion for the financial year ending March 2007 to an anticipated US $ 16 billion for the financial year ending March 2010. [23]

4.1.4   Improved access to finance and institutional credit has brought greater cash inflows to rural households. Institutional credits to the agriculture and allied sectors increased from US $ 14.5 billion in 2002-03 to US$ 55 billion in 2008-09. [6]

4.1.5   Policy measures such as US $ 13.9 billion waiver of agriculture loans and the National Rural Employment Guarantee Scheme (NREGs), which guarantees 100 days of employment to one member of every rural household, have helped to reduce under-employment and raised wages. The official minimum average per-day wage paid under NREGs has increased from INR 65 in 2006-07 to INR 84 in 2008-09

4.2   4A VS 4 R's: AN APPROACH TOWARDS MARKETING OF BRANDED PRODUCTS

The company reaches deeper into the interior through regular visits to stock smaller villages with supplies. "A good distribution network is the only answer in rural India. Companies need to keep two issues in mind here: one, ensure distributor margins are high enough to make them service their territories well; and two, offer consumers a choice of products so that the marginal cost of distribution reduces, while avenues of income generation increase."   notes Rural Relations' Lokhande.

Each Company is making their way to Rural India. Most of them have studied the market and analyzed the things over there and ready to stand and compete at rural India. There are some of the companies which have already written their success stories in rural market. Companies like HUL, ITC, LG, and M &M have given a new format for rural marketing. They have done a great job. So, the marketing is always having the difference in Urban and rural, which makes the companies to think over the Marketing mix. Marketing mix is such an element in rural market which gives the sense to think of marketing activities. This 4A model is similar to the 4P model of marketing mix; the difference it shows is main streamline and rural market. 4A perceived to be more customer oriented. The 4A's are Affordability, Availability, Awareness, and Acceptability.[15]

If the Indian advertising industry is to reach out to rural India, it has to be firmly   grounded in rural perceptions, values, and traditions. It has to drown itself in local colours, customs, and modes of communication to make itself relevant to rural society. It must gain the trust of the masses by undercutting its excessive dependency on Western advertising, on the one hand, and on deceptive and manipulative claims, on the other. It has to reach out to potential consumers and relate to them on a level that can bring about the desired behavioral changes. Finally, it has to find ways of reincarnating innovation. The components of the 4-R principle are not mutually exclusive. Innovation should be carried out within the framework of what can best be characterized as the 4-R principle [2]

R1 = Relevance

R2 = Reliability

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R3 = Reach
R4 = Reincarnate innovation

TABLE 5: 4P's, 4A's & 4R's

4 P's &	4 A's Principal	4 R Principal
P1: Product ,	A1: Adaptability	R1 = Relevance
P2: Price,	A2: Affordability	R2 = Reliability
P3: Place,	A3: Availability	R3 = Reach
P4: Promotion,	A4: Awareness	R4 = Reincarnate innovation

FIGURE 3: 4P's, 4A's & 4R's
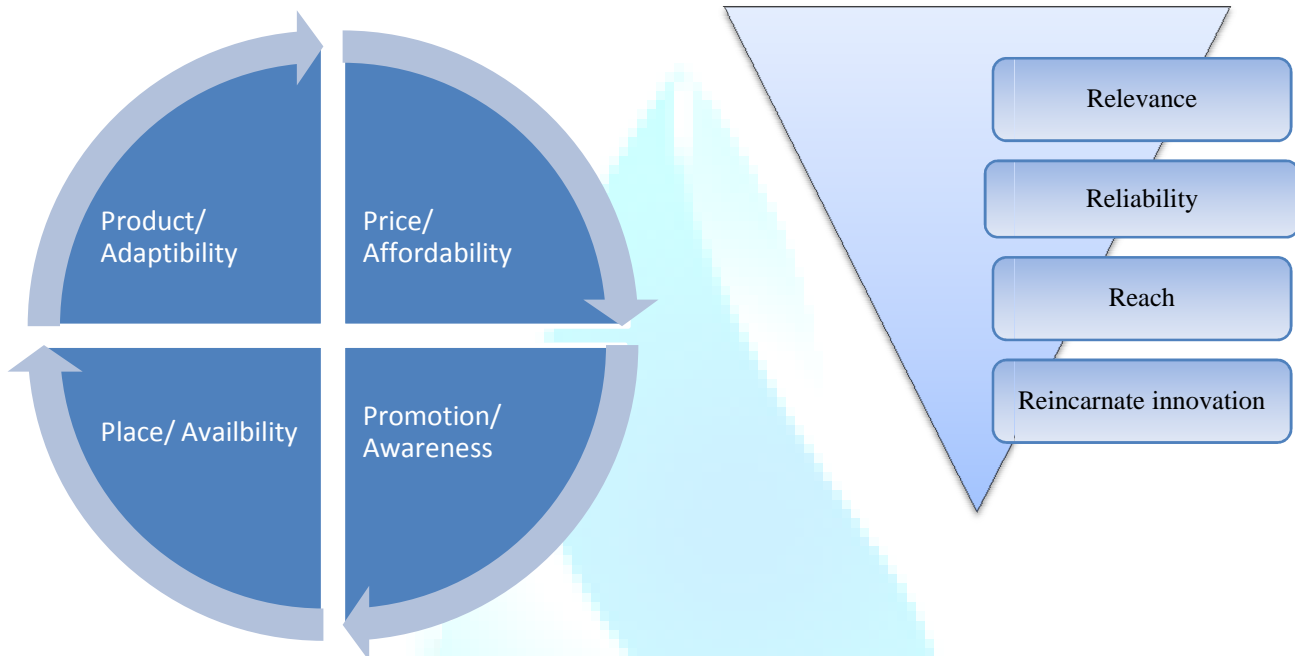
R. Seshadri, Managing director of Anugrah Madison, an advertising agency that focuses on rural and semi-urban markets, believes there are four mantras for a brand to succeed in India's rural markets: "Customize product and communication; build recognition through demonstration; build word of mouth for the brand; and build access through innovation and a cost-effective distribution channel."

In formal reasoning, relevance has proved an important but elusive concept. It is important because the solution of any problem requires the prior identification of the relevant elements from which a solution can be constructed.

4.2.1   **PRODUCT – ACCEPTABILITY VS RELEVANCE**

Across product categories, however, there seems to be a lot of action. Media -- particularly TV -- has been a great leveler. Even in small villages, people who have seen the urban lifestyle on television seem to want similar goods and services. Companies have realized this and are going all out to tap this latent demand. Companies understand what low income consumer wants but it is hard to design exclusively for them for several reasons. [25] Owning a car in India is esteem for most Indians and also in many developing countries. TATA Motors (recently took over Jaguar and Land Rover brands from Ford) came out with a compact car Tata Nano. Nano is expected to cost about USD 2,000 specially designed for the low income consume.

➢ The State Bank of India (SBI) has started a zero-balance bank account program for villagers. Called the SBI Tiny account, there are no physical branches or officials, just a paid volunteer who is equipped with a small box and a cell phone. The box enables biometric measurements (fingerprints), at the time of opening the account to confirm the account holder's identity. The cellphone enables communication with the zonal office to check on available balance. Payments under programs such as the NREGS and pensions are made directly to these accounts. The advantage for the villagers is that they can withdraw money from their accounts at any time of the day or night. (Withdrawals are never more than a few dollars.) SBI hopes to cover 100,000 villages by 2012. The bank has tied up with India Post for some services**.**

➢ Maruti Suzuki, India's leading automobile manufacturer, today sells 5% of its vehicles in the rural markets. The company expects this number to rise to 15% in the next two years. "This is not just our wish, but reflects market demand," says director (marketing & sales) Shuji Oishi.

➢ India Post, the public sector postal network, has its own plans. It has been hard hit in urban areas because of the more efficient (though more expensive) private sector courier services. Now it is looking at consolidating its hold on the rural areas. Project Arrow has been launched to IT-enable post offices in the hinterland. A pilot project involving 500 post offices -- the country has more than 150,000 -- has been kicked off. It will focus on banking, money remittance, and transmission and delivery of information.

➢ The third challenge is to gain acceptability for the product or its service. LG in 1998 introduced a customized TV for rural market & christened it "Sampoorna". It was a runaway hit selling 100,000 set in very first year.

➢ Because of lack of electricity & absence of refrigerator in rural area coca cola provide low-cost ice boxes, i.e. tin boxes for new outlets & thermocol boxes for seasonal outlets

4.2.2   **PRICE VS ACCEPTABLE VS RELIABILITY**

The second challenge is to ensure affordability of the product or service. With low disposable income, product need to be affordable to rural consumers, most of them whom is daily wages earner. Reliability refers to the consistency of a measure. A test is considered reliable if we get the same result repeatedly. For example, if a test is designed to measure a trait (such as introversion), then each time the test is administered to a subject, the results should be approximately the same. Unfortunately, it is impossible to calculate reliability exactly, but it can be estimated in a number of different ways. Lower prices/smaller packaging has been the most common strategies adopted by FMCG companies to penetrate rural markets. [16]

FIGURE 4: BUILDING BLOCK OF HIGH PERFORMANCE

Market Focus & Position

Select the Rural Market that can unlock long-term value for your company

Develop capabilities that customers value and competitors find difficult to copy

Distinctive Capabilities

Create, shape and develop markets	Adopt and optimize supply chain	Co-create value through innovative use of technology
Create new consumer categories, develop new sources of data, customize and innovate products, and create channels to reach new customers and carve new markets	Build a sourcing process cutting down upon various transaction costs and find innovative ways of reaching your customer cost effectively	Focus on utilizing technological platforms and solutions to co-create value with local resources

Framework Factors

Be a part of the local fabric

Builds social networks through local participation

Organizational Cultures (Performance Anatomy)

Develop the right capabilities-and act on them

Integrate rural markets in organization's core strategy
Secure top-down commitment and strategic clarity
Re-shape your operating model and mindset
Invest in the future workforce

Company for tapping rural market towards branded Consumer Durable products be done by rolling out low rate Equated monthly Installments (EMI). When developing products in any category, marketers must identify the typical rural specific needs. Urban products cannot be dumped into rural markets without modifications. The rural audience better receives tailor-made products as the consumers feel empowered and tend to identify with the offering. For instance, shampoos or soaps with distinctive, strong rose or jasmine perfumes are very liked among the rural women in South India. Creation and development of markets in the hinterland involves building consumer understanding, product customization, relevant pricing, value engineering, and innovative modes of advertising and promotion—all designed to increase consumption and open up new markets. The following activities stand out:

CREATING NEW CATEGORIES
Businesses may need to develop new products tailored to the unique needs and circumstances of rural consumers. An example: BP Energy India saw an opportunity to offer a cleaner fuel alternative for the traditional charcoal- and wood-fired stoves used in the countryside—a move that the company believed could convert 3.6 billion potential consumers to more environment-friendly energy solutions. The company bought patented technology from the Indian Institute of Science (IISc) that used fuel pellets made from agri-waste to run smokeless stoves; it had successfully sold the pellets to nearly 200,000 households by early 2008

CUSTOMIZING PRODUCTS
Rural consumers typically define value in terms of the functional focus of a product or service—its durability, affordability, and fit for multiple uses. Nokia translated this perspective into customized mobile phones for the rural market. Sold as a part of the "bundled offers" by different telecom providers, the phones are priced at less than INR2, 000 and are feature rich, with multilingual keypads, a built-in flashlight and FM radio.
The rural market leaders usually address their customers' price perceptions in two ways: by offering low-priced products in the first place, with a range of even cheaper variants; and by selling products as discrete units rather than in multiunit packs. Many FMCG companies, selling products ranging from biscuits to shampoos, have introduced smaller pack sizes to increase category penetration. The rural market experts may also practice value engineering, lowering the input costs by using alternative materials for raw materials or as packaging alternative.[1]

4.2.3   PLACE V/S AVAILABLE V/S REACH:
The classic conundrums of reach and coverage of the media are shattered. Distribution costs and increases market penetration at lowest costs and low danger to environment. The first challenge is to ensure the availability of product or services. India: 638000 Village are spread over 3.3 Million Sq. Km. Around 70 % of Indian live in rural areas but finding them is not easy. Challenge to send product to far flung village on a regular basis. Several creative communication media have been used by various companies to tackle the problem of having to use visual communication and non-verbal communication to reach the rural audience. This is required because a large proportion of the rural population cannot read or write. Getting together with small industries, dharamsalas, post offices or other rural outlets for advertising and marketing purposes can be quite useful. Word of mouth is a big advantage in rural India. Collaborative and shared warehouses may bring down.
- Over the year India's largest FMCG Co., HUL has built a strong distribution system that helps its brand to reach the interior of rural market.
- Coca cola, which consider rural India as a future growth driver, has evolved a hub & spoke distribution model to reach village.
- LG define all cities & town other than 7 metro cities as rural & semi – urban market. To tap these unexplored markets LG has a set up 45 area offices & 59 rural / remote area offices.

4.2.4   PROMOTION VS. AWARENESS VS 4R'S (RELEVANCE + REACH + RELIABLE+REINCARNATE INNOVATION)
Different target segments require different marketing approach and rural market is no exception to it. A much strong awareness can be created without conventional flyers, TV advertisements, and hoardings. The need for focused communication aimed at the rural be underestimated. This calls for innovation and substantive changes. If the Indian advertising industry is to reach out to rural India in an effective and efficient manner, it has to be grounded firmly in rural

perceptions, value and traditions. It has to immerse itself in local colors, customs and modes of communication in order to make itself relevant to the needs and desires of rural society.[5] It has to gain the trust of the masses by undercutting its own excessive dependency on western styles of advertising, on the one hand and on its use of deceptive and manipulative claims, on the other. It has to reach out to rural consumers and relate to them at an appropriate level, so that it can bring about the desired behavioral changes.[8] Finally, it has to find ways to reincarnate innovation. The four components are not mutually exclusive; they share an interdependent relationship.

➢ Nokia, Ericsson, Qualcomm are developing technology for rural value-added services like agri-related information. Reuters is also providing data on weather and commodity prices through mobile phones to farmers.

➢ General Electric is studying water and energy solutions. The focus is to provide clean drinking water and energy efficient power solutions.

➢ IT companies are developing software that makes rural launches viable. For instance, cattle-tagging has made cattle insurance viable now as an embedded software chip tracks the lifecycle of the livestock.

➢ Healthcare and Pharmacy companies are getting increasingly active with Novartis launching its Arogya Parivar (healthy family) programme, Aventis looking at making diabetic care affordable and Ranbaxy hiring in a big way in rural India.

➢ Hindustan Unilever not only created a low cost brand Shakti (Shakti means Strength) for the low income group but also made use of the microfinance channel to Promote its product to Reach the remotest areas and thus creating an employment opportunity for the poor.

5. MARKETER PERSPECTIVE AND IMPLEMENTATION

Rural marketing is thus a two way marketing process (other than internal aspect). Its content now encompasses inflow of product into rural areas for production or consumption purposes, and also outflow of product to urban areas.

DOMAIN OF RURAL MARKETING

FIGURE 5: DOMAIN OF RURAL MARKETING

URBAN~ RURAL Consumer and Durable Agriculture Input Consumable Consumer Durable	URBAN-URBAN
RURAL- RURAL Rural artisans products and Services	RURAL- URBAN Agriculture and allied production Rural artisans and rural industrial products.
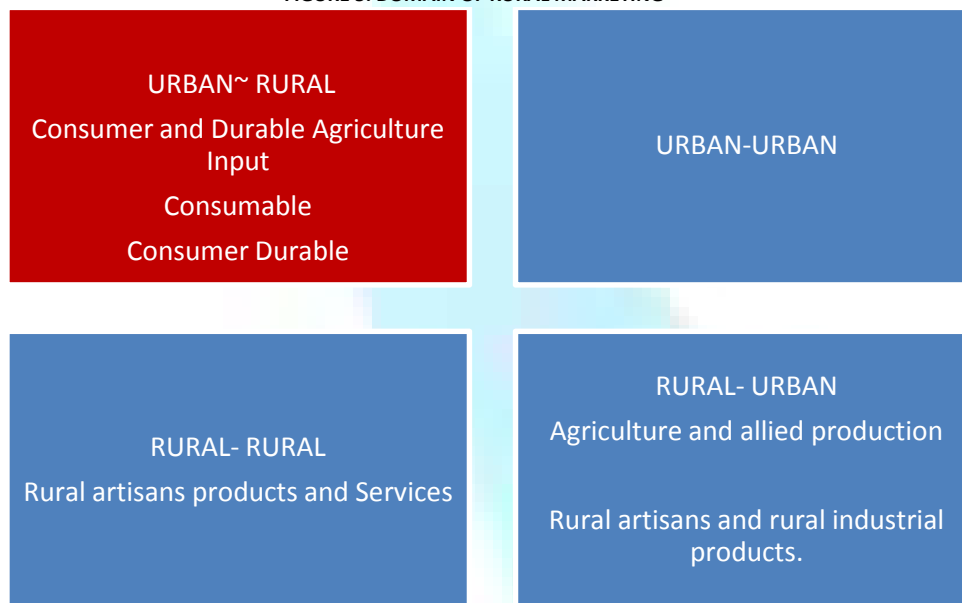
Source: (Pradeep Kashyap & Siddharth Raut – The Rural Marketing: 2010) [21]

Rising per capita income, increased literacy and rapid urbanization have caused rapid growth and change in demand patterns. Apart from the demand for basic goods, convenience and luxury goods are growing at a fast pace too. The urban population between the ages of 15 to 34 years is expected to increase from 107 m in 2001 to 138 m in 2011, an increase of 30% per annum. In fact by 2020 it is expected that the average age in India will be 29 years. This would unleash a latent demand with more money and a new mindset. With growing incomes at both the rural and the urban level, the market potential is expected to expand further. While the homegrown companies are looking to expand beyond the Indian shores, the MNC subsidiaries are likely to look for greater leverage of their respective parent's strength. Since India is a big potential market, none of the big MNCs can afford to ignore the region for long. The decade ahead is likely to see more MNCs looking to enter India, as organized retailing picks up. [3]

Every marketer must realize that the rural consumer is not a miser. He is not simply looking for the cheapest product in every category. He understands and demands value for money in every purchase that he makes. Pricing therefore is a direct function of factors including cost-benefit advantage and opportunity cost. Pricing offered to consumers should be for value offerings that are affordable. Price sensitivity is extremely high and comparison with competitive prices is common. It must be remembered that the rural consumer does not have a budget problem. He has a cash flow problem. This is because the village folk receive funds only twice a year. At these times, he is capable of making high volume purchases. At all times, however, the unit price is critical and so is the pack size. Because of this, in the lean season when there is a cash flow crunch, marketers need to provide financial products, schemes or solutions that suit the needs of the rural population[19]

Any macro-level strategy for these markets should focus on availability, accessibility and affordability. Constant scanning and sieving of ideas and plans is essential at all times. Focused attention needs to be paid to market research that goes on to reduce the uncertainly in dealing with these markets. More specifically, in relation to rural areas, demand is seen to be very highly price elastic. To break the price barrier is essential. Only this can keep the grey area local brands in check.[7]

Due to the large size of the market, penetration level in most product categories like jams, skin care, toothpaste, hair wash etc. in India is low. This is more visible when a comparison is done between the rural and the urban areas.[26] Existence of unsaturated markets provides an excellent opportunity for the industry players in the form of a vastly untapped market as the income rises. FMCG products are witnessing a retailing revolution in recent times. While some retail chains have large retail formats enabling huge volumes, some are focused on affordability which has resulted in margins getting squeezed. The Indian market is dominated by more than 12 m small 'mom and pop' retail outlets. However only 4% is in the organized sector, thereby reducing the reach. With FDI expected to be allowed, the share from the retail formats is expected to increase.

FIGURE 6: MARKETING PERSPECTIVE - MODEL FOR ENHANCING MARKETABILITY OF PRODUCT's
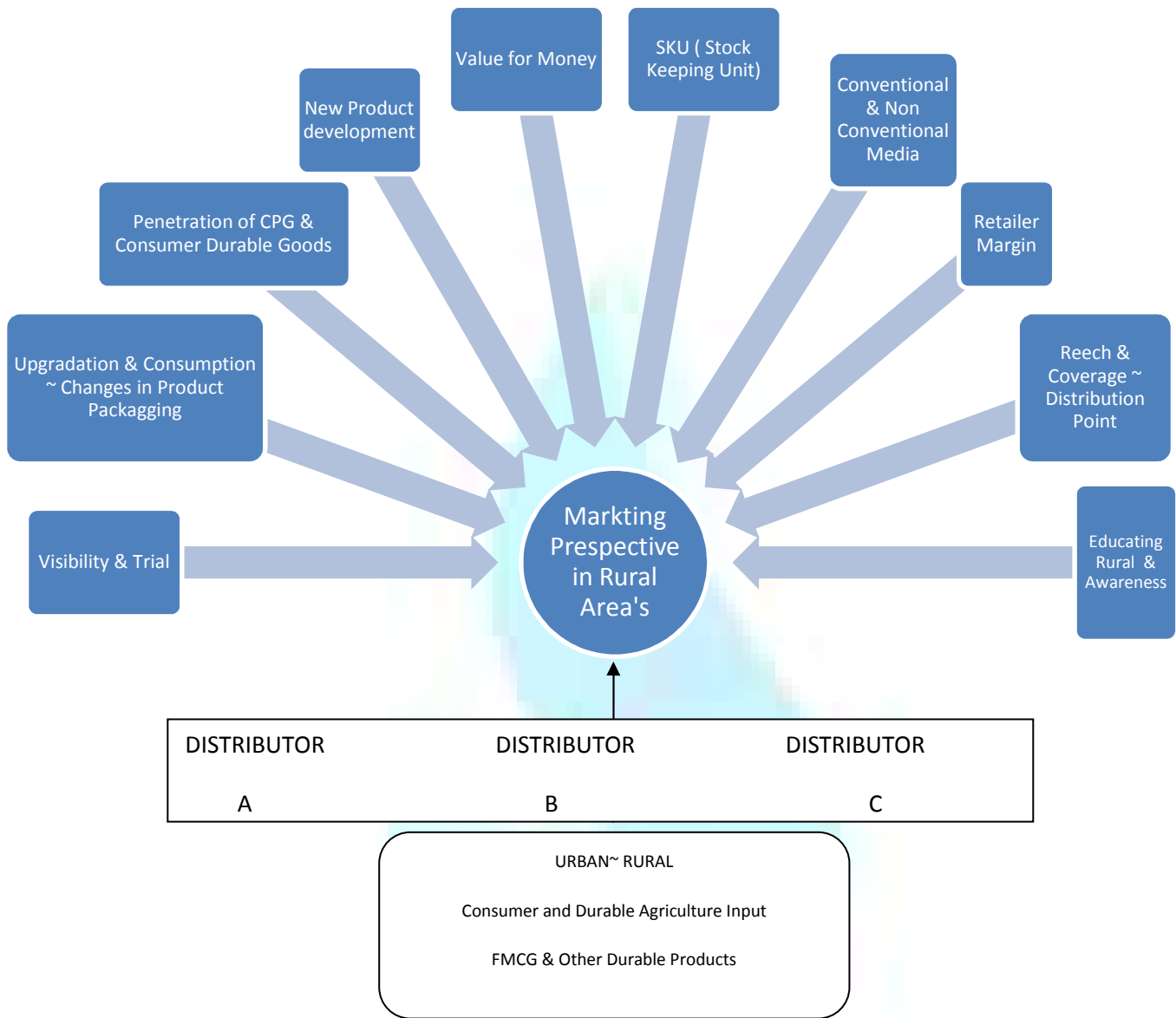
CONCLUSION

Market provides a key to gain actual success only to those brands which match best to the current environment i.e." imperative" which can be delivered what are the people needs and they are ready to buy at the right time without any delay. Rural experience suggests that more sales happen on trust and familiarity with the agent than on a structured administration of financial planning tools The 800 million potential consumers in rural India presented both an opportunity and a problem, as this market has been characterized by unbalanced growth and infrastructural problems. Thus looking at the opportunities which rural markets offer to the marketers it seems that the future is very promising for those who can understand the dynamics of rural markets and exploit them to their best advantage [10]

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A STUDY ON EMPLOYEES JOB SATISFACTION WITH SPECIAL REFERENCE TO COACH FACTORY

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ABSTRACT

Job satisfaction in regards to one's feeling or state of mind regarding nature of their work. Job can be influenced by variety of factors like quality of one's relationship with their supervisor, quality of physical environment in which they work, degree of fulfillment in their work, etc. Various studies have been conducted to find out the factors which determine the job satisfaction and the way it influences productivity in the organization. Though there is no conclusive evidence that job satisfaction affects productivity directly because productivity depends on so many variables, it is still a prime concern for mangers. Hence, the study is conducted on Employee job satisfaction with special reference to coach factory. The results shown that majority of the employees are highly satisfied and in turn employee involvement and retention is not a challenging outcome.

KEYWORDS

job satisfaction, coach factory.

INTRODUCTION

Job satisfaction describes how content an individual is with his or her job. It is a relatively recent term since in previous centuries the jobs available to a particular person were often predetermined by the occupation of that person's parent. There are a variety of factors that can influence a person's level of job satisfaction. Some of these factors include the level of pay and benefits, the perceived fairness of the promotion system within a company, the quality of the working conditions, leadership and social relationships, the job itself (the variety of tasks involved, the interest and challenge the job generates, and the clarity of the job description/requirements).The happier people are within their job, the more satisfied they are said to be. Job satisfaction is not the same as motivation, although it is clearly linked. Job design aims to enhance job satisfaction and performance methods include job rotation, job enlargement and job enrichment. Other influences on satisfaction include the management style and culture, employee involvement, empowerment and autonomous workgroups. Job satisfaction is a very important attributes which is frequently measured by organizations. The most common way of measurement is the use of rating scales where employees report their reactions to their jobs. Questions relate to relate of pay, work responsibilities, variety of tasks, promotional opportunities the work itself and co-workers

REVIEW OF LITERATURE

Vijay Pereira(2009)"Leadership next Research Study: Indian Railways", the 21st century has witnessed India undergo sweeping economic changes. Riding on a host of factors, India today stands at the cusp of becoming one of the top four economies in the world. A growth rate of over 8%, prior to the slowdown, was despite the inadequacies of infrastructure. Yet, one organization, which has shouldered the infrastructural burden of the transportation sector in India's growth story, is Indian Railways.

Ankur Sharma (2009)"Employee welfare measures taken in the Indian South Central Railway", The Study on "Employee Welfare Measures" is conducted with the main objective of evaluating the effectiveness of welfare measures at South Central Railway and to suggest measures to make existing welfare measures much more effective and comprehensive so that the benefits of the employees will be increased.

Reeti Agarwal (2009)"Public Transportation and Customer Satisfaction: The Case of Indian Railways" This study has been undertaken to find the factors related to Indian Railway services that have an impact customer satisfaction. The study was conducted using the survey method. This study primarily aims to assess the effects of consumer perceptions of the various aspects of services provided by public transportation services on their level of satisfaction with specific reference to the Indian Railways.The major findings of the study depict that out of the various factors considered; employee behavior has the maximum effect on satisfaction level of customers with Indian Railways as a whole. However, the study fails to focus on the Employees welfare facility in Indian Railways.

Binoy Joseph; Joseph Injodey; Raju Varghese (2009)"Labor Welfare in India", India's labour force ranges from large numbers of illiterate workers to a sizeable pool of highly educated and skilled professionals. Labour welfare activities in India originated in 1837. They underwent notable changes during the ensuing years. This article is a description of these changes and the additions, which were included over this period. On the whole, it paints a picture of the Indian Labour welfare scène.

G. Raghuram Rachna Gangwar (2008)"Indian Railways in the Past Twenty Years, Issues, Performance and Challenges", to understand the development process of Indian Railway's over the past twenty years, the study covers issues and strategies related to financial and physical aspects of revenue generating freight and passenger traffic from 1987-2007.Study also covers the developments in the parcel, catering and advertising sector, however this study fail to provide the information regarding employees welfare in Indian Railways.

Reddy, T. Koti (2007)Wrote an article entitled "India's Progress in Infrastructure Development". He applied minute center of attention on Rail Transport in this study. The author has tried to provide discussion on History of Indian Railways. The Railway has played an integrating role in the socio-economic development of the country. He also represents the précis of the operations of the Indian Railway since independence. He further more discusses on the finance of Indian Railway by annually from 1950-51 to 2007-2008.

Shobha Mishra and Dr. Manju Bhagat (2007) "Principles for Successful Implementation Labour Welfare Activities from Police theory to functional theory", gave a brief account of labour welfare activities. This study comprises the definition of labour welfare, scope of labour welfare activities, objectives, and theories of labour welfare. The author describes that labour welfare activities in an industrialized society has far reaching impact not only on the work force but also all the facets of human resources. This article is an attempt to show that, the success of welfare activities depends on the approach, which has been taken into account in providing such activities to the employers. Welfare policy should be guided by idealistic morals and human value.

John Creedy and Guyonne R.J. Kalb (2005) "Measuring Welfare Changes in Labour Supply Models" This paper examines the computation of welfare measures for use with labour supply models. An alternative method is suggested and applied to contexts in which individuals are allowed to vary their hours continuously and to contexts where only a limited number of discrete hours of work area available. Discrete hour's models have in recent years been used in view of the substantial econometric advantages when estimating the parameters of direct utility functions. This type of model is particularly popular in behavioral micro simulation modeling where predicted labour supply responses are calculated for policy changes.

OBJECTIVES OF THE STUDY

❖   To ascertain the employee perception towards job satisfaction at coach factory.

The questionnaire was framed and distributed to the samples of 100 employees of coach factory, amongst them 71 filled in questionnaire were received back and analyzed. With the filled questionnaire, analysis has been done by using simple percentage, weighted average method etc.,

ANALYSIS, FINDINGS AND INTERPRETATION

1.   Majority of the employees are satisfied in selection & placement of the job.
2.   At least 34% of the employees are satisfied in physical environment of the job.
3.   Most of the employees are satisfied in size & layout of the job.
4.   At least 37% of the employees are satisfied in type of work perform.
5.   Majority of the employees are satisfied in interrupted, requirement to perform the job.
6.   Most of the employees are satisfied in training needs.
7.   Majority of the employees are satisfied towards support from seniors.
8.   Majority of the employees are satisfied in co-operation from subordinates.
9.   At least 47% of the employees are satisfied in job rotation.
10. Majority of the employees are satisfied in performance-based pay.
11. Most of the employees are satisfied in sharing with management.
12. At least 53% of the employees are satisfied in promotion.
13. Majority of the employees are satisfied with job rotation.
14. Most of the employees are satisfied in personal strength & weakness.
15. At least 54% of the employees are satisfied with recognition of work.
16. Most of the employees are satisfied with great future.
17. At least 50% of the employees are satisfied with feedback.
18. Majority of the employees are satisfied with recognizing readiness to change.
19. Most of the employees are satisfied with career planning & counsel

WEIGHTED AVERAGE METHOD

TABLE 1

S.No	Factors	Excellent	Good	Fair	Poor	Total	Rank
1	Promotional opportunity	28	51	56	19	154	12
2	Fair Rewards	4	81	70	8	163	11
3	Challenging Work.	72	105	32	2	211	8.5
4	Good working Conditions.	168	69	6	3	246	5
5	Supportive supervision.	180	57	10	2	249	4
6	Excellent Interpersonal relations.	200	54	6	0	260	2
7	Good company policies.	68	114	26	3	211	8.5
8	Active participation in Management.	60	129	22	2	213	7
9	Job security.	40	57	52	16	165	10
10	Role Clarity.	208	45	8	0	261	1
11	Degree of Autonomy & Responsibility	156	90	4	0	250	3
12	Working hours	144	75	14	3	236	6

INTERPRETATION

The employees are very much satisfied and they prioritized their satisfaction level in Role Clarity, Interpersonal Skills and Authority & Responsibility.

FIGURE 1

overall satisfaction level with the company

- ■ highly dissatisfied (1-3)
- ■ neutral (4)
- ■ highly satisfied (5-7)
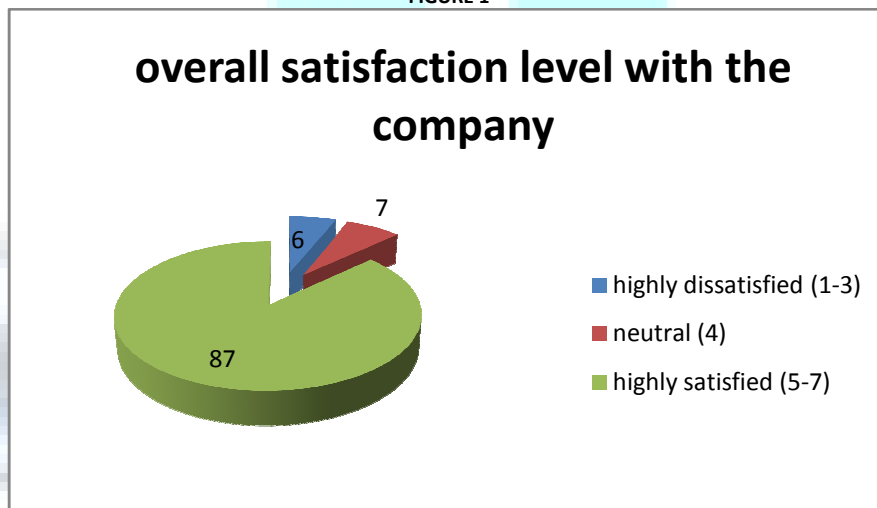
From the above chart, 87% of the employees are highly satisfied with the company and 6% of the employees are highly dissatisfied with the company.

RECOMMENDATIONS

•   It is found that some meager % of employees are unfavorable with job rotation. Though job rotation is a policy of every organization the employee's views may be looked into in future.
•   Most of the employees are satisfied in all vital areas. The concern in certain section of employees in minor aspects may be redressed, if feasible.
•   Job satisfaction and productivity is somewhat related and linked to each other. Increase in production cannot be achieved both in quality and quantity unless the performers are satisfied. Redresses of employees concern are a routine process and hence it should be reviewed periodically.

CONCLUSION

Job satisfaction plays significant role in an organization. Therefore managers should take concrete steps to improve the level of job satisfaction. These steps may be in the form of job redesigning to make the job more interesting and challenging, improving quality work & life linking rewards with performance and improving overall organizational climate .

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E-CRM APPLICATION IN INSURANCE SECTOR AND RETENTION OF CUSTOMERS

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ABSTRACT

On a global scale a number of insurers are competing and offering the customers a plethora of products. The customers are demanding quick and better service from the service providers. For the insurance companies to survive competition, they have to upgrade the quality, transparency and integrity to acquire and retain customers in long range. They need a set of offers and the value proposition to be delivered to the target potential customers, which needs a thorough market research to understand the needs of the customers and accordingly launching the products to match with customer's expectation. Since the initiation of liberalization, privatization and globalization, successive governments have tried to keep pace with a rapidly changing global scenario. The doors for private participation were opened in a number of sensitive sectors, insurance being one of them. For the past few decades, insurance was looked upon as a tax-saving investment product. While the opportunity for the players is the huge untapped potential, the challenge is to establish a long-term reputation, also to serve the customers in a sophisticated way by introducing the innovative offerings. This research study is the based on impact of customer relationship management practices on insurance sector in odisha market. In this study customer's opinions have been collected through a structured questionnaire to understand the effectiveness of CRM implementation in relation to the companies like AVIVA, LIC of India, ICICIprudential, Birla sun life and Reliance. Here to measure the customer retention gained by above insurers, factor analysis and t test have been used considering the factors of retention.

KEYWORDS
transparency, integrity, retaining customers, value proposition, innovative offerings.

INTRODUCTION
Globalization of business, cut throat competition, customer's expectation, maintaining loyalty among customers, to gain more profit, customer retention and strategic customer care have evolved the recognition of the importance of customer relationship management(CRM) and relationship marketing in the business organization. Today the companies have to shift from managing a market, to managing specific customers. But managing the customers and retaining them for long time is not easy task in a competitive market. Besides coping with changing psychology, preferences and needs of the customers is becoming challenging one. So the business organizations now a days are taking the help of data base management system for customer retention and e-CRM is the out come of such system. Keeping the importance of e-CRM and its service excellence in view, this study is an attempt to analyse management of the customer relationship in insurance sectors.

CONCEPT
CRM is a concept that enables an organization to tailor specific products or services to each individual customer. In the most advanced scenario, CRM may be used to create a personalized, one-to-one experience that will give the individual customer a sense of being cared for, thus opening up new marketing opportunities based on the preferences and history of the customer. CRM is also a customer focused business strategy that aims to increase customer satisfaction and customer loyalty by offering a more responsive and customized service to each customer. CRM technology initiatives are most commonly implemented in functional areas such as customer support, service, sales &marketing to optimize profitability and revenue. CRM is about managing customers for better understanding and to serve them. It is an umbrella concept that places the customers at the centre of an organisation.Customer service is an important component of CRM; however CRM is also concerned with coordinating customer relations across all business functions to retain the customers for long range.

E-CRM can be divided into three different types: operational, analytical and collaborative Operational CRM also known as front-office management. CRM enables and streamlines communications and involves the areas where direct customer contact occurs. Analytical CRM is also known as back-office or strategic CRM, which involves understanding the customer activities that occurred in the front office. Collaborative CRM is almost an overlay. It is the communication center of the co-ordination network that provides the paths to the customer and supplier. It could mean a portal, a partner relationship management application or a customer interaction center. Developing customer focused business strategies; the objective of this step is not to try to mold the customer to the company's goals but to listen to the customer and try to create opportunities beneficial to each. It is important to offer customers what they are currently demanding and anticipating and what they are likely to demand in the future. This can be achieved by providing a variety of existing access channels for customers, such as e-mail, telephone and fax, and by preparing future access channels such as wireless communication. Offering solutions rather than obstacles is possible when a company empowers its customer service agents. Provides Greater efficiency and cost reduction; Data mining, which is the analysis of data for exploring possible relationships between sets of data, can save valuable human resources. Integrating customer data into a single database allows marketing teams, sales forces, and other departments within a company to share information and work towards common corporate objectives using the same underlying statistics. Improved customer service and support; An ECRM system provides a single repository of customer information. This enables a company to serve customer needs quickly and efficiently at all potential contact points, eliminating the customer's frustrating and time-consuming "hunt" for help. More effective marketing; Having detailed customer information from an ECRM system allows a company to predict the kind of products that a customer is likely to buy as well as the timing of purchases. In the short to medium term, this information helps an organization create more effective and focused marketing/sales campaigns designed to attract the desired customer. Increase customer loyalty and satisfaction; an effective ECRM system lets a company communicate with its customers using a single and consistent voice, regardless of the communication channel. This is because, With ECRM software, everyone in an organization has access to the same transaction history and information about the customer. Information captured by an ECRM system helps a company to identify the actual costs of winning and retaining individual customers.

LITERATURE REVIEW
Burnett-2001; discussed that the objectives from CRM generally fall into three categories; cost saving, revenue enhancement and strategic impact and having the benefits of improving level of customer retention, increasing margins and decreasing marketing administrative costs. Wilson 2001; claimed that organizations are becoming increasingly aware of the importance of moving closer to their customers and extending their enterprise units. CRM objectives are

to; improve the process to communication with the right customers, providing the right offer for each customer, providing the right offer through the right channel for each customer, providing the right offer at the right time for each customer. By doing this, organizations can receive the following benefits; like increasing customer retention and loyalty, higher customer profitability, creating value for customer. Greenberg 2001, stated that the following objectives seem reasonable for an organization implementing CRM such as ;it focuses the sales force on increasing organizational revenues through better information and better incentives to drive top line growth, it improves global forecast and pipeline management to improve organization's ability to close deals, to improve probability, to reduce cost of sales by adopting new technologies and deploying sales automation solutions, to increase sales representative productivity and to promote sales representative retention.Bayon, 2002 claimed that three factors influence marketing by adopting CRM such as closed loop marketing; which improves marketing management and comprehensive marketing system that supports planning, campaign management, execution, internet support and analysis. CRM provides better information for better management and to expand marketing channels through the web. According to wallstrom (2002); the service sector comprises a wide range of companies including banks, insurance etc.She explains that the service sectors employ more and more people, for example nine out of ten job opportunities are created within service sectors. Rodie and Martin-2002, claimed that service sector is considered as one of the most challenging and competitive landscape and like all businesses, services firm face some degree of competition the ability to view all customer interactions and information, which is essential to providing the high quality of service that today's customers demand. Ryals and Knox 2002; stated that, by implementing CRM, It can create a profit center out of a service organization using operational and customer information to reduce costs and generate more revenues. It improves service delivery and helps organizations to delight customers by differentiating products. Green berg 2004; emphasized that CRM can increase the true economic worth of a business by improving the total lifetime value of customers, adding that successful CRM strategies encourage customers to buy more product, stay loyal for longer periods and communicate effectively with a company. Swift 2002; stated that companies can gain many benefits from CRM implementation. Such as lower cost of acquiring customers, to acquire so many customers to preserve a steady volume of business. CRM can help to retain the customers for long range. Apart from this he stated, the cost regarding selling are reduced owing to existing customers are usually more responsive. In addition with better knowledge of channels and distributions, the relationship becomes more effective as well as that cost for marketing campaign is reduced. Higher customer profitability will come with higher customer satisfaction among existing customers and customer retention and loyalty will also increase. According to Maoz 2003, Research director of CRM for the Gartner group, CRM is a strategy by which companies optimize profitability through enhanced customer satisfaction and retention. ".CRM is a business strategy, not a technology, says Maoz."It involves process, technology and people issues. All three together really captures what CRM is.

E-CRM SOFT WARES AND INSURANCE ORGANIZATION

LIC of India; LIC of India has implemented the e- CRM software by the help of Wipro and IBM .This CRM project is the largest of its kind in india.Wipro and IBM work together to compile the data of over 15 crore policy holders of LIC.The data would reflect consumer behaviour of policy holders, nos of customers going for loans, nos. of customers paying premium within the due date and defaulting in premium payment. All efforts aim to provide the faster and better services to the customers with right offers to the right customers.

ICICI prudential; ICICI prudential has ambitious plans for its retail business and has implemented the CRM software by the help of SAS and Teradata solutions. it is implementing various modules of CRM to establish world class CRM practices for the sake of better customer relationship management.ICICI prudential life insurance company is using the CRM project properly by integrating front office, back office and the analytical system.

By implementing this project they aim to reduce the cost of service, to effectively use the customer's data, to increase the customer retention, up-selling and cross selling.

AVIVA life insurance; AVIVA life insurance entered in 2002 and deployed Talisma e-CRM suite. AVIVA got the success by recognizing the potential customers and bringing out products and services tailored to the customer requirements. Also e-CRM developed multistep marketing campaign and superior services across multiple channels. With this CRM project the company aims to achieve the organized data base system, superior service standards, quick access to customers, upgrading offers to customers, integrating the efforts of insurance agents and officials and ultimately to obtain customer satisfaction.

Birla Sun Life Insurance; BSLI has selected Talisma CRM software due to its wide acceptance in customer relationship sphere. Moreover its modules summarize all possible requirements associated with customer interaction. The deployment of CRM is addressing all 50 branches spread through out the country. This CRM solution includes sales automation-mail management, web service management, data compiling, customer centric sales process and customer service with timing.

Reliance Life Insurance; Reliance life insurance has an excellent web enabled IT system for superior customer services. They aim to increase better customer interaction, to predict customer behaviour, sales management, and consumer groupings and faster spread of information among the customers through CRM software

ASSUMPTIONS OF THE STUDY

Assuming the factors like updated service, faster communication, quick access, managing customer expectation, on line interaction and integration with customers are some of the outcome of e-CRM which can increase retention of customers and service standard. Again, this study aims at to find out how far the different soft wares used by different companies are able to satisfy the customers.

SCOPE OF THE STUDY

This study is conducted in the capital city of Odisha where major five insurance companies like LIC of India, AVIVA life insurance, ICICI prudential, Birla sun life insurance, and Reliance life insurance have been taken. They have managed their customer relationship through e-CRM.

RESEARCH METHODOLOGY

A well structured questionnaire was prepared to obtain the opinions from the respondents having the insurance policies. In total two hundred eighty four customers were selected on random basis and views were taken for analysis. The data are analysed and interpreted by using the statistical tools like factor analysis, ANOVA and t tests.

CRM AND RETENTION OF THE CUSTOMERS

Absolute insurance (2009) has indicated that CRM has enhanced customer retention in different insurance organizations. The data were collected from the respondents on 14 parameters of retention; subsequently they were reduced to 5 factors of retention by using the factor analysis.

TABLE 1: EXTRACTION SUMS OF SQUARE LOADINGS OF FACTOR ANALYSIS

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.700	15.451	15.451	1.700	15.451	15.451
2	1.525	13.865	29.315	1.525	13.865	29.315
3	1.247	11.335	40.651	1.247	11.335	40.651
4	1.091	9.915	50.565	1.091	9.915	50.565
5	1.038	9.439	60.004	1.038	9.439	60.004
6	.897	8.150	68.155			
7	.872	7.926	76.081			
8	.799	7.262	83.343			
9	.767	6.976	90.318			
10	.599	5.442	95.761			
11	.466	4.239	100.000			

Extraction Method: Principal Component Analysis.

TABLE 2: ROTATIONS SUMS OF SQUARE LOADINGS

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	1.414	12.851	12.851
2	1.395	12.680	25.532
3	1.324	12.039	37.570
4	1.239	11.266	48.836
5	1.229	11.168	60.004

Extraction Method: Principal Component Analysis.

TABLE 3: ROTATED COMPONENT MATRIX

	Component				
	(1)	2	3	4	5
q4a	.071	.148	.115	.761	.110
q4b	-.016	.672	.145	.254	.029
q4c	.018	-.054	.138	.035	.772
q4d	-.446	.066	.542	.344	.067
q4e	-.133	.545	.394	-.498	.046
q4f	.059	.165	-.184	.053	.706
q4g	.207	-.054	.843	-.003	-.050
q4h	.157	.683	-.260	.020	.086
q4i	.375	-.299	.060	-.359	.244
q4j	.834	.022	.074	-.004	-.050
q4k	.534	.175	.017	.310	.205

INTERPRETATION

The factor analysis can be implemented to derive out some influential factors from the fourteen factors of retention in the questionnaire. By the help of extraction method and principal component analysis, the cumulative percentage of variance within these five factors found to be 60.004 and most of the characters can be explained by these five factors. The name of the factors are such as factor 1= **updated service through CRM,** Factor 2 = **managing expectation of customers,** Factor 3 = **on line interaction with customers,** Factor 4 = **better integration through CRM,** Factor 5 = **one to one relationship with customers**.
Factors of Retention across the Selected Companies:
The table 4 depicts the factors of retention responsible and effective to sustain and develop relationship to retain the customers across insurance organizations.

TABLE 4: FACTORS OF RETENTION ACROSS ORGANIZATIONS

Factors	Organization	N	Mean	Std. Deviation	Std. Error
Updated service (F_1)	AVIVA	50	4.1933	.43690	.06179
	BIRLA	66	3.7980	.42919	.05283
	ICICI	48	4.1667	.40094	.05787
	LIC	72	4.2407	.40040	.04719
	RELIANCE	48	3.8056	.39996	.05773
	Total	284	4.0434	.45710	.02712
Managing expectation (F_2)	AVIVA	50	4.1400	.43690	.06179
	BIRLA	66	4.0000	.42164	.05190
	ICICI	48	4.1944	.36277	.05236
	LIC	72	4.2778	.43695	.05149
	RELIANCE	48	4.0139	.45068	.06505
	Total	284	4.1303	.43575	.02586
Online interaction (F_3)	AVIVA	50	4.0300	.52886	.07479
	BIRLA	66	4.1061	.46006	.05663
	ICICI	48	4.0417	.45934	.06630
	LIC	72	4.3750	.53570	.06313
	RELIANCE	48	4.0000	.46127	.06658
	Total	284	4.1320	.51066	.03030
Better integration (F_4)	AVIVA	50	4.5800	.49857	.07051
	BIRLA	66	3.9697	.72260	.08895
	ICICI	48	4.2083	.58194	.08400
	LIC	72	4.3333	.67135	.07912
	RELIANCE	48	4.3333	.69446	.10024
	Total	284	4.2711	.67285	.03993
One to one relation (F_5)	AVIVA	50	3.9400	.50143	.07091
	BIRLA	66	4.0000	.56840	.06997
	ICICI	48	4.3125	.43301	.06250
	LIC	72	4.1667	.47471	.05595
	RELIANCE	48	3.9583	.43556	.06287
	Total	284	4.0775	.50543	.02999

In all the factors of retention, it is observed that the mean score of responses for the companies under study is more than 4(in a 5 point likert scale) and the standard deviation is less than 1.This indicates that the preference of customers ''mostly preferred'' is uniform and responses are more or less similar(SD<1).The table 4 depicts that for the factor 1(updated service), the mean is around 4.0400 for every company, standard deviation is less than 1 and can be interpreted that factor updated service is mostly preferred by customers and facilitate to retain the customers. For factor 2 (managing expectation) ,the above table reflects that mean is above 4.0100 for all the companies ,standard deviation is less than 1 and can be interpreted that managing expectation of customers can lead the retention for customers. For factor 3 (online interaction),the above table shows that mean is above 4 for every company, which will reflect that online interaction to customer's queries and problems must be there for maximum satisfaction among the customers. For factor 4 (better integration) ,the above table reflects that mean is above 4 for every company and it is proved that integration building with customers is a most preferred factor and can retain and satisfy the customers. For factor 5 (one to one relation), the above table shows that mean is above 4 and it is proved that one to one relationship with companies can provide better transparency and can lead to retention of the customers.. Hence it can be concluded that the factors of retention extracted from the factor analysis indicate a better preference for choice of an insurance company.

FACTORS OF RETENTION ACROSS THE PRIVATE AND PUBLIC SECTORS
The table 5 depicts the factors of retention responsible to retain the customers for long range across the private and public insurance companies.

TABLE 5: GROUPS STATISTICS ACROSS THE PRIVATE AND PUBLIC SECTORS

Factors of retention	Org_type	N	Mean	Std. Deviation	Std. Error Mean
Updated service	Private	212	3.9764	.45662	.03136
	Public	72	4.2407	.40040	.04719
Managing expectations	Private	212	4.0802	.42483	.02918
	Public	72	4.2778	.43695	.05149
On line interaction	Private	212	4.0495	.47561	.03267
	Public	72	4.3750	.53570	.06313
Better integration	Private	212	4.2500	.67364	.04627
	Public	72	4.3333	.67135	.07912
One to one relation	Private	212	4.0472	.51300	.03523
	Public	72	4.1667	.47471	.05595

In all the factors of retention, it is observed that the mean score of responses for the companies understudy (both private and public) is more than 4(in a 5 point likert scale) and the standard deviation is less than 1.This indicates that the preference of customers 'mostly preferred' is uniform and responses are more or less similar (SD<1).Hence it can be concluded that the factors of retention extracted from the factor analysis indicate a better preference for choice of an insurance company.

T-TEST ACROSS FIVE FACTORS OF RETENTION

TABLE 6: T TEST

Factors	Levine's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	T	df	P,Sig.(2-tailed)
F_1	.109	.742	-4.373	282	.000
F_2	.044	.835	-3.385	282	.001
F_3	2.177	.141	-4.855	282	.000
F_4	.175	.676	-.908	282	.365
F_5	.446	.505	-1.739	282	.083

The table 6 depicts, for factor 1; t test for equality of means indicate that p=.000 which is less than .05, and it is statistically significant. Thus factor 1 is effective in attracting and retaining customers. For factor 2; p is 0.001. It's statistically significant, where perceptual difference exists indicating difference in the opinion of respondents. For factor 3; p is 0.000 which is less than 0.05 and it is statistically significant, where the perceptual difference will exist and the factor is effective to retain the customers. For Factor 4, p is .365, it's not less than 0.05 and statistically not significant where the perceptual difference will not exist and this factor is having effects to increase customer retention. For factor 5; p is 0.083 and it is greater than 0.05, which is not statistically significant, the perceptual difference will not exist. It indicates the similarity in the opinion of respondents. Thus all the factors are having positive effect to increase the customer retention.

CONCLUSIONS

CRM will be able to manage the huge database of customers. also will facilitates the online customer interaction for the sake of quick access, better service and delivering right offers at right time to the right customers.CRM implementation is also a cost effective and time saving activity, which will provide the long range solutions to the insurance players. Thus, the need to integrate customer data from multiple channels, to increase sales force productivity (including agents), raising service standard, customer satisfaction, loyalty of customers and ultimately to retain the customers, CRM soft wares will be always in demand.

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THE USAGE OF SIX SIGMA TOOLS IN BRINGING DOWN THE DEFECTS IN THE HR PROCESSES

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ABSTRACT

Six Sigma is not the latest buzzword in management circles. It has been here for quite a long time and companies have been raining accolades for this merit-worthy process by contributing Million Dollars as Benefits for them Eg: The Six Sigma effort at GE contributed $700 million in corporate benefits in 1997, just two years into the program. Six Sigma seeks to improve the quality of process outputs by identifying and removing the causes of defects (errors) and minimizing variability in business processes . All HR processes are prone to producing multiple defects during delivery. Sometimes these defects remain unnoticed until they start to cause problems and when this happens they can affect the organization at a much higher level, significantly impacting areas such as finance, employee satisfaction, customer satisfaction or even the legality of the business. It is therefore a high priority to detect and minimize the number of defects produced. Achieving the Six Sigma level or 99.9997 per cent flawless transactions may not be possible in all HR processes, but by taking the Six Sigma approach defects can often be reduced substantially.The study aimed at finding out the defects in the Hr Processes by collecting data using Questionnaire & Interview to the Hr staffs of 5 hotels in Bangalore. The data obtained is quantified and analysed using weighted average and percentage methods.Then by using the Six Sigma tools like 5Why Analysis, Cause & Effect Diagram (Fish Bone Analysis) & Visual Controls we will be able to Successfully trace out the reasons for which the defect might have occurred & find out the root cause for the problems, after which these defects can be minimized by improving the Current Hr Process with the Actual Hr Process in the Hr system. The study analyzed the various types of defects that came from Hr Processes. It showed that a majority of Hr Activities carried out had some form of the defects in the Hr Process. This study intended to find out most of the defects & errors in the Hr functioning, their causes & root Problems for the occurrence of the Defects in the Hr system. After a thorough analysis of the Six Sigma tools in the Hr process, it was found that these defects could have minimized easily.

KEYWORDS
Defects, Fish bone analysis, 5 why analysis, HR practices, Six sigma tools.

INTRODUCTION
Hospitality Industry is one of the largest Industries in the world today.
- It Contributes to 10.4% of Global GDP And US $ 5.4 Trillion in 2007
- Employed over 231.2 Million People in 2007
- Accounted for 8.3% of total world employment in 2007
- Estimated to be comprised of more than 300,000 Hotels & Restaurants

ASIA PACIFIC HOSPITALITY INDUSTRY
- Asia Pacific is the region with greatest growth potential for Hospitality industry.
- 2006- Average Tourism Growth of 707% across APAC
- Average Hospitality growth of 2.7% across Americas and 2.5% across Europe
- Total Number of Tourist Arrivals in this region was over 252 Million in 2006

UNITED KINGDOM HOSPITALITY INDUSTRY
- Hospitality Industry is probably the world s fastest growing, Employment generating profession employing 1 in 10 people world wide
- In UK alone the industry employs over 1.8million people. It is estimated that it will require 30,000-35,000 trained people at the managerial & Supervisory levels every year till 2010 to full potential.
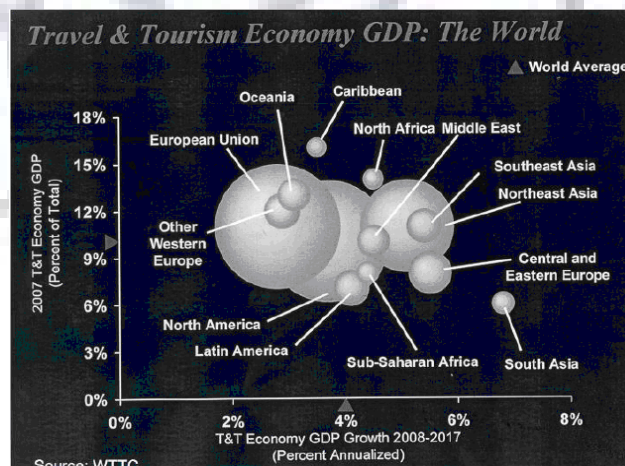
MIDDLE EAST HOSPITALITY INDUSTRY
- UAE predicted to average of 7% P.A. of Growth
- Visitors to Dubai projected to reach 10million by 2010 & 25 million by 2029.

➢ Dubai investing $45 Billion in Infrastructure & Hospitality Sector.

THE INDIAN HOSPITALITY INDUSTRY

This is one of the fastest growing sectors of the Indian economy. Riding on the economic growth and rising income levels that India has witnessed in recent years, the sector has emerged as one of the key sectors driving the country's economy. Rising disposable incomes and increase in double-income households have also played a part in this growth phenomenon.

Revenues of Hotel and Restaurant (H&R) industry in India during the financial year 2006-07 was INR604.32 billion, a growth of 21.27% over the previous year, primarily Driven by foreign tourist arrivals, which increased by 14.17%. Currently there are some 1,980 hotels approved and classified by the Ministry of Tourism, Government of India, with a total capacity of about 110,000 hotel rooms. With tourism industry showing excellent performance, in terms of foreign tourists arrival and demand outpacing supply, the hospitality industry, is poised to grow at a faster rate. It is estimated that over the next two years 70,000-80,000 rooms will be added across different categories throughout the country.

A FRAMEWORK FOR UNDERSTANDING SIX SIGMA

The Financial Times defines Six Sigma initiative as a "program aimed at the near elimination of defects from every product, process and transaction." which was developed by Motorola in 1986. It is basically a proven set of methods that help people in running their business or organization more efficiently and profitably (Brue, 2005).

HISTORY: In 1980s, Bob Galvin the CEO of Motorola was trying to improve the manufacturing Process. The Senior Sales Vice President Art Sundry at Motorola found that their quality is extremely bad. They both decided to improve the quality. Quality Engineer Bill Smith at Motorola in 1986 invented Six Sigma. It was applied to all business processes. In 1988 Motorola Won the Malcolm Baldrige Quality Award, as a result other organizations were also interested to learn Six Sigma. Motorola leaders started teaching Six Sigma to other organizations. Initially Six Sigma was invented to improve the product quality by reducing the defects, but later Motorola reinvented it. The new Six Sigma is beyond defects, it focuses on strategy execution. It became a management system to run the business. It was invented for an improvement in manufacturing industry but now it is applied in almost every industry i.e. Financial Services, Health care and Hospitality. Originally Six Sigma was introduced in United States but now it is in applied in many countries around the world.

SIX SIGMA TOOLS

5 WHY ANALYSIS

The 5-Why analysis method is used to move past symptoms and understand the true root cause of a problem. It is said that only by asking "Why?" five times, successively, you can delve into a problem deeply enough to understand the ultimate root cause. By the time you get to the 4th or 5th why, you will likely be looking squarely at management practices. This methodology is closely related to the Cause & Effect (Fishbone) diagram, and can be used to complement the analysis necessary to complete a Cause & Effect diagram.

BENEFITS OF THE 5 WHYS

● It helps to quickly identify the root cause of a problem.

● It helps determine the relationship between different root causes of a problem.

● It can be learned quickly and doesn't require statistical analysis to be used.

WHEN IS 5 WHYS MOST USEFUL?

● When problems involve human factors or interactions.

● In all types of business situations whether solving a lean manufacturing or for any other business problem.
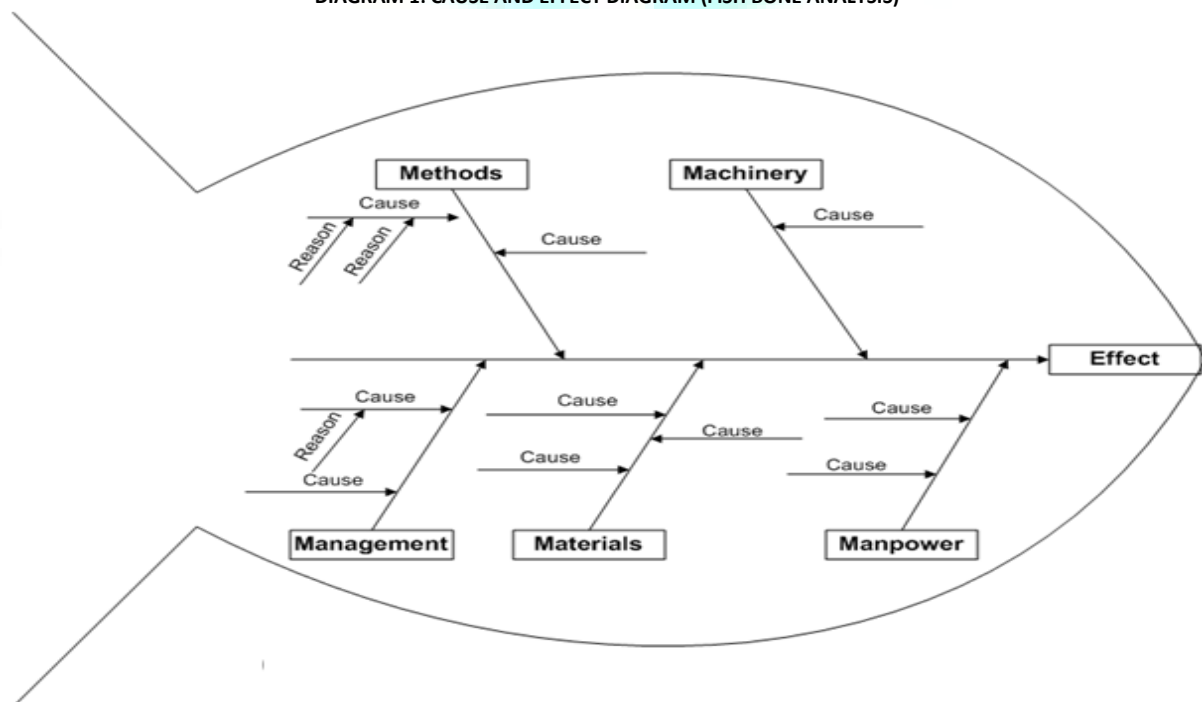
The 5 Whys is a technique used in the Analyze phase of the Six Sigma DMAIC methodology. The 5 Whys is a great Six Sigma tool that doesn't involve a statistical hypothesis and in many cases can be completed without a data collection plan.

By repeatedly asking the question "Why" (five is a good rule of thumb), you can peel away the layers of symptoms which can lead to the root cause of a problem. Very often the ostensible reason for a problem will lead you to another question. Although this technique is called "5 Whys," you may find that you will need to ask the question fewer or more times than five before you find the issue related to a problem.

5   WHY'S AND THE FISH BONE ANALYSIS

The 5 Whys can be used individually or as a part of the fishbone (also known as the cause and effect or Ishikawa) diagram. The fishbone diagram helps you explore all potential or real causes that result in a single defect or failure. Once all inputs are established on the fishbone, you can use the 5 Whys technique to drill down to the root causes.

<div align="center">DIAGRAM 1: CAUSE AND EFFECT DIAGRAM (FISH BONE ANALYSIS)</div>

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The cause and effect diagram is also known as fishbone diagram or an Ishikawa diagram. It was introduced by Dr Kaoru Ishikawa in 1943, while working in a quality program at Kawasaki Steel Works in Japan. Once we have a quality problem its causes must be found. Cause and effect Diagram helps to find out all the possible causes of an effect (problem). It is the first step in solving a quality problem, by listing all the possible causes.

In Six Sigma it is used in the define phase and analyze phase.

The reason that Cause and Effect Diagram is also called Fishbone Diagram is that it looks like a skeleton of a fish. The main problem is the head of the fish, the main causes are Ribs and the detailed causes are the small bones.

WHEN SHOULD A FISHBONE DIAGRAM BE USED?

Does the team...

• Need to study a problem/issue to determine the root cause?

• Want to study all the possible reasons why a process is beginning to have difficulties, problems, or breakdowns?

• Need to identify areas for data collection?

• Want to study why a process is not performing properly or producing the desired results?

HOW IS A FISHBONE DIAGRAM CONSTRUCTED?

Basic Steps*:*

1. Draw the fishbone diagram....

2. List the problem/issue to be studied in the "head of the fish".

3. Label each ""bone" of the "fish". The major categories typically utilized are:

▪ The 4 M's:

  • Methods, Machines, Materials, Manpower

▪ The 4 P's:

  • Place, Procedure, People, Policies

▪ The 4 S's:

  • Surroundings, Suppliers, Systems, Skills

Note: You may use one of the four categories suggested, combine them in any fashion or make up your own. The categories are to help you organize your ideas.

4. Use an idea-generating technique (e.g., brainstorming) to identify the factors within each category that may be affecting the problem/issue and/or effect being studied. The team should ask... "What are the machines issues affecting/causing..."

5. Repeat this procedure with each factor under the category to produce sub-factors. Continue asking, "Why is this happening?" and put additional segments each factor and subsequently under each sub-factor.

6. Continue until you no longer get useful information as you ask, "Why is that happening?"

7. Analyze the results of the fishbone after team members agree that an adequate amount of detail has been provided under each major category. Do this by looking for those items that appear in more than one category. These become the 'most likely causes".

8. For those items identified as the "most likely causes", the team should reach consensus on listing those items in priority order with the first item being the most probable" cause.

The cause-and-effect diagram or fishbone can be used to help find the root causes of defects with speed and accuracy, especially when the improvement project is in a process that the project leader has little to no experience.

CAUSE-AND-EFFECT DIAGRAM AND SIX M'S

Once the charter is complete and signed by all parties, the team transitions to the Measure phase, where the search starts for potential Xs that influence output. One of the tools is the fishbone diagram. The classic cause-and-effect fishbone has the defect at the end (the stinky head of the fish), and the bones are split up in six categories:

1. Man (People)

2. Machines

3. Material

4. Methods

5. Measurements

6. Mother Nature


Diagram 2: Fishbone with Six M's
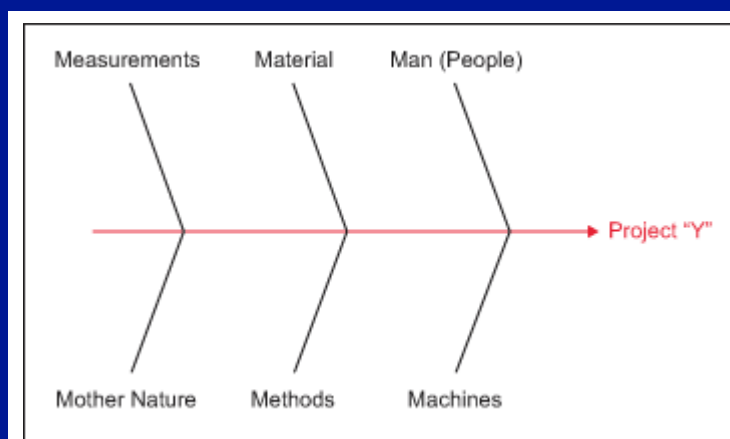
With each "bone," the team tries to find various potential Xs that influence the project Y by asking:

• "How does Man (People) negatively influence the defect?"

• "How do the Machines negatively influence the defect?"

• "How does the Material negatively influence the defect?"

• "How do the Methods negatively influence the defect?"

• "How do the Measurements negatively influence the defect?"

• "How does Mother Nature negatively influence the defect?"

VISUAL CONTROLS

Visual Control provides information to guide everyday actions. Traffic signals and signs are the most common examples. It is a powerful tool for enabling good decision-making at the micro level. The table below summarizes different types of visual control and gives examples.

Indicator	Signal	Control
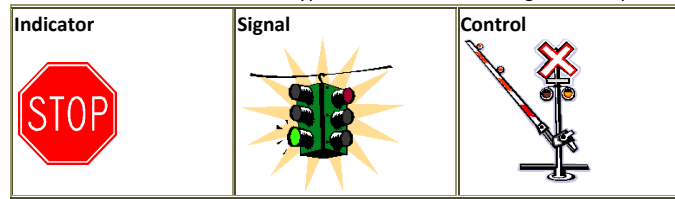
WHAT IS VISUAL CONTROL?

Visual control methods aim to increase the efficiency and effectiveness of a process by making the steps in that process more visible. The theory behind visual control is that if something is clearly visible or in plain sight, it is easy to remember and keep at the forefront of the mind. Another aspect of visual control is that everyone is given the same visual cues and therefore is likely to have the same vantage point. There are many different techniques that are used to apply visual control in the workplace. Some companies use visual control as an organizational tool for materials. A clearly labelled storage board lets the employee know exactly where a tool belongs and what tools are missing from the display board. Another simple example of a common visual control is to have reminders posted on cubicle walls so that they remain in plain sight. Ongoing processes are commonly made visible by LED displays, colored, lights, computer images, etc. The fact is that replacing text or number with graphics makes a set of information easier to understand with only a glance, making it a more efficient way of communicating a message.

WHAT ARE VISUAL CONTROLS MEANT TO DO?

Visual controls are designed to make the control and management of your company as simple as possible. This entails making problems, abnormalities, or deviations from standards visible to everyone. When these deviations are visible and apparent to all, corrective action can be taken to immediately correct these problems. Visual controls are meant to display the operating or progress status of a given operation in an easy to see format. Furthermore visual controls are meant to both provide instruction and to convey information. A visual control system must have an action component associated with it in the event that the visually represented procedures are not being followed in the real production process. Therefore visual controls must also have a component where immediate feedback is provided to workers.

REVIEW OF LITERATURE

Six Sigma is an improvement methodology in the field of Total Quality Management. It aims for an error free business environment. It was originally introduced in the US by Motorola in the late 1980s. and became popular elsewhere in early 1990s. This tool became the focus of attention for CEOs and quality managers in the late 1990s, at a time when stagnancy and criticism of ISO 9000 was rising about its effectiveness with respect to making improvements in organisations. It provides more promises to management to solve deep rooted and complex performance issues of their organisations. It is, therefore, usually labelled as a tool which strives for breakthrough improvements

rather than slow and simple improvements.

(Kamran Moosa and Ali Sajid, Critical analysis of Six Sigma implementation, Total Quality Management, Vol. 21, No. 7, July 2010, 745–759)

Academics have identified six concepts or constructs related to Six Sigma:

(i) Top management leadership,

(ii) Customer requirements,

(iii) Focus on financial and non-financial results,

(iv) structured method of process improvement,

(v) Strategic process selection, and

(vi) Full - time specialist

Six Sigma places considerable emphasis on reducing unwanted variation. In fact, the term 'Six Sigma' refers to a performance target of operating within 3.4 defects per million opportunities.

The implementation of Six Sigma improvement projects occurs through a parallel Organization that consists of improvement specialists such as 'master black belts', 'black belts' and 'green belts'.

(R. SHAH, A. CHANDRASEKARAN* and K. LINDERMAN, In pursuit of implementation patterns: the context of Lean and Six Sigma, International Journal of Production Research, Vol. 46, No. 23, 1 December 2008, 6679–6699).

By the implementation of a quality improvement program, an organization always would like to monitor its progress at every given point of time. When a six sigma quality program is used, the milestones are the sigma levels that the organization achieves. Obviously the organization aims for the six-sigma goal of 3.4 ppm. Such an organization is often called as a 'six sigma organization'. (J. RAVICHANDRAN, Six-Sigma Milestone: An Overall Sigma Level of an Organization, Total Quality Management , Vol. 17, No. 8, 973–980, October 2006).

Six Sigma reduces waste, increases customer satisfaction and improves processes with a considerable focus on financially measurable results. Six Sigma is defined as a set of methodologies and techniques used to improve quality and reduce cost utilising a structured and disciplined methodology for solving business problems. DMAIC, or Define, Measure, Analyse, Improve and Control are key processes of a standard framework for a Six Sigma project. Another popular approach associated with Six Sigma projects, DMADV or Define, Measure, Analyse, Design and Verify. While the focus of DMAIC is on eliminating waste and improving an existing process, DMADV

is primarily utilised to develop new products/services. (Erick C. Jones, Mahour Mellat Parastb_ and Stephanie G. Adams, A framework for effective Six Sigma implementation, Total Quality Management, Vol. 21, No. 4, April 2010, 415–424).

The Six Sigma management programme includes;-

❖   The creation of an organisational structure to support the initiative.

❖   Training a high proportion of staff in core competencies, including statistics, interpersonal skills, problem solving, project management etc.

❖   Taking a team-based project-by-project improvement approach.

❖   Using recognition and reward schemes that support the initiative.

(LOUISE DAVISON & KADIM AL-SHAGHANA, The Link between Six Sigma and Quality

Culture – An Empirical Study, Total Quality Management Vol. 18, No. 3, 249–265, May 2007.)

Hr is an integral element of the main corporate business environment strategy, Six sigma and the hr process is fully integrated into the operational activities of the business models and plans. Six sigma has been deployed by the hr team to drive the improvement of the hr processes to achieve the strategic objectives of right people in the right place at the right time at the right cost (Wyper, Bill; Harrison, Alan., Deployment of Six Sigma methodology in Human Resource function, *Total Quality Management,* Jul2000, Vol. 11 Issue 4)

As Hr is playing an increasingly strategic role in achieving business goals as well as delivering key services through out the organization. These functions were the very reasons that the six sigma was developed. So Six sigma emerged as one of the best management tool that can be used to improve the quality and profitability in an organization (How Six Sigma may help Hr to improve Processes & Services, Hr Focus, Dec2007, Vol.84 Issue12, and P5-7**).**

Six Sigma increases Hr participation in employee, company and customer development by integrating its function into management decision, company strategy as well as employee development. For employees the quality concept opens up career option never before possible and the satisfaction of being part of a winning team (Lanyon, Sally, SIX SIGMA: NEW OPPORTUNITIES FOR HR, NEW CAREER GROWTH FOR EMPLOYEES, *Journal of Organizational Excellence*, Autumn2003, Vol. 22 Issue 4, p29-42).

Six sigma approaches helps to support a culture where all lines of communication are open, unencumbered by traditional corporate barriers. It also supports unity of direction. It is a disciplines way of thinking about quality that adapts to all functions and becomes universal. Employees everywhere speak the same language and use the same tools for the basic targets (DeFeo, Joseph A. *Employment Relations Today (Wiley)*, Summer2000, Vol. 27 Issue 2, p1-6).

Six Sigma is a toolset, not a management system and is best used in conjunction with other more comprehensive quality standards such as the Baidrige Criteria for Performance Excellence or the European Quality Award. It is based on utilizing an extensive set of statistical and advanced mathematical tools, and a well-defined methodology that produces significant results quickly. The success of this methodology within an organization has significant momentum that can only lead to fundamental organizational cultural transformation (Lanyon, Sally. Six Sigma works too to improve Hr management processes, *Journal of Organizational Excellence*, Autumn2003, Vol. 22 Issue 4, p29-42)

The immediate goal of Six Sigma is defect reduction. Reduced defects lead to yield improvement; higher yields improve employee satisfaction. Six Sigma defect reduction is intended to lead to cost reduction. It has a process focus and aims to highlight process improvement opportunities through systematic measurement Six Sigma implementation can have negative consequences if applied in the wrong project. (Rai singhani, Mahesh S.; Ette, Hugh; Pierce, Roger; Cannon, Glory; Daripaly, Prathima, Six Sigma: Concepts, tools applications, *Industrial Management & Data Systems*, , 2005, Vol. 105 Issue 4, p491-505)

Hospitality industry is one of the industries which benefited by the adoption of Six Sigma techniques. Providing personalized services to each and every customer & employees by bending to their demands within a limited time without comprising the quality was aided by the Six Sigma metrics. The six sigma technique is adopted in every field right from maintaining full occupancy to employee development, to efficient housekeeping, ensuring a balance inventory supply and to minimize the wastage of resources. Starwood hotels were the first company to six sigma in the hospitality sector (chrmglobal.com/articles/375/1/app.)

Six Sigma tools And Methodologies can be used to manage the practical challenges of improving Hr Operations, to meet customer expectations at lower cost and with greater efficiency. Six Sigma help to pinpoint exactly what needs to be done for the process to improve, without wasting the resources, whilst at the same time offering an empirical , quantitative view of the performance of the process and highlighting improvement opportunities (Mircea Albeanu and Ian Hunter with Jo Radford, Six Sigma in Hr Transformation, Gower publishing limited,2010)

NEED FOR THE STUDY
❖   The study is needed in order to enhance the quality of service, as it helps to findout various problems related to the HR processes. It helps to reduce the time taken to carryout HR pocesses and to reduce various costs associated with it. It will also help to reduce the employee complaints and increase their satisfaction and motivation levels.

STATEMENT OF THE PROBLEM
The inefficiencies or defects in the Hr processes will ultimately result in the decrease in the level of Quality of service to employees which in turn affect the profits of any organization.

OBJECTIVES OF THE STUDY
➢   To find out the defects in the Hr Processes
➢   To trace out the reasons for which the defect might have occurred
➢   To find the root cause for the problems
➢   To help to minimize the defects occurring and try to improve the Current Processes with the help of six sigma tools.

METHODOLOGY
The research is an exploratory research, which uses six sigma tools to find out the defects in HR process and improve it.

A detailed and comprehensive literature study have been carried out to find out the tools and techniques used in Six Sigma, and to analyze the suitability of these tools and techniques for process improvement in Hospitality Industry. A list of tools and techniques has been identified, which are helpful for Six Sigma implementation in hospitality industry and used in the study. Questionnaire & interview methods are also employed to collect the necessary data. Questionnaire consists of five point scale and yes/no questions. Weighted average and percentage methods are used to collect the data obtained through questionnaires. The interview was conducted along with direct observation.

SAMPLE
The study was carried out on a sample of 62 HR staffs drawn from the Hotel Industry. The sample was drawn form five hotel groups in Bangalore.

RESULTS AND DISCUSSION
The study is conducted to find out the defects in Hr Processes & to bring down the defects in Hr functioning through the usage of Six Sigma tools. An understanding about it will help the Hr's to make rational decisions effectively & efficiently. Coming out with a Six Sigma tools is a complex process but it involves a number of tools which can be used to manage the practical challenges of improving Hr Operations.

A majority of Hr Activities carried out has some form of defects in the Hr Process. This study help to find out most of the defects & errors in the Hr functioning, their causes & root Problems for the occurrence of the Defects in the Hr system. After a thorough analysis of the Six Sigma tools in the Hr process, it is found that these defects could have minimized easily.

TOPIC	WEIGHTED SCORE	% RATE	RESULT
SUCCESS RATE IN SOURCING THE CANDIDATES WHENEVER REQUIRED	3.83	----	GOOD
ON TIME INDUCTION & RE-ORIENTATION PROGRAMMES		75%	BAD
DELIVERY OF TRAINING WITHIN STIPULATED COST & TIME		67%	BAD
EFFECTIVENESS OF ON-TIME VERIFICATION PROCESS (delay in receiving verification reports)	2.08	75%	AVERAGE
SATISFACTION LEVEL OF PERFORMANCE APPRAISAL SYSTEM (not conducted on time)	2	67%	BELOW AVERAGE
EFFECTIVENESS IN MANAGING EMPLOYEE FACILITIES (Cafeteria system)	2.41	----	AVERAGE
RATING OF PAYROLL DEPT IN ROLLING OUT SALARIES ON TIME (trainees not getting stipend on time)	2.5	50%	AVERAGE
COMPLIANCE TO STATUTORY POLICIES		83%	GOOD
EMPLOYEE BENEFITS SCHEME (MEDI-CLAIM FACILITIES)	2.08	----	AVERAGE
SUCCESS RATE IN HANDLING EMPLOYEE GRIEVANCES & DISCIPLINARY ISSUES	4.6	----	EXCELLENT
IF EXIT FORMALITIES ARE HELPING IN REDUCING ATTRITION RATE	4.08	----	EXCELLENT

Weighted Average value >1 but < 2 is Below Average
Weighted Average value > 2 but < 3 is Average
Weighted Average value > 3 but < 4 is Good
Weighted Average value > 4 but < 5 is Excellent

While analysing the responses it is found that75% of the Respondents feel that their organization failed to conduct Induction & Re-Orientation Programmes on time.

DIAGRAM 3: FISH BONE ANALYSIS ON ON-TIME INDUCTION AND ORIENTATION
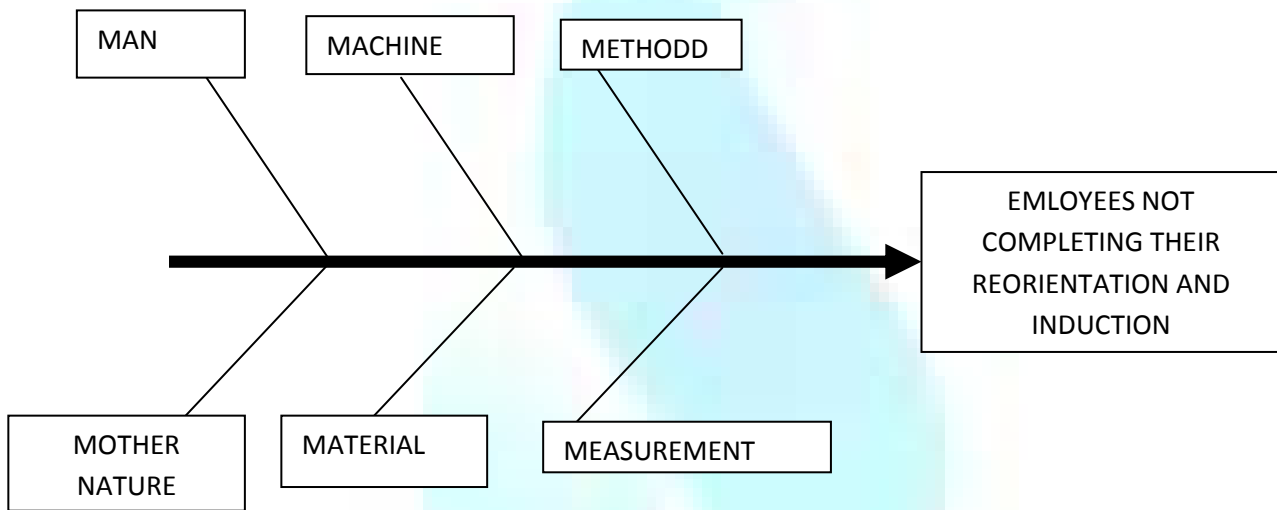
Man: People used to miss their induction due to manpower shortage in the department & some people did not understand the importance of Induction.
Machine: The audio were got broken & the projector was not kept properly.
Method: Induction Schedules were not sent on time, people did not use to come on time, HOD s did not come on time due to which the induction used to finish late.
Material: Some Department HOD s did not even make their induction ppt, some induction presentations were outdated.
Measurement: There were no definite parameters on which number of people completing induction was measured; induction scores were not displayed on time.

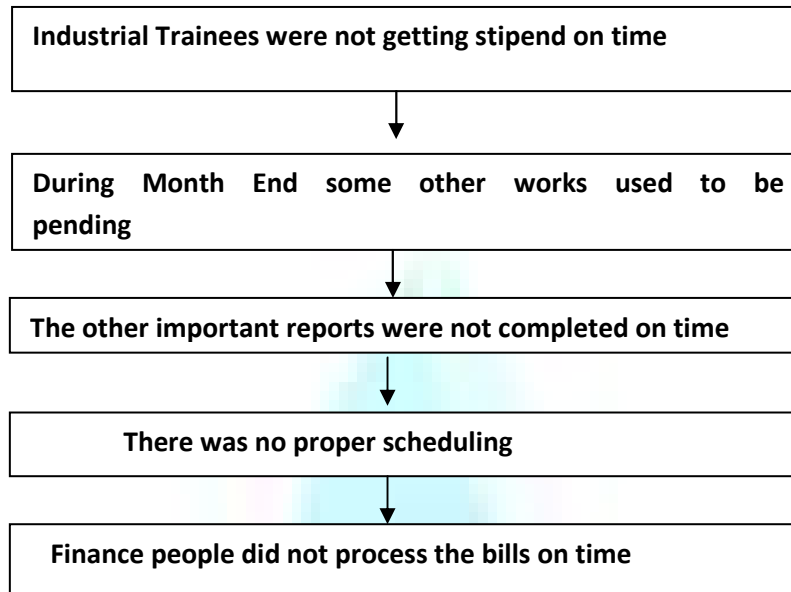**DIAGRAM 4: FISH BONE ANALYSIS FOR INEFFECTIVENESS IN VERIFICATION PROCESSES**
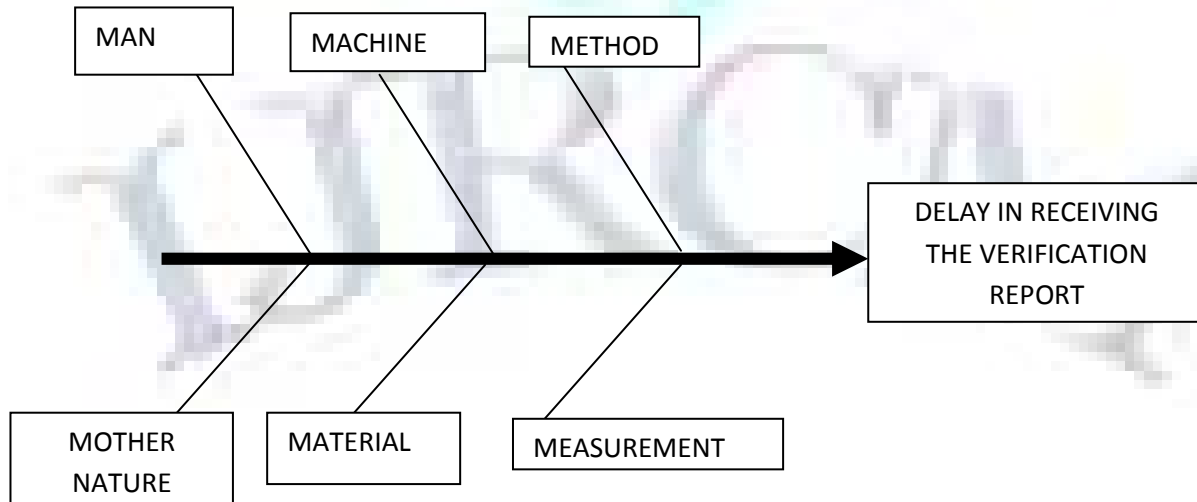
Man: Delay due to single resource involved in numerous tasks, less literate/educated staff that need continuous feedback, time taken by the staff to fill Joining & Formalities.
Machine: Single Photocopier available, insufficient stationery.
Method: 2 days for courier used to dispatch documents, post offer verification large scale scanning is not available.
Material: Delay due to long que in Photocopier, Insufficient information given in Joining & Formalities.

**Measurement:** Tracker maintained by Auth bridge, Tracker maintained by Hr.
Mother Nature: Associates not responding due to operational requirements.

DIAGRAM 5: 5 WHY ANALYSIS FOR DELAYED ROLL OUT OF SALARY

Industrial Trainees were not getting stipend on time

↓

During Month End some other works used to be pending

↓

The other important reports were not completed on time

↓

There was no proper scheduling

↓

Finance people did not process the bills on time

ROOT CAUSE: Planning of things not done properly

DIAGRAM 6: FISH BONE ANALYSIS FOR DELAY IN RECEIVING MEDICAL CLAIM CHEQUE
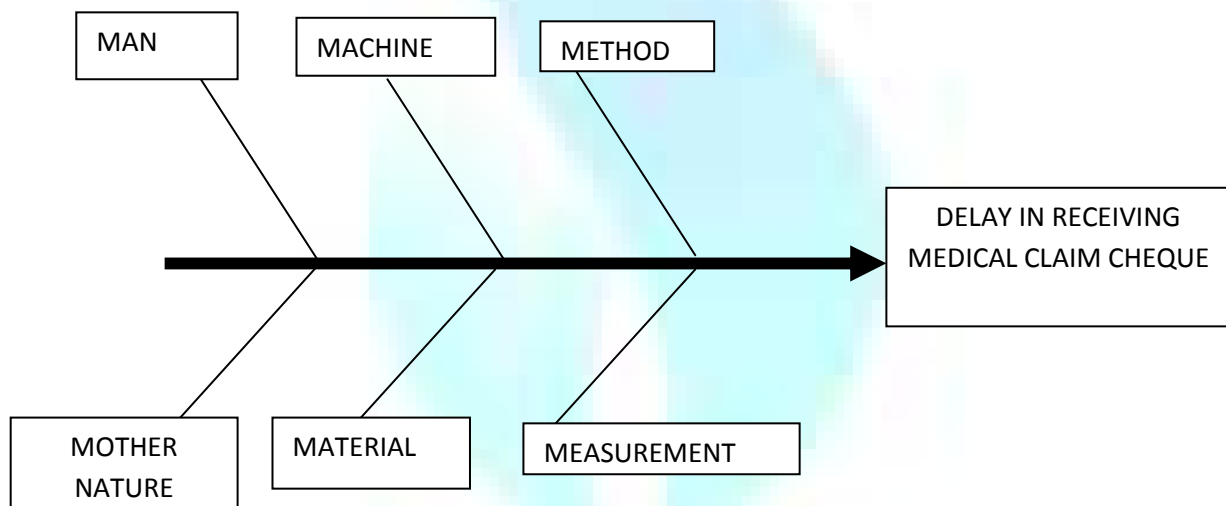
Man: Frequent change of the doctor handling the unit claims, Non update of Insurance Nos. to Insurance Company, Cheque encashment delayed in unit Finance office.
Machine: Excel Sheet of nominations is sent to DHQ Hr by email, No Confirmation of coverage till unit Hr receives the medical insurance cards, Claims are sent to DHQ.
Method: Insurance No. a must for claim processal, Doctor is frequently changed in the company, on the 20th of every month the covered associates list is sent DHQ.
Material: Updated Insurance Nos. not available with Insurance Company.
Measurement: HR Register maintained, No TAT on the claim reimbursement.
Mother Nature: Doctor Visit on Saturday only, if there is any holiday; no claims are processed for that week.

AREAS FOR IMPROVEMENT USING SIX SIGMA IMPLEMETATION TECHNIQUES & TOOLS

AREAS FOR IMPROVEMENT	AT PRESENT	USING SIX SIGMA
INDUCTION & RE-ORIENTATION PROGRAMMES	Conducted once in 70-90 Days	To be Conducted once in 35-45 Days
COST OF DELIVERY OF TRAINING	Huge	To be brought down
TIME TAKEN TO COMPLETE VERIFICATION PROCESS	2 Months	15 Days
TIME TAKEN FOR PERFORMANCE APPRAISAL SYSTEM	8 Months to 15 Months	6 Months
COST OF CAFETERIA FACILTIES	Huge Wastage	To be Brought down
TIME TAKEN FOR PAYROLL DEPT IN ROLLING OUT SALARIES TO TRAINEES	After 2 Months	On Date
TIME TAKEN FOR MEDICLAIM FACILITIES TO BE REIMBURSED	Once in 180 Days	Once in 45 Days

SUGGESTIONS & RECOMMENDATIONS

Till now, the Six Sigma team hadn't applied this concept of Six Sigma into Hr Department, at least from now on, we would like to recommend them to start implementing the Six Sigma into Hr Processes .There should be Training & Monitoring of the Hr Staffs on the adoption of the right Six Sigma Methodologies into

Hr functioning Processes. The HR staff should display these Six Sigma improvement Charts & lists of Six Sigma implementation techniques so that the whole organization knows about its effectiveness. The Managers of the department can be trained for the Six Sigma Certification by outside experts who have years of experience in Six Sigma implementation.HR Professionals with Six Sigma knowledge are absolutely an added advantage and a starting point for any organisation embarking on achieving a strategic HR role and would be a Huge success factor for the organization..

CONCLUSION

The study was conducted to find out the defects in Hr Processes & to bring down the defects in Hr functioning through the usage of Six Sigma tools. An understanding about it will help the Hr's to make rational decisions effectively & efficiently. Coming out with a Six Sigma tools is a complex process but it involves a number of tools which can be used to manage the practical challenges of improving Hr Operations. The immediate goal of Six Sigma is defect reduction. Reduced defects lead to yield improvement; higher yields improve employee satisfaction. Six Sigma defect reduction is intended to lead to cost reduction. The study analyzed the various types of defects that came from Hr Processes. It showed that a majority of Hr Activities carried out had some form of the defects in the Hr Process. This study intended to find out most of the defects & errors in the Hr functioning, their causes & root Problems for the occurrence of the Defects in the Hr system. After a thorough analysis of the Six Sigma tools in the Hr process, it was found that these defects could have minimized easily.

SCOPE FOR FURTHER RESEARCH

The study has explored the usage of six sigma tools in improving HR processes with respect to hospitality sector. A lot of other sectors are not at all explored till now.There is a huge scope for further research as there are only few researches on the application of six sigma tools in HRM.

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WOMEN EMERGING GLOBALLY AS THE POTENTIAL MARKET: REASONS, IMPLICATIONS AND ISSUES

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ABSTRACT

Women across the world are expanding beyond traditional roles to influence decisions in the home, in business and in politics. In fact, women already make the majority of the world's purchasing decisions. Boston Consulting Group estimates that they control some $12 trillion of the world's $18.4 trillion in annual consumer spending, and that percentage will likely rise as a new upwardly mobile class of young female professionals overtakes their male peers in wealth and status. In developed countries, there is already an elite cadre of urban women who are more powerful than their male counterparts. This paper tries to examine the changing role of women in the global economy and also analyses the reasons and issues associated with the transition. Besides, this paper also studies the implications of this transition on the market conditions.

KEYWORDS

Women, Potential Market, Purchasing Decisions, Economic Growth.

INTRODUCTION

All over world, women are emerging both as consumers, as well as as decision-makers across various socio-economic strata. Apart from the increasing female employment or rising income, the changing socioeconomic factor is responsible for the change. A report by Boston Consulting Group said a billion women are participants in the global workforce. It added that in the US, they controlled half the country's wealth. In addition to their increasing purchasing power, women make or influence 60-80 per cent of all consumption decisions, depending on the category of product or service. These factors made women the potential and largest addressable market globally.

LITERATURE REVIEW

According to an October 10, 2012 global thematic report by José Martins Soares and Inês Duarte Silva, analysts at Espirito Santo Investment Bank, regardless of differences in culture, religion, geographical position, economic development leads to increased female participation in the workforce and higher wealth being "owned" by women everywhere. In addition it is clear that women are becoming an increasing economic force in terms of their purchasing influence and power (Silverstein and Sayre 2009a; 2009b). Silverstein and Sayre indicate that women in the USA control $20 trillion in consumer spending and this figure is expected to increase. In addition, women earn about $11 trillion in total yearly income and this figure will also rise. Women make major purchasing decisions in several areas (for example, home furnishings, vacations, automobiles). Women represent the largest market opportunity in the world (Wittenberg-Cox and Maitland, 2008). Shiver(2009), based on the fact that half the US workplace is now female, used the phrase 'female nation' to highlight the fact that this body of employed women is going to bring about changes to men, women, families, organizations and society as a whole.

IMPORTANCE OF THE STUDY

The importance of the study can be perceived by the fact that the study unravels the most powerful force,' *the women force'*, in the global demand over the next decade. It also focuses on the changing role of women in the world economy. The consumption drivers across the globe are manifold –changing demographics, rising incomes and under-penetration- but the strong emergence of women both as consumers and as decision makers, is playing out across the globe and points to the growing financial activity by women. The study is also significant for the marketers as it indicates that they have a massive opportunity to better connect women with the products they buy and the media technologies they use to make a positive impact both in their lives and in the bottom line. This paper explores all these possibilities and makes the readers acquainted about this sweeping change that is happening at various socio-economic strata. The study also helps people and the researchers in the business world to identify the transition and make best out of it by making gender focus business plan and addressing to the changing structure and mood of the market.

STATEMENT OF THE PROBLEM

Women are now set to drive the post-recession world economy and the credit goes to an estimated $5 trillion in new female-earned income that will be coming on line over the next five years. Worldwide, total income for men ($23.4 trillion) is still more than double that for women ($10.5 trillion), but the gap is poised to shrink significantly, because the vast majority of new income growth over the next few years will go to women, due to a narrowing wage gap and rising female employment. Thus, it becomes imperative to study the status of women as the largest addressable and emerging global market and how they influence and control the majority of purchasing decisions in a household and grow their influence in global economy.

OBJECTIVES

1. To examine the changing role of women as consumers and decision makers in world economy
2. To study the status of women as the emerging market over the next decade
3. To analyze the power women represent in driving consumer demand
4. To analyze the reasons behind the transition on the market
5. To study the implications of the changing role of women as the emerging market

HYPOTHESIS

The narrowing wage gap and rising female employment increase woman's purchasing power.
With increasing purchasing power, women can control and influence consumption decisions.

RESEARCH METHODOLOGY

The research is more descriptive and exploratory in nature. It involves an in-depth study of the transitional role of women in global economy. It is also the exploration of the emerging phenomena guiding the status of women. Most estimates in this paper are based on secondary data which includes the reports and data from United Nations, World Bank, International Labour Organisation, United Nations Development Fund for Women (UNIFEM), the global research firm 'Espirito Santo', market research firm 'Indian Market Research Bureau' (IMRB), published information and other related data.

RESULTS AND FINDINGS

1.   CHANGING ROLE OF WOMEN IN THE GLOBAL ECONOMY
Across the world, women's power of influence extends well beyond the traditional roles of family and education to government, business, and the environment. This is just the start of a sweeping change. Women around the globe have more control over their life choices and path than ever before. In emerging markets, women are entering the workforce at lightning speed. There is also a distinct swing in decision making, favouring the feminine gender. Today, it is the woman in a household who makes the decisions in the majority of purchases--not only in the home with food and cars, but with services such as banking and health care. With increasing purchasing power, women make or influence between 60 – 80 per cent of all consumption decisions. With access to more choices, they are delaying marriage to increase their educational and career opportunities.

The chart below indicates the liberty and autonomy being exercised by women on the various areas of decision making in developed and emerging economies. As compared to developed economies, the emerging economies are giving many portals of freedom to women in the decision-making areas. Across 18 dimensions analyzed, more than 77 percent of women in emerging countries believe the future will be brighter for their daughters. The areas where improvement will be the greatest are technology (84%), education (83%), travel (82%), financial stability (81%), purchasing power (81%) and careers (80%). Women in Turkey (92%), Nigeria (89%) and Malaysia (89%) were the most optimistic.
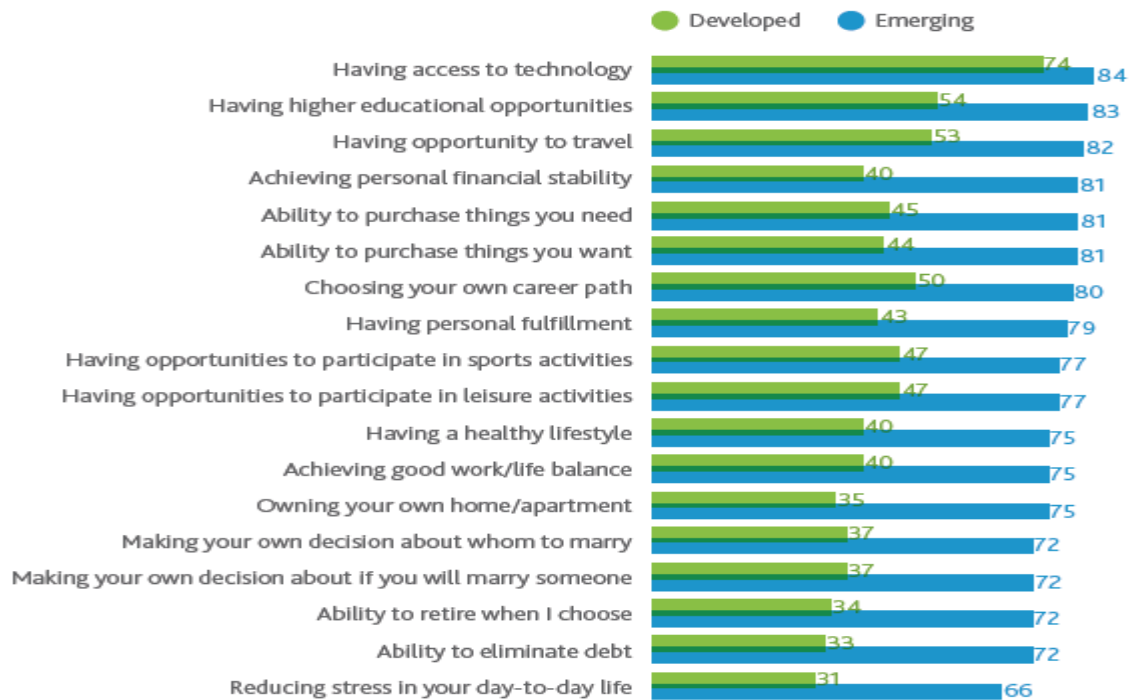
Source: Nielsen Women of Tomorrow Study 2011.

2.   STATUS OF WOMEN AS THE EMERGING MARKET
Women are the next largest global emerging market. Their economic power is truly revolutionary, representing the largest market opportunity in the world. Over the next decade, they will exercise colossal influence over politics, sport, business and society. Women control 65 percent of global spending and more than 80 percent of U.S. spending. In the next five years, the global incomes of women will grow from US$13 trillion to US$18 trillion. That incremental US$5 trillion is almost twice the growth in GDP expected from China and India combined. By the year 2028, women will control close to 75% of discretionary spending worldwide. Women own about a third of all businesses in the world, and nearly half of those businesses are in developing markets. According to consulting firm BCG, one billion of them now participate in the workforce globally and control 50 per cent of the wealth in the US.

3.   PREFERENTIAL AREAS OF WOMEN FOR SPENDING
I.   Spending by women, both in current (clothes, food) and durables, as well as in services (education, healthcare, financial) is likely to be more family oriented.
As women around the world see a great optimism in education and access to technology and they believe that education can promise them and their family a good fortune and better, they invest a larger proportion of their income in the education of their children, preparing the latter to make a greater economic impact in the future. According to figure 2, against 16 percent women in developed countries, 56 percent of women in emerging countries plan to allocate additional income for their children's education. Women in Nigeria, India and Malaysia placed the most importance in saving for their children's education —a choice that ranked in the top three out of 25 different options for how they plan to allocate their additional salary in the next five years.
II.   Health, convenience and affordability are also often cited as important criteria in women's spending decisions. With more women - generally more prudent beings - receiving better insurance terms, healthcare services are investing in women's medical care, automobile groups in training more female drivers, etc.
III.   Women will be spending more on themselves, with young sectors in fast-moving consumer goods (FMCG), like beauty-care and furnishings, growing. But it's not just lipstick and lampshades - women are transforming longer-term sectors.

FIGURE 1: WOMEN'S PREFERENCE OF EDUCATION FOR THEIR CHILDREN (%)
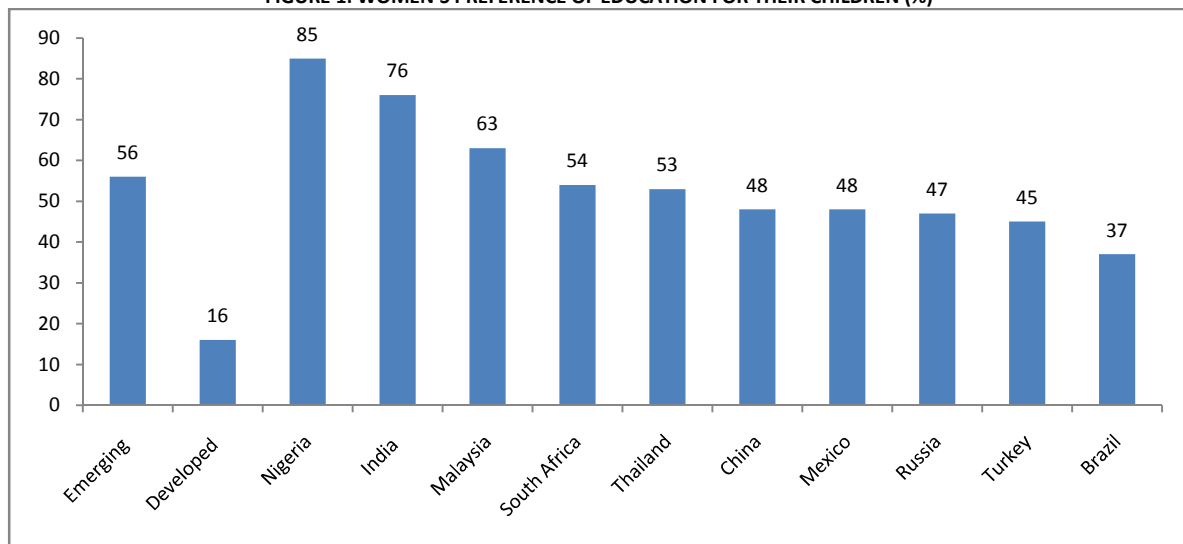
Source: Nelson Women of Tomorrow Study 2011

IV.   The survey, which interviewed 9,000 urban women above 25 years says as an impact of increasing financial independence, there has been a 33% jump in the number of women who have a savings bank account in the last decade. Also, from only 4% of women owning their own credit card back in 2001, there has been a 150% growth as 10% of women in 2010 possessed a credit card. Marketers are also looking to tap this sizeable opportunity. Banks offer gold purchase schemes largely to working women, which is increasingly becoming the target market. The credit card business is also targeting women by offering rewards/bonuses on high-spend categories and heavy discounts on women-oriented brands.

V.   Women may also play an important role in reshaping industries like financial services. The female propensity to save may fuel growth of banking services in countries such as India, where roughly half of all household assets are currently held in physical categories like land and machinery. The vast unmet desire among Western women for more simple, understandable financial products and services could also help make retail investing in countries like the U.S. more accessible and transparent. Analysts say companies like Visa, Wal-Mart, Nestle, Johnson & Johnson, and others that already have a strong leg up in the women's market stand to prosper further from the female consumer boom.

4.   REASONS BEHIND THE TRANSITION IN THE GLOBAL MARKET

I.   BETTER OPPORTUNITIES
Better access to education, improved career opportunities, higher pay scales, narrowing wage gap, increasing female employment and participation in both developed and emerging economies are paving the way for a rise in women's economic power and thus across the world, women are now seen as the largest addressable potential market.

II.   HIGHER AMBITIONS
Women want to expand beyond career and home to influence decisions in both business and politics to benefit others. Women everywhere echoed similar sentiments about wanting to play an integral and equal part in making a positive change for the future and affecting policies that would affect her family and the environment.

III.   CHANGING SOCIO-ECONOMIC ENVIRONMENT
It is not just the rising incomes that are fuelling the trend but also the changing socio-economic environment as urban women are now more independent, better educated and career-oriented. It is, therefore, not surprising to see that women are the decision-makers when it comes to the purchase of most consumer durables.

5.   IMPLICATIONS
The implications are revolutionary. The rise of women as a grand, cross-border emerging market could have implications as profound as the rise of India and China. There is a wide body of research to suggest that women's spending patterns may be exactly what the world needs at this moment.

I.   MORE PARTICIPATION IN DECISION MAKING PROCESS
Most importantly, having her own money empowers a woman to participate with strength in family decision-making - a huge change for women especially Indian women whose lives are often circumscribed due to gender and economic weakness.

II.   GREATER CONSUMPTION
Economists have studied how women spend in comparison to men, and they tend to spend more on things that are linked to people's well being, like health, education and finance, food, beauty care, child care, furnishing and growing. Women appreciating education's liberating impact will invest intensively in the same for their children - great news for Education Sector. Greater consumption is just one sure result.

III.   MORE SAVING AND MORE INVESTMENT
Knowing the average woman's financial prudence, higher national savings are likely. Economists have studied that they tend to save more, and exhibit less risky financial behavior. Women already represent one of the highest growth opportunities for investment globally; in emerging markets this opportunity is growing even faster. Based on a study of 13 Emerging Markets (EMs) – Brazil, China, Czech Republic, Hungary, India, Indonesia, Republic of Korea, Mexico, Poland, Russia, South Africa, Turkey and the Ukraine – analysts suggest that investors should be able to play this convergence and structural change in their economies via the equity markets.

IV.   SLOWER GROWTH RATES IN MALE-ORIENTED PRODUCT CATEGORIES
The fallout for business and investors could also be significant. Goldman Sachs estimates that more male-oriented product categories may show slower growth rates than areas like consumer durables, food, health care, and childcare—in short, all the stuff that women spend their money on. A handful of forward-thinking companies with product lines that were historically considered male-dominated, such as electronics and automotive, are starting to redirect their design and messaging at women. The businesses that spend the time and resources to engage and understand this female consumer will claim those dollars and create a win-win situation with a long-term and loyal consumer.

V.   GROWTH OF SOCIAL MEDIA AS AN INDISPENSABLE TOOL
Social networking is connecting women across the globe, broadening her "circle of influence" and becoming an indispensable tool for solving problems, asking questions, and building the community. Marketers have an opportunity to better connect with women online to make them feel like valued customers —and then reward them for being an advocate for the brand. Throughout the entire consumer journey, women use each other as experts and themselves as the ultimate experience filter. Women are heavily influenced by other women's opinions throughout the purchasing journey and they look to each other as sources

of advice and for real-time reviews of products. As a result of this powerful communication, businesses can quickly decline or improve based on how they adopt to these new realities.

In the U.S., women rule the blogosphere--managing, creating, and sharing consumer opinions on products with every keystroke. In fact, a recent Com Score report on women and the web found that their influence online is gaining massive momentum globally. They reported that, "Once women connect, they engage; once they engage, they embrace; once they embrace, they drive. And that's the future. The internet: It's women's work." The same power of influence is at work in emerging markets as well.

6. ISSUES

I. UNTAPPED POTENTIAL

According to the International Labour Organization, nearly half or 48.4 percent of the available productive potential of women is under or unutilized compared to 22.3 percent for men. If their "untapped potential" is put to proper use, it could help end the cycle of poverty in many parts of the world. Approximately 860 million women — over 25% of all women worldwide — are "not prepared" and/or "not enabled" to take part in the world economy.

Source: Booz and Company

Most of these women are between the ages of 20 and 65, and nearly 95% live in emerging economies; the rest live in North America, Western Europe and Japan. Counting female births and those under age 20, this number will add up to a billion in the next decade. This group is a powerful resource for driving global economic growth and will have a multiplier effect, which happens when large population segments integrate into the global economy, as in the case of China and India. As newly enabled consumers and workers enter the economy, they create new markets and increase the available talent pool.

II. LEGAL, SOCIAL, FINANCIAL AND CULTURAL CONSTRAINTS

The women generally face formidable legal, social, financial and cultural constraints that prevent their full participation in society. By eliminating restrictions on women, governments and businesses can benefit from a vital resource to spur growth and innovation.

III. UNDER INVESTMENT IN WOMEN

Under-investing in women not only limits economic and social development, but puts a brake on poverty reduction. Propelling women forward can bring powerful positive change to the global economy.

CONCLUSION

The women's place in the world has risen in the last several decades. They are the next global emerging market. Women take and influence the majority of purchasing decisions in a household. It is a great opportunity for the marketers to better connect women with the products they buy and the media technologies they use to make a positive impact both in their lives and in the bottom line. Due to a narrowing wage gap and rising female employment, the gap between the total income of men and women is shrinking and is giving indications that the women are now driving the market and thus a ray of hope for the market recovery. However, their full participation is impeded by the legal, social, financial and cultural constraints. Unless these restrictions are eliminated, government and businesses cannot benefit from this vital resource to spur growth and innovation

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URBAN RESIDENTIAL WATER SUPPLY IN GADAG TOWN IN KARNATAKA STATE

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ABSTRACT

Most of the urban area availability of drinking water is becoming more scares and more uncertain, this uncertain access to drinking water leads to urban conflicts. Mountain urbanization and rising population in urban area in recent years, coupled with inefficient management, has led to the widening gap between the demand and supply of water. Large numbers of households in cities around the developing world do not have access to safe and reliable supply of drinking water. In over 65 years of political independence and economic development, India has not been able to ensure the most basic of human needs particularly safe drinking water for all its citizens. Rural areas contain the largest number of people without access to safe water but in common with many developing countries, the fastest growing un -served populations live in urban and semi-urban areas. The water supply in most Indian cities is only available for a few hours per day, pressure is irregular, and the water is of questionable quality. Intermittent water supply, insufficient pressure and unpredictable service impose both financial and health costs on Indian households. Therefore the present work is an attempt to study the urban residential water supply and its management in Gadag city in Karnataka.

KEYWORDS
urban residential water, Gadag, water treatment plants.

INTRODUCTION

Drinking water is a basic requirement for life and a determinant of standard of living, supply and demand side factors of both surface and groundwater determine the level of drinking water available to people. Water is abundant globally but scarce locally, the main water consumers are agricultural industry and households. There is a greater demand for water in developing countries, where population, industry and growth will be greatest. Out of 100 percent, 97.5 percent is salt water contained mainly in the oceans and only 2.5 percent is the fresh water. As of now, 75 percent of drinking water is used for non-drinking purposes.

It is proposed to supply potable water and non-drinking water separately to ease the pressure on drinking water supply. Besides, water for non-drinking needs could be met by recycling domestic waste water. In developed and developing countries excess irrigation and industrial development results in excess consumption of water. To fulfill various requirements the man is blindly exploiting the natural resources of water without thinking of future. The principle collectors of water in Indian household are women usually between the ages of 15 to 35 years. This could be for the purpose of drinking, cocking, washing, bathing and for cattle. The importance of women in domestic water resource management emphasized the active involvement of women in decision making process, it could be predicated with complete certainly that the world in the year 2025 will be largely different from what it is today. In one way fresh water will be just the same in the future as in the past and this is a precisely the problem. Climate change may well cause changes in the hydrological regime, which could result in increasing stress on water resources. In earlier times water was use by human beings for drinking, bathing, cooking etc., but with advancement of civilization the utility of water enormously increased. There is an uneven distribution of water resource, the sources of water available to the human beings is less than a per cent present in lakes, streams, ground and in other sources. Water used for domestic purposes should be collected, cleaned and recycled for non-drinking, domestic and industrial purposes. Nearly holy places and temple, towns, the water that is used for bathing and washing in tanks and ponds should be channelized towards agricultural fields in adjacent areas. In Israel water is used 4 to 6 times before it is let off to nature while it is only once in India. The quality of water is as important as provision of adequate water supply. In India drinking water gets contaminated for a host of reasons such as rapid growth of population, industrialization, urbanization and excessive use of chemicals.   The need for action in this direction is growing day by day as countries and communities across the globe are increasingly experiencing water stress in various contexts. Gadag city has been facing a severe water shortage with people unable to get drinking water even once in 15 days   and during March to July once in 20 days. Different areas demanding the supply of proper drinking water from the bhadra reservoir and the Gadag residents are having a harrowing time as water is supplied once in 15 to 20 days. In view of this the study on residential water supply and its management in Gadag city of Karnataka state is undertaken with the following specific objectives

OBJECTIVES
1. To study the basic information of households in Gadag.
2. To study the different sources of water supply for domestic activities in Gadag..
3. To know the use of the water for different household activities
4. To study the knowledge level of residential water management in Gadag
5. To suggest suitable suggestions and recommendations for water management.

METHODOLOGY
The present work entitled "urban residential water supply in Gadag town in Karnataka state" was carried out during May 2012. The survey method was used to collect various information using structured interview schedule. The 100 random samples have been taken, 25 households from each 4 sub area in Gadag,   The data collected for the study were processed and analyzed by using suitable statistical technique.

BACKGROUND OF THE GADAG DISTRICT
Gadag district is newly created on 1-11-1997, bifurcating Gadag, Mundargi, Nargund, Ron, Shirhatti taluks from the old Dharwad district. Gadag district is located in northern parts of Karnataka and situated in between north latitudes of 15° 15' and 15°45' and east longitudes of 75°20' and 75°47'. It is bounded by Koppal district on east, by Baglkot district on north, by Haveri district on south and by Dharwad district on west. For administrative convenience, the district is divided in to 5 taluks with total of 337 villages. It contains 3 town municipalities, 5 town Panchayaths and 11 hob lies. The district is a part of Krishna basin, divided in to two sub basins namely Malaprabha, and Tungabhadra. These have an area of 2768 km2 and 1889.2 km2 respectively. The district falls in the semi arid tracts of Karnataka. The annual rainfall is generally less than 750mm. It lies to the east of the Western Ghats in the rain shadow region. Hence receives low rainfall and generally drought prone and it is a part of Krishna major basin the district drained by two main rivers namely Malaprabha and Tungabhadra.. The Malaprabha and Tungabhadra sub basins have the area of 2768 sq km and 1889.2 sq km respectively. Malaprabha river sub basin is sloping towards north- east direction. And Tungabhadra river sub basin slopes towards southeast to east –north-east direction. Master slope is 1.25m/km where as Malaprabha River has 0.5m/km slope. Both rivers show a seasonal regime varying from lean sluggish flow during summer to torrential muddy flow during the monsoon. The north-east monsoon contributes nearly 24.8 per cent and prevails from October to early December. And about 54.7 per cent precipitation takes place during south –west

monsoon period from June to September. And remaining 20.5 per cent takes place during rest of the year. In the district from December to February month is winter season, During April to May temperature reaches up to 42°C and December and January temperature will go down up to 16°C. The standard deviation of rainfall in the district varies from 1.3 to 263.5mm from west to east. The average standard deviation for the district is about 146 mm. South West monsoon is dominant followed by northeast monsoon.

RESULTS AND DISCUSSION
BASIC INFORMATION OF THE HOUSEHOLDS

Most of the household (70 per cent) service belongs to up to 25 years age group in Gadag city followed by more than 35 years (20 percent) and only 10 percent of them were in the range of 26-35 years.   Regarding education level of the housewives, majority of them had education up to SSLC (50 per cent), PUC (40 per cent) and 10 per cent of the household had completed their graduation. However, no illiterate households were found in Gadag city. Majority of the women were housewives (55 percent) followed by working in private sector (20 percent), government servant (20 percent) and agriculture laborers 05 per cent in Gadag.

TABLE 1: BACKGROUND INFORMATION OF THE RESPONDENTS

Sl No	Particulars	Gadag city (n=100)
1	Age of the Respondents	
	Up to 25	70 [70.00]
	26-35	10 [10.00]
	More than 35	20 [20.00]
2	Education of the Housewives	
	Illiterate	----
	Up to SSLC	50 [50.00]
	PUC	40 [40.00]
	Graduate	10 [10.00]
3	Occupation of the Housewives	
	Government servant	20 [20.00]
	Private	20 [20.00]
	Agricultural Labour	05 [0.05]
	House wives	55 [55.00]
4	Family size	
	2-4 members	40 [40.00]
	5-6 members	60 [60.00]
	More than 6 members	---
5	Type of family	
	Nuclear	90 [90.00]
	Joint	10 [10.00]
6	Monthly income of the family	Rs 27000

Source: Primary data

Note: Figures in the parentheses indicates actual percentage

Majority of the families had 5 to 6 members (60 percent) and 2 to 4 members (40 percent) in Gadag city. Further, most of the household (90 percent) belonged to nuclear family followed by joint family (10 per cent). It is also found that monthly income of the family was Rs 27000/- per month from all the sources, the details are given in table 1.

SOURCES OF URBAN WATER SUPPLY IN GADAG

Drinking water is the basic needs of the people to be addressed on top priority. Access to water in required quality and quantity is the most essential part of the government, otherwise, water shortage for drinking and sanitation is an endemic. The study data reveals that 50 percent of the households had the municipal water supply, 20 per cent each from bore well and mineral water purifying plants respectively in Gadag and followed by well (10 per cent).Recently, around 20 per cent of the households using mineral water for drinking purposes from water purifying plants due to the awareness of the purity of drinking water and had the knowledge of the importance of water , it is due to traditional beliefs that few households get water from the well for their pooja and drinking purposes. So, it is found that municipal government still provides sufficient water to the residents. The details are given in table 2.

TABLE 2: DETAILS OF URBAN RESIDENTIAL WATER SUPPLY IN GADAG

Sl. No	Sources of Water	Gadag city (n=100)
1	Municipal Water	50 [50.00]
2	Bore Well Water	20 [20.00]
3	Well	10 [10.00]
4	Mineral Water (purification water plants)	20 [20.00]

Source: Primary data

Note: Figures in the parentheses indicates percentage

Former Leader of Opposition in the Legislative Council H.K. Patil handing over a can of 20 liters of clean drinking water to the residents of Gadag. Hence around 20 per cent of the residents bringing water from water purifying unit in Gadag, this helps to ease the pressure of drinking water in Gadag.

USE OF THE WATER FOR DIFFERENT HOUSEHOLD ACTIVITIES

Municipal government in Gadag city has been made an attempt to provide adequate and safe drinking water to all the households but supply and demand side factors determine the level of water availability. The supply side factors like rainfall, surface flows, Groundwater availability and recharge, surface run-off etc., quality of available water, kinds of institutions and establishments, operation and maintenance of water supply schemes in Gadag is not so satisfactory. With the available water different households have been using for different activities.

Municipality water is the most important water, which is supplied from the Tungabhadra River through korlahalli and mundaragi. Study data reveals that 45 per cent of the households used this water for drinking and 25 per cent for cooking purposes. Because, river water cooks early and makes the food tasty and also they take head bath and the hair will not fall and grows. Whereas 10 percent of the municipality water using for washing cloths and dish washing each purposes. Therefore, households in Gadag city using river water cent percent for all activities. The details are given in table 3.

TABLE 3: USE OF THE WATER FOR DIFFERENT HOUSEHOLD ACTIVITIES IN GADAG

Sl .No	Sources of water	Activities					
		Drinking	Cooking	Washing cloth	Dish washing	Salty	Other activities
1	Municipality water[n=100]	45[45.00]	25[25.00]	10[10.00]	10[10.00]	5[05.00]	5[05.00]
2	Bore well water [n=100]	20[20.00]	10[10.00]	20[20.00]	20[20.00]	20[20.00]	10[10.00]
3	Well water [n=100]	25[25.00]	20[20.00]	40[40.00]	05[05.00]	05[05.00]	05[05.00]
4	Mineral water [n=100]	100 [100.00]	--	--	--	--	--
5	Tank water [n=100]	--	--	40[40.00]	20[20.00]	20[20.00]	20[20.00]
6	Lake [n=100]	--	--	10[10.00]	--	--	20[20.00]

Source: Primary data

Note: Figures in the parentheses indicates percentage

Regarding the use of bore water, almost all the activities were carried out by using the bore well water in Gadag. The 20 per cent of the water for dish washing, washing, and drinking each and other domestic activities (05 percent each). Only 10 per cent of the water is used for drinking purpose. Because, irregular supply of municipality water and for all the domestic activities it is due to not possible to bring the water from well and other sources like tanks, lakes regularly. Majority of the households used the well water for cloth washing (40 percent), drinking (25 percent) and cooking (20 percent) while little percentage of the households had used the well water for other domestic activities. The 100 per cent mineral water used by households in Gadag for drinking purpose alone, The K.H. Patil Foundation, the Hulakoti Cooperative Education Society, and the Rural Medical Society have joined hands in this initiative of helping miniral water for residents of the city and also the surrounding places. The 11 small water treatment plants had been set up by the three organizations by mobilizing funds. These plants had the latest technology which was adapted by companies supplying packaged drinking water, these units involves reverse osmosis technology. Each unit has a capacity of producing around 32,000 liters of potable bacteria-free water per day. People are being charged 20 paisa for a liter of clean water, while, it is Rs2 for 10 liters and Rs. 2 for a can of 20 liters. The 40 per cent of the tank water used for washing cloth, for dish- washing (20 percent) and for others domestic activities (20 percent) each. Finally, lake water was used for only washing cloth and other activities.

STORAGE OF WATER BY HOUSEHOLDS IN GADAG

Storing of water is a system by which different households using varieties of instruments to store the water for different purposes. Since there is a water crisis in Gadag city, different households using different types of means of water storage instruments. The study data reveals that majority of the households in Gadag city had upper tank (35 per cent) followed by syntax, underground tank and drums 15 per cent each to store the water from different sources. The 10 per cent of the households had big vessels facilities. Some of the households opined that uppar tank; underground tank and syntax were constructed and fixed at the time of building the house.

TABLE 4: METHODS OF WATER STORAGE BY HOUSEHOLDS IN GADAG CITY

Methods of water storage	Gadag City N=100		
	Yes	No	Total
Upper tank	35	65	100
Syntax	15	85	100
Underground tank	15	85	100
Drums	15	85	100
Big vessels	10	90	100
Cement tank	06	94	100
Tank (stone)	00	100	100
Earthen wares	02	98	100
Plastic tubs	02	98	100
Bucket	02	98	100

Source: Primary data

It is also found that some of the households had still the habit of storing the water in cement tank, plastic tubs, drums and buckets, since they consume more water. Further, just 2 per cent of the households had to use earthenware to store the drinking water particularly in the summer only because during which water remains cold and tasty. The detail is given in table 4.

OPINION OF THE HOUSEHOLDS ABOUT RESIDENTIAL WATER MANAGEMENT

The 65 per cent households of the Gadag city opined that they used water judiciously followed by 30 per cent of them reported that they used water limitedly and only   5 percent households managed unlimitedly. Households get water from municipality once in 15 to 20 days, so it is very difficult for carrying out the water for domestic activities with limited municipality water.

TABLE 5: HOUSEHOLD OPINIONS ABOUT RESIDENTIAL WATER MANAGEMENT

Opinion about water management	Urban (n=100)	
	Number	Per cent
Judiciously	65	65
Limited	30	30
Unlimited	05	05
Total	100	100

Source: Primary data

Therefore, it is concluded that most of the residents reported that they used water judiciously and had the knowledge of water management. Similarly, cent percent of the households in Gadag city opined to know about the water management.

SUGGESTIONS AND RECOMMENDATIONS FOR RESIDENTIAL WATER MANAGEMENT

There is an urgent need for planned action to manage water resources effectively. The problems in Gadag city has still most of the households are living without safe drinking water supply.

- Municipal government in Gadag city is supplying inadequate water to its residents. Hence it is suggested to provide sufficient water to the residents by constructing big tanks to preserve water during rainy season from Tungabhadra and Malaprabha rivers. Further, Rainwater harvesting structures would enhance the availability of drinking water vicinity of Gadag town.
- Former Leader of Opposition in the Legislative Council H.K. Patil handing over a can of 20 liters of clean drinking water to the residents of Gadag . Around 20 per cent of the residents bringing water from water purifying unit in Gadag, existing units are 11 in numbers. Hence, it is suggested to increase still more water purifying units in Gadag, this helps to ease the pressure of drinking water.
- Some of the households living in EWS, LIG in HUDCO colony in Gadag city do not have upper tank facility to store water. Therefore, it is suggested to use the best quality of syntax tank in addition to the underground tank.

- The 65 per cent residents of Gadag city had the knowledge of judicious use of water. Hence, it is suggested to use water judiciously, economically and carefully for different activities.
- Bleaching powder and alum may be distributed to the schools teachers/ANMs/Habitation head/PHE worker etc., for using in their respective water sources for disinfection.
- There must be a rethink of the way that water is used and reused and greater use Of natural systems for treatment
- Urban water supply in Gadag is likely to become more difficult in the future due   to several changing pressures like urbanization, climate change and infrastructure deterioration. The challenge is to develop appropriate technical and institutional responses to change the way in which urban water systems are managed.
- Demand management and water reuse opportunities are real and increasing. A Combination of end-use efficiency, system efficiency, storage innovations and reuse strategies would reduce water demand.
- Water can be used multiple times, by cascading it from higher to lower-quality needs and by reclamation treatment for return to the supply side of the infrastructure. In most of the developing countries, effective water demand management and reuse of the supplied water may be a sustainable ways to reduce water stress.

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TECHNICAL ANALYSIS: A TOOL TO MEASURE MARKET VOLATILITY

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ABSTRACT

Technical analysis is the study of historic price movement of securities, trading volumes and market action, primarily through the use of charts for the purpose of forecasting future price trends. Through technical indicators, investors can analyze the short-term price movement of the stocks, the most important market turning points and project the price movement. This paper is attempt to know and understand the concept of Technical Analysis and how its use as a tool to measure the market volatility. There are several facts are behind the volatility of the market and stock. As an investor he can understand and measure the volatility of the market in several ways, among that technical analysis is the first and foremost tool on this. The market volatility it affect both primary and secondary market. Both this markets predominantly deal in the equity shares. Debt instruments like bonds and debentures are also traded in the stock market. Well regulated and active stock market promotes capital formation. The health of the economy is reflected by the growth of the stock market.

KEYWORDS

Debt Instruments, Market volatility, Price Movement, Technical Analysis, Technical Indicators.

INTRODUCTION

Investment analysts often examine historical price and volume data and other market related indicators to identify past trends and patterns in price movements. The objective is to forecast the future prices and measure market volatility. More emphasis is laid on charts, graphs and indicators, rather than on fundamentals related to earnings of the firm.

Many people enter into the stock market using strategies that stack the odds against their success. Market indicators and other market information act as a guide for better investment. Investors and speculators face heavy losses due to lack of adequate awareness of market indicators. The investor or the speculator should have better knowledge and update market news, market indicators and technical system so that he could invest them in best avenues and get back the investment safely and get regular income out of it.

The study on technical analysis of stock market helps the investor to take decision to buy and sell the share at right time to get profit and it helps to prevent the loss. The technical analysis is simple and gives an investor a bird's eye on the future of the security price by measuring the past moves of prices. Further it helps in understanding the price behaviour of the stock, the signals given by them and the major turning points of the market price. Technical analysis is a simple and useful method to find out the fluctuations of price around the intrinsic value of a share and measure the volatility level of shares in market.

TECHNICAL ANALYSIS

Technical analysis is based on the proposition that the securities price and the volume in the past suggest their future price behavior. A trend in prices is believed to continue unless there is some definite information leading to change. Technical analysis is based on the concept that past information on prices and volume can give an idea of what lies ahead. It emphasizes that securities prices and changes there in can be forecasted by studying the market data.

TECHNICAL ANALYSIS TOOLS

By examining the historical patterns of the two most important measures, namely, the market price trend and volume of trading, an investor tries to estimate the future market price of a share. In the narrowest sense, technical analysis is based on the assumption that market price fluctuations reflect the logical and emotional forces prevailing in the secondary market.

VOLATILITY

The Volatility technical indicator is helpful in seeing potential market reversals. This Volatility indicator based on the true range of price is based on the premise:

- Strong trends upward are marked by decreases in volatility.
- Strong trends downward show a general increase in volatility.
- Reversals in trend usually occur when volatility increases.

The chart below of the 5,000 ounce Silver futures contract illustrates the first point, that strong trends usually have low volatility:

MARKET INDICATORS

All the technical analysis tools and techniques were analysed a share data. There is another group of technical tools designed to help an investor gauge changes in all shares within a specific market. These indicators are usually referred to as market indicators because they gauge an entire market, not just an individual share. Market indicators typically analyse the stock market, although they can be used for other markets

The performance and evaluation of capital market across the world has witnessed the development of numerous market indicators. In many instances these market indicators are computed on the stock market on a whole rather than on a specific share. Certain market indicators are amenable to individual share evaluation as well as market evaluation. Listed below are a few indicators:

1. Moving Averages
2. Line Studies
3. Bollinger Bands
4. Absolute Breadth Index
5. Arms Index
6. Relative Strength Index
7. Accumulation Swing Index
8. Commodity Channel Index
9. Chaikin Oscillator
10. Detrended Price Oscillator
11. Stochastic Oscillator
12. McClellan Oscillator
13. Dynamic Momentum Oscillator
14. Performance Indicator
15. R-squared Indicator
16. Momentum Oscillator
17. Parabolic Stop and Reverse
18. Volume Oscillator
19. Triple Exponential Average

MOVING AVERAGES

Moving averages are used to help identify the trend of prices. By creating of prices that moves with the addition of new data, the price action on the security being analysed is smoothed. In other words, by calculating the average value of a share or indicator, day to day fluctuations are reduced in importance and what remains is a stronger indication of the trend of prices over the period being analysed.

Simply put, moving averages measures the average movement of the market for an X amount of time, where X is whatever you want it to be. For example if you applied a 20 SMA to a daily chart, it would show you the average movement for the past 20 days.
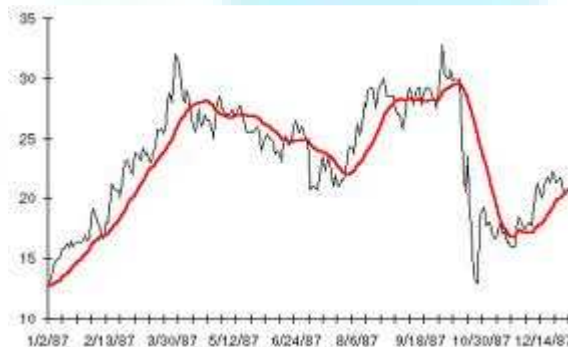
LINE STUDIES

Line studies are technical analysis tools that consist of lines drawn on top of share's price and / or indicator. These help in identifying the support, resistance and trend line indicated by the historical data price movements.


BOLLINGER BANDS

Bollinger Bands is a versatile tool combining moving averages and standard deviations and is one of the most popular technical analysis tools available for traders. There are three components to the Bollinger Band indicator:

1. **Moving Average**: By default, a 20-period simple moving average is used.
2. **Upper Band**: The upper band is usually 2 standard deviations (calculated from 20-periods of closing data) above the moving average.
3. **Lower Band**: The lower band is usually 2 standard deviations below the moving average.

Bollinger Bands (in blue) are shown below in the chart of the E-mini S&P 500 Futures contract:
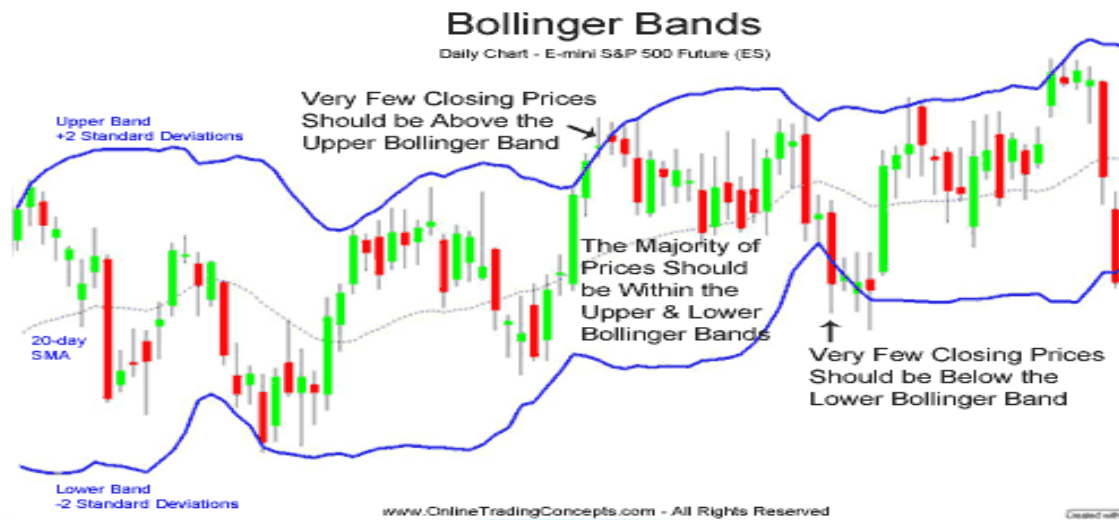
ABSOLUTE BREADTH INDEX

The Absolute Breadth Index (ABI) is a market momentum indicator, it shows how much activity, volatility and change in taking place in the stock market.

ARMS INDEX

The Arms Index is a market indicator that shows the relationship between the numbers of shares that increase or decrease in price and the volume associated with shares that increase or decrease in price.
It is calculated by dividing the advance/decline ratio by the upside/downside ratio.

RELATIVE STRENGTH INDEX

The Relative Strength Index (RSI) is a price following oscillator that ranges between 0 and 100. It measures the internal strength of a share by monitoring changes in its closing prices. The RSI usually tops above 70 and bottoms below 30.

RSI = 100 – [100/(1+RS)]

ACCUMULATION SWING INDEX

The Accumulation Swing Index seeks to isolate the 'real' price of share by comparing relationships between the current prices and the previous period's prices. The swing index is a value from 0 to 100 for an uptrend and 0 to -100 for down trend. The swing index is calculated by using the period's market open, high, low and close prices, as well as the previous period's open, high, low and close prices.

Accumulation Swing Index = $50 \times ((c2-c1 + 0.5 \times (c2 - o2) + 0.25 \times (c1 - o1))/r) \times (k/limit)$

Where

C1 = Previous close
C2 = Current close
R1 = absolute value of (h2 – c1)
L1 = Previous low
L2 = current low
R2 = absolute value of (l2 – c1)
H1 = previous high
H2 = current high
R3 = absolute value of (h2 – l2)
01 = previous open
02 = current open
R4 = absolute value of (c1 – o1)

COMMODITY CHANNEL INDEX

It measures the variations of share's price from its statistical average. High index values show that prices are unusually high compared to average prices whereas low index values indicate that price are unusually low.

Commodity Channel Index = (Current Average Price – Current Moving Average of price)/(0.15 X Moving average of Mean Deviations)

CHAIKIN OSCILLATOR

The Chaikin Oscillator is a moving average oscillator based on the accumulation/ distribution indicator. This indicator considers the relevance of traded volume in an investment decision. Volume analysis helps in identifying internal strengths and weaknesses that exist under the cover of price action. In many instances, volume divergences versus price movement itself can successfully predict a major market reversal.

Chaikin Oscillator = 3 – Period of EMA of A/D line – 10 – Period EMA of A/D line

Where

EMA = Exponential Moving Average
A/ D line = Cumulative Accumulation / Distribution line

DETRENDED PRICE OSCILLATOR

The Detrended Price Oscillator (DPO) attempts to eliminate the trend in prices. Detrended prices allow the technical analyst to easily identify trend cycles and over bought/oversold levels. Long term cycles are made up of a series of short-term cycles.
DPO = Closing Price – (Moving Average ($[n/2] + 1$ days ago)

STOCHASTIC OSCILLATOR

The stochastic process has an infinite progression of jointly distributed random variables. The stochastic oscillator compares where a share's price closed, relative to its trading range over the last n-time periods.

R-SQUARED INDICATOR

The R-Squared Indicator illustrates the relationship between prices using the linear regression trend line. The closer the two are to each other, the stronger the trend. The formula for R-square is as follows:

PARABOLIC STOP AND REVERSE (SAR)

The Parabolic SAR is a very useful and accurate indicator during a trending period. But during trading time periods this indicator does not serve any purpose. SAR stands for stop and reverse, and the term parabolic comes from the shape of the curve that is created on the technical chart.
If Long SAR = SAR (t-I) + (Hl(t-I) – SAR (t-I)) X AF
If Short SAR = SAR (t-I) – (LO(T-1) – SAR (t-1)) X AF

VOLUME OSCILLATOR

Volume simply indicates enthusiasm, or lack thereof, for a share and does not deal with the price of the share. To confirm a market turn around or trend reversal, the technical analyst most importantly must determine whether or not the measurements of price and volume momentum agree with each other. If they do not, it is a sure indicator of weakness in the trend and may point to trend reversal.

Volume Oscillator = (14 – period volume MA) – (28 – Period volume MA)

TRIPLE EXPONENTIAL AVERAGE

The triple exponential average indicator is an oscillator used to identify oversold and overbought markets, and it can also be used as a momentum indicator. Like many oscillators, the TRIX oscillates around a zero line. A positive value indicates an overbought market while a negative value indicates an oversold market. When TRIX is used as a momentum indicator, a positive value suggests momentum is increasing while a negative value suggests momentum indicator, a positive value suggests momentum is increasing while a negative value suggest momentum is decreasing. Many analysts believe that the TRIX crossing above the zero line is a buy signal, and its closing below the zero line is a sell signal. Also, divergences between price and the TRIX can indicate significant turning points in the market.

CONCLUSIONS

Technical analysis is based on published capital market data as opposed to fundamental data, such as earnings, sales, growth rates or government regulations. Market data include the price of share or the level of a market index, volume and other technical indicators such as the put/call ratio. But ultimately the tools and techniques which are available in technical analysis will helpful and understand the market situation and market volatility. Final thought from technical analysis;

- ❑ Develop a strategy unique to your personality and comfort levels
- ❑ Tweak your strategy until it works the best that it can
- ❑ Test it using virtual (paper) trading
- ❑ Do not stay from the system!
- ❑ Remember that 1% every day leads to about 290% a year! A little goes a long way!
- ❑ Learn First, Trade Second

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CO-BRANDED CREDIT CARD - A TAILOR-MADE PRODUCT NICHE FOR CONSUMERS

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ABSTRACT

Co-branded credit cards are one of the biggest trends in the credit-card industry in the last several years. For banks they offer a way to distinguish their products from their competitors now that everyone offers basic credit cards. For consumers they offer attractive deals in different product niches as well as a good reason to get multiple cards. The sheer numbers in terms of could be and would be credit card users have made this an exciting arena for the banks and other credit card marketers. This is why we have seen a very fast pace of progress in this field. The latest product and technological developments in the international credit card scene are quickly replicated here for the Indian market. The newest kid on the block is the co-branded credit cards. In this conceptual research, the researcher wants to analyze the features and benefits of co-branded credit cards. This study also indicates the scope of consumers spending behaviour and their problems in using a co-branded credit card. Finally, researcher has suggested various points to assess the consumers spending pattern with a co-branded card.

KEYWORDS
Types of cards, Co-branded credit card, tailor-made features, benefits, deals and things to watch out.

INTRODUCTION
Today's consumers have many more choices than ever before. They look for products and services that simplify their lives and express their individuality. A co-brand partnership is designed to strengthen the bond with your customers. It can increase loyalty, attract promising new customers, lower your acquisition costs and help keep your company top-of-mind. All can add profits to your bottom line. The latest product and technological developments in the international credit card scene are quickly replicated here for the Indian market. The newest kid on the block is the co-branded credit cards. Co-branding is essentially two major brands converging to enhance the usefulness and image of the product. In the case of a credit-card, it is a partnership between the issuer, say, Citibank, and a retail service-provider or a goods provider to meet customer demand more efficiently.

A card issued through a partnership between a bank and another company or organization is called a co branded card. The card would have both the bank name and the store name on it. Many co-branded cards are also rebate cards that provide the consumer with benefits such as extra services, cash or merchandise every time the card is use. Obviously the aim of the co branders is to gain market share, promote loyalty to the brand, promote more usage etc. For instance in the US, this category of credit card is one of the fastest growing in the credit card industry. Due to the MasterCard and VISA connection, co branded cards find wide acceptance, unlike proprietary cards that can only be used at the sponsor's premises. The co branders get to a wider customer base that is better defined and could not have been targeted by one partner alone. As for the structure, the credit-card issuer is responsible for distribution, while the partner offers the benefits that differentiate between the cards and the target customers.

BACKGROUND LITERATURE
Despite the growing use of co-branding in practice, little empirical research has been conducted on the topic. Most of the literature on co-branding simply describes the strategy or discusses the advantages and disadvantages of co-branding arrangements. There are however two empirical studies dealing with this topic. In the first study by George et al. (1998) consumer attitudes towards brand alliances are examined. The focus in this work is on spillover effects of brand alliance evaluations on the later evaluation of partners and on the role of brand familiarity in these relationships. The result of this study is that consumers´ attitudes toward a particular brand alliance influenced their subsequent attitudes toward the individual brands that comprise that alliance.

The second study by Grossman (1996) deals with a Composite Brand Extension (CBE), combination of existing brand names, analogous to co-brand. It examines how consumers form the concept of the CBE based on their concept of their constituent brands, the roles of each constituent brand in forming this concept and the effective of the CBE strategy. According to the study a composite brand name can favorably influence subjects´ perception of the CBE and those complementarities between the primary and secondary constituent brands is a more important factor in the success of the CBE strategy than a positive evaluation of the secondary brand.

TYPES OF CARDS
- ✓ Many Types of Plastic
- ✓ Multipurpose Cards
- ✓ Single-Purpose Cards
- ✓ Charge Cards
- ✓ Credit Cards
- ✓ Bank Cards
- ✓ Debit Cards
- ✓ On-Line Debit Cards
- ✓ Off-Line Debit Cards
- ✓ Secured Cards
- ✓ Commercial Cards
- ✓ Co-Branded Cards

WHAT ARE CO-BRANDED CARDS?
They are credit cards, which are associated with a particular firm like an airlines or retail outlet. These cards can be used just like regular credit cards but they also offer benefits to users of the relevant product like frequent travel points and special discounts.

Today co-branded cards are available for a large number of sectors including travel, telecom, retail, entertainment and so on. There are new products coming every year: for instance just recently Yatra Online and Barclays announced a co-branded card tailor-made for consumers in the fast-growing online travel segment.

CO-BRANDED MARKETING OBJECTIVES
Increase revenue or brand recognition, another participant may wish to penetrate new markets or introduce new products or services.
- ✓ Each participant should be absolutely certain from the outset that his specific objectives coincide with the actual opportunities that will arise from the intended marketing campaign.

- ✓ To ensure that all participants benefit from the campaign, it is important to identify the right partner — the compatibility of potential partners plays a crucial role in the success of the project.
- ✓ When a dominant partner joins forces with a smaller brand, the smaller partner usually benefits from the trust and loyalty that attach to the bigger brand, while the latter may use the smaller brand to penetrate new market sectors.
- ✓ Co-branding by two or more small players can be more strategic and creative in nature.
- ✓ In this kind of situation parties should ensure that the sum total of the joint marketing effort results in greater brand recognition than what would have been achieved with individual campaigns.

TYPES OF CO-BRANDING

1. INGREDIENT CO-BRANDING
One form of co-branding is ingredient co-branding. This involves creating brand equity for materials, components or parts that are contained within other products.
Examples:
- Dell Computers with Intel Processors
- Samsung hardware with Google software (e.g. Galaxy Nexus)
- Tata motors with Fiat engines

2. SAME-COMPANY CO-BRANDING
Another form of co-branding is same-company co-branding. This is when a company with more than one product promotes their own brands together simultaneously.
Examples
- Tata Croma and Tata Capital

3. JOINT VENTURE CO-BRANDING
Joint venture co-branding is another form of co-branding defined as two or more companies going for a strategic alliance to present a product to the target audience.
Example:
- British Airways and Citibank formed a partnership offering a credit card where the card owner will automatically become a member of the British Airways Executive club

4. MULTIPLE SPONSOR CO-BRANDING
Finally, there is multiple sponsor co-branding. This form of co-branding involves two or more companies working together to form a strategic alliance in technology, promotions, sales, etc.
Example:
- Citibank/American Airlines/Visa credit card partnership

CO-BRANDED CREDIT CARD MARKETERS AND THEIR BENEFITS
Clearly, a co-branded card encourages spending at particular places only. Gauge the amount of spending you will be doing in that brand in order to understand how you will benefit. Here's few illustrating with an example.

❖ **SBI's co-branded card with Spice Jet**
SBI's co-branded card with Spice Jet offers 5 per cent cash back on spending at the airline. But you must use only Spice Jet's Web site, call centre or airport ticketing counters for booking. Outside spending on Spice Jet, the reward points system for this card doesn't have much going for it, requiring huge spends for a minimum of benefits from reward points. With a Spice Jet-only card, you lose out on benefits if you take alternative airlines

❖ **HSBC's co-branded card with Make-My Trip**
Then take HSBC's co-branded card with Make-My Trip, or SBI's Yatra.com partnership. The cards give you, upon joining, Rs 5,500 and Rs 8,250 worth of discounts on tickets and hotels, besides extra reward points on transactions made on the Web site. You get discounts on crossing a minimum threshold of spending on the sites. The spending-reward ratio is slightly better. . Given that Make-My Trip offers a lot more airline options, besides hotel, bus and rail bookings, the drumming up points and deriving more benefits is quicker.

❖ **ICICI Big Bazaar Gold Credit Card**
Benefits include zero finance charges on EMI purchases at Big Bazaar; you can pay off a purchase of Rs 1,500 and above in three equal monthly installments, EMIs, without any finance charges. Other benefits include 6 reward points for every Rs 100 of purchases at Big Bazaar.

❖ **ICICI Bank Xbox 360 Credit Card**
Aimed at fans of Microsoft's popular gaming console the card offers discounts on certain Xbox and Microsoft products and also provides zero per cent financing when purchasing an Xbox 360.The card also provides offers from other electronics brands like Samsung and Kodak.

❖ **Jet Airways Citibank Gold Card**
Every Rs. 100 spent earns you 4 Jet Privilege Miles. You can also win upgrade vouchers when you earn 4,500 miles on your card. This card is free for life.

❖ **ABN Amro Adlabs Credit Card**
In addition to reward points on ticket purchases you get benefits like exclusive ticket counters at Adlabs Cinemas, reserved seats for new movies and special invitations for premiere shows.

❖ **SBI Railway Card**
You earn railway points from your ticket purchases. Other benefits include zero transactions charges for online railway booking and accident insurance worth Rs 10 lakhs in case of loss of life in a railway accident while travelling on a valid ticket.
There are a number of co-branded airline cards, both national and international. Also keep in mind that with airline co-branded cards especially, it may be more beneficial to take a regular credit card that promotes travelling. HDFC Bank's Platinum Edge credit card, for instance, allows points conversion into air miles on Jet Airways, Kingfisher Airlines and Air India.

THING TO WATCH OUT FOR WITH CO-BRANDED CARDS
- ➢ Annual fees: Today plain-vanilla credit cards with zero annual fees are quite common but co-branded cards are more likely to carry significant fees. Make sure that the benefits they provide outweigh the costs.
- ➢ Read the fine print and ask questions when it comes to benefits. The descriptions provided are often rather vague and you need to clarify the details to make sure that the benefits you get are worth the annual costs. For example when it comes to reward points, find out what time limit or other restrictions are imposed on their use.
- ➢ The usual warnings about credit cards apply to these cards as well. Credit cards are best used as a means of payment not as a source of credit. You should ideally pay off your full balance every month before the payment due date. Remember that interest charges are steep and if you keep borrowing every month you could get caught in a debt trap.
- ➢ Don't get too many cards. Aside from the annual fees, the more cards you have the more likely you are to miss payments and pay penalties and interest. Only get a co-branded card if the benefits fit your lifestyle and purchasing habits really well.

CONCLUSION

Co-branded cards provide you with additional benefits tailored to your consumption habits. However, as always with credit cards, it's wise to be moderate and not carried away with your new spending power.

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A COMPARATIVE STUDY ON CUSTOMER SATISFACTION WITH SERVICE QUALITY IN PUBLIC AND PRIVATE SECTOR BANKS

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ABSTRACT

Indian banking industry has suddenly witnessed a major boom. Being a globalized market, the customers seek and demand world class products. In today's global market, the competitive advantage lies in delivering high quality services to the customers. The need to achieve customer satisfaction lies in its ability to deliver better quality products to the customers. Therefore, customer satisfaction is considered as a pre- requisite for customer retention, loyalty and convenience which ultimately helps in realizing the goals of profitability, market share, growth, return on investment, productivity etc. services quality is one of the highly debatable topic in market theory. There is a wide range of literature on customer satisfaction and services quality though both are different concepts but are closely related to each other. In order to judge the link between two, a deep study of both concepts is required. So, the present paper strongly emphasized the relationship between services quality and customer satisfaction. This paper attempts a comparison of performance among two categories of banks – public and private sector banks (only domestic) in Ambala District - using the list of service attributes based on different service dimensions such as tangibles, reliability, responsiveness, assurance , empathy and courtesy during December 2012. This study is based on questionnaire method. A sample of 160 customers has been selected using convenient sampling method. The statistical tests are conducted at 5% and 1% level of significant the main statistical tools are used. This study concluded that private sector banks are more preferred by majority of the customer as they emphasize more upon relationship building with their clients and are better equipped with modern infrastructure as compared to public sector banks. The findings show that Private sector banks performed significantly by satisfying its customers with good services and they have been successful in retaining its customers by providing better facilities than Public sector banks.

KEYWORDS
Customer satisfaction, service quality, banks.

INTRODUCTION

Customer is the kingpin for the development of trade, industry and services sector particularly in financial services. So, the significance of customer services in the banking sector came to force to compete in a market driven environment. Banks these days provide a variety of services ranging from opening a savings account to internet banking, granting loans to selling insurance, providing locker facilities to transferring money abroad. Their customers come from all classes of society from a salaried group to a Multi National Corporation having its business activities all around the world. The banks have to satisfy all the customers belonging to different social groups. Measuring services quality in the services sector particularly in the banking sector is more difficult than measuring the quality of manufactured goods. The banking has therefore become more complex and requires specialized skills. People working in banks act as a bridge between the bank and the customers. They are the people who face customers directly and are the first ones to know what customer actually needs. The concept of customer satisfaction and services quality is interrelated with each other. Moreover satisfaction of customer depends upon services quality and service quality is increasingly offered as a strategy by marketers to position themselves more effectively in the market place. As survival of the fittest has become the order of today, every bank is trying woe the best customer who is common for all. Retaining the existing customers and attracting new ones has become all the more difficult especially for public sector banks (Bhatt, 1990). It may be concluded from the above discussions that customer satisfaction is always taken as a central point in banking industry. There are various factors that actually generate customer satisfaction. Service quality is one of them. This study has been designed to examine the customer satisfaction with service quality in the selected public and private sector banks from Indian banking sector.

REVIEW OF LITERATURE

Sarin and Anil (2007) recommended that manpower in service organizations must work with the focus of satisfying the customer. Banking should bring out the areas requiring improvement and further throws light on the measures so that customers feel should be adopted in order to improve the quality of service. **Hummayoun Naeem, Asma Akram and Iqbal Saif (2009)** investigated the impact of service quality on customer satisfaction in the Pakistani banking sector. Results of the analysis indicated that service quality was proved to be a strong predictor of customer satisfaction in case of the foreign bank as compared with the public sector bank. The study concluded that service quality, if managed effectively, can contribute significantly towards customer satisfaction.**Uma Sankar

Mishra, Bibhuti Bhusan Mishra, Saroj Kanta Biswal and Bidhu Bhusan Mishra(2010)concluded that the major reasons for dissatisfaction with Public sector banks is the rigid policy, while for the Private banks it is mostly service related factors like service charges, interest rates on loans & term deposit and matching to concluded that the major reasons for dissatisfaction with public sector banks is the rigid policy, while for the private customer's attitude. **Ushad Subadar Agathee (2010)** advocated that there are increasing urgent needs for bankers to meet customer expectations for faster and better service with the number of bank branches growing across the island leading to more price competition. The study also showed that those falling in the highest income groups are more likely to be unsatisfied with the banks' services. It highlighted the need for bankers to gear customer service and quality improvement efforts towards components of reliability and responsiveness.

OBJECTIVES OF THE STUDY
1. To identify the banking sector that is largely availed by the customers.
2. To examine the expectations and the level of satisfaction of the customers towards the services rendered by public and private sector banks.
3. To study the preferences and priorities towards types of services provide by the public and private sector banks.
4. To compare the public sector banks and private sector banks in terms of customer satisfaction.

RESEARCH METHODOLOGY
The methodology and design adopted for the study is as follows:
AREA OF STUDY
The study has been conducted in Ambala District having a population of more than five lacs.
PERIOD OF THE STUDY
The present research study is related to **"A Comparative Study on customer satisfaction with service quality in Public and Private Sector Banks"**. The survey lasted for about six months.
DATA COLLECTION
The study is based on a survey conducted in Ambala city during December 2012 with the sources of Primary data and Secondary data. The secondary data was collected from various possible records like books, magazines, periodicals and website. Primary data is based on questionnaire methods. Questionnaire consisting of 5 key dimensions of tangibles, reliability, responsiveness, assurance and empathy. The list of service attributes based on different service dimensions are ranked and rated by the customer to identify the importance of each service attributes. With regards to the level of satisfaction the rating for each statement was designed on a 5 point, where '1' represents highly dissatisfied and '5' represents highly satisfied. Primary data were collected from men and women respondents living in Ambala District. People from all walks of life were contacted. The total number of respondents was 160.The researchers have covered customers from four banks, two each from public sector and private sector. Under Public sector banks Punjab National Bank and Oriental Bank of Commerce were selected and ICICI and HDFC were selected among Private Sector Banks.
SAMPLING
A sample of 160 customers has been selected using convenient sampling method. The data has been interpreted satisfactorily whenever and wherever needed.
DATA ANALYSIS
The major statistical tools used in this study are Percentage analysis, Chi square test and student's t-test analysis. Internal consistency will also be tested using Cronbach's alpha (Cronbach, 1951).

ANALYSIS AND FINDINGS
CUSTOMER'S PROFILE
Respondents form an important component of the primary data survey. So it is very essential that the personal profile of the respondents undergoes a study. Descriptive analysis was done to present the demographic information of the respondents. The sample size consists of 160 respondents of four banks including Public and Private sector. In order to have an effective banking policy and marketing strategy, it is required to study the customer profile as the customers are the milestone of banking business. Sound banking system depends upon the sound customers having a good educational ground and having a regular flow of income. So, the first section of questionnaire includes the customer's profile .The basic attributes of the respondents are age, monthly income, education, gender and occupation.Table-1 presents a comprehensive profile of bank customers who had participated in this study.

TABLE 1: CUSTOMER'S DEMOGRAPHIC PROFILE FROM DIFFERENT TYPES OF BANKS

Parameters		PNB Bank (n=40)		Oriental Bank (n=40)		ICICI Bank (n=40)		HDFC Bank (n=40)		Total (n=160)		Chi- square Value
		f	%	f	%	f	%	f	%	f	%	
Age	Below 25 years	06	15	03	07	04	10	03	08	16	10	19.3052
	25- 40years	15	37	16	40	17	42	17	42	65	41	
	40-55 years	18	45	18	45	18	46	18	45	72	45	
	55years and above	01	03	03	08	01	02	02	05	07	04	
Education	Up to HSC	14	35	12	30	18	46	18	45	62	38.7	16.9644
	Graduate	16	40	16	40	14	35	14	35	60	37.5	
	Post graduate	06	15	08	20	05	12	03	08	22	13.8	
	Professional	04	10	04	10	03	07	05	12	16	10	
Gender	Male	30	75	28	70	28	70	32	80	118	73.7	1.3276
	Female	10	25	12	30	12	30	08	20	42	26.3	
Occupation	Self employed	18	45	20	50	24	60	21	52	83	51.8	24.1278
	Govt. service	13	32	13	32	12	30	14	35	52	32.6	
	Student	06	15	04	10	02	06	02	05	14	8.75	
	Retired	02	05	02	04	01	02	02	05	07	4.3	
	Housewife	01	03	01	04	01	02	01	03	04	2.5	
Monthly income	Less than Rs. 5,000	13	32	12	30	14	35	18	45	57	35.5	18.3696
	5,000-25,000	14	35	16	40	12	30	14	35	56	35.5	
	25,000-35,000	07	18	08	20	07	18	05	12	27	17.0	
	More than Rs.35,000	06	15	04	10	07	17	03	08	20	12.0	
All sample		40	100	40	100	40	100	40	100	160	100	1% Level of Significance

Source: Primary Data

RELIABILITY TEST

The present study checked the reliability on all items with the help of Cronbach's Alpha reliability test. This test represents internal consistency on all items.

TABLE-2 RELIABILITY TEST

Variables	Cronbach's Alpha
Responsiveness towards customers	.89
Deposits accepting services	.75
Loan granting services	.80
Accessible E- Banking services	.83
Statement Facility	.67
Response for complain	.78

Table 2, shows the reliability test with all values greater than threshold of 0.60. Hence it can be conclude that the items reliably measure the defined constructs.

COMPARISON BETWEEN PUBLIC AND PRIVATE SECTOR BANKS SHOWING THE EFFECT OF BANKING SERVICES ON CUSTOMER SATISFACTION

As the descriptive statistics in table 3 shows a significant difference between public and private banks in all the variables, it was decided to examine whether the differences are significant or not. For this purpose independent sample t-test was applied.

TABLE 3: T-TEST SHOWING THE EFFECT OF BANKING SERVICES ON CUSTOMER SATISFACTION

Variables	Mean		Standard Deviation		t-value
	Pub Sector	Pvt. Sector	Pub Sector	Pvt. Sector	
Responsiveness towards customers	25.98	27.15	2.89	3.51	2.20
Deposits accepting services	31.01	33.01	4.69	4.55	0.958
Loan granting services	24.91	26.18	4.02	4.75	2.224
Accessible E- Banking services	20.13	23.56	2.83	3.45	-0.750
Statement Facility	31.85	33.85	2.29	4.57	-2.230
Response for complain	26.09	28.60	2.89	4.60	0.720

Table 3 shows there is significant relationship between all the variables and the ownership of bank. Table 3 shows that private sector banks are providing better services to customer in terms of services provided by bank's employees as well relationship with managers. It also shows that private sector banks are providing better Electronic facilities as compared to public sector banks. However some banks like in private sector are providing it in a very efficient way while others are making efforts to adopt it. Table 3 shows that customers are more satisfied with private sector banks as compared to public sector banks when it comes to solve the complains. Hence it can be concluded that customer satisfaction is higher in private banks than in public banks.

CORRELATION AMONG ATTRIBUTES SELECTED FOR MEASURING CUSTOMER SATISFACTION

Table 4 shows correlation of attributes viz. Responsiveness towards customers, Deposits accepting services, Loan granting services, Accessible E- Banking services ,Statement Facility, Response for complain for measuring customer satisfaction.

TABLE 4: CORRELATION OF ATTRIBUTES SELECTED FOR MEASURING CUSTOMER SATISFACTION

	Responsiveness towards customers	Deposits accepting services	Loan granting services	Accessible E- Banking services	Statement Facility	Response for complain
Responsiveness towards customers	1					
Deposits accepting services,	.759	1				
Loan granting services	.699	.799	1			
Accessible E- Banking services	.370	.640	.475	1		
Statement Facility	.192	.240	.287	.146	1	
Response for complain	.489	.536	.581	.273	.503	1

Table 4 shows that all the attributes are correlated.

CONCLUSION

Satisfaction is the sum total of customer's expressions of service quality and depends upon customer's own perceptions and expectations. Service Satisfaction of the customers is a most valuable asset for the modern organizations, providing unmatched competitive edge. It helps in building long term relationship as well as brand equity. Anderson and colleagues (1994, found out those firms with higher reported satisfaction levels also show significantly higher returns. They say that an annual 1% increase in customer satisfaction is worth an 11.4% improvement in current return on investment. From the present study it is revealed that majority of the respondents were not satisfied with employees behavior in PNB and Oriental Bank of Commerce. On the contrary, majority of customer's were satisfied with employee's behavior in private sector banks. Training on stress management and public dealing should be imparted to the employees of nationalized banks. Nationalized banks need to improve their infrastructure and ambience to compete with private banks in India. Branches of private banks should be increased for easy accessibility.

LIMITATIONS OF THE RESEARCH STUDY

There is no research study without limitations. There are a few limitations in the present study i.e. "A Comparative Study on customer satisfaction with service quality in Public and Private Sector Banks". These limitations are discussed as follows:
1. This study is geographically restricted to Ambala District only. Limited numbers of banks (only two Public sector and two Private sector banks) were covered under the study.
2. The sample of the study consisted of only 160 respondents due to time constraints.
3. The sample size do not ensure representative and conclusive finding and finally, a more robust analysis is needed to reach a strong conclusion.

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EMOTIONAL INTELLIGENCE (EI): AN IMPERATIVE SKILL FOR MANAGERS IN THE GLOBAL WORKPLACE

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ABSTRACT

In the present millennium, organisations are going global and companies need managers who can work in a multicultural environment, is aware of the global issues and recognise the need for a diverse workforce to gain a competitive advantage in their global operations. In a globalised setting to outperform and emerge successful, firms need emotionally equipped employees who do not panic or overreact during tough situations but change with the 'changes' in the workplace. The greatest challenge in the global work settings is managing the intellectual capital of the firm. Organizations need to develop a culture that focus on awareness of this challenge and help employees find a deeper meaning and bonding in their work lives .Hence managers of today need to develop not only their core competencies &task oriented skills but their emotional intelligence skills too . They have to manage the emotional climate of their organisation with the same proficiency as they manage their tasks and resources. Hence the need of the hour is to develop a breed of managers who are emotionally competent, who are masters their own emotions and is able to connect themselves to others by considering the emotional elements of decision making and maintaining constructive relationships . Self awareness, self regulation, motivation, empathy and social skills are the basic building blocks of emotional intelligence. Using EI managers can create a link between the top management and his followers through shared understanding and thereby achieve the organisational objectives. This paper discusses the importance of EI skills in workplace in a globalised setting and the imperative of developing those skills for managers. Finally it also discuss how EI skills can be developed by creating an enabling climate in the organisation and imparting EI capability training to managers

KEYWORDS
Emotional Intelligence, Managerial Skills.

INTRODUCTION

rganisations in the present millennium are reaching out for global customers and facing global competition and therefore companies now need managers with a 'global' mindset. Firms need managers who can work in a multicultural environment, is aware of the global issues and recognise the need for a diverse workforce to gain a competitive advantage in their global operations. To outperform and emerge successful, in a globalised setting, firms need emotionally equipped managers who do not panic or overreact during turbulent times but change with the 'changes' in the workplace. It is opined that the greatest challenge in the global work places is managing the intellectual capital of the firm. There is indeed a greater need for organizations to develop a culture that focus on awareness of this challenge and help the managers who lead and the employees, to find a deeper meaning and bonding in their work lives .Hence managers of today need to develop not only their core competencies & task oriented skills but their emotional intelligence skills too .They have to manage the emotional climate of their organisation with the same proficiency as they manage their tasks and resources. Hence the need of the hour is to develop a breed of managers who are emotionally competent, who are masters of their own emotions and is able to connect themselves to others by considering the emotional elements of decision making and maintaining constructive relationships at their workplaces. Mintzberg in his managerial roles approach theorised ten different roles played by a manager in any organisation. According to him a manger has to play the role of a leader, figurehead, liasoner, disseminator, spokes person disturbance handler, entrepreneur, resource person, negotiator and one who monitors. So when managers are expected to take such multiple roles within their work places, they have to develop their emotional competencies. Using EI, managers can perform these multiple roles much more efficiently and also create a link between the top management and his followers through shared understanding and thereby achieve the organisational objectives.

There has been innumerable research evidence over the years to prove that emotional intelligence at workplace is necessary for better job performance, team orientation, to develop interpersonal skills, for effective leadership etc. David Mc Clelland has said that to assess performance one should assess *"competence rather than intelligence"*. Other researchers too have supported this view (Spencer & Spencer, 1993), (Parry, 1998). Apart from job specific knowledge and skills, to be a performer and scale up his performance as a manager one needs knowledge about self but also knowledge on how to use that knowledge and apply those skills. EI helps in self monitoring of emotions and understand others feelings which help the individual to take informed effective decisions in a given situation (Goleman,1995,Salovey & Mayer 1990,Cooper 1997,Morris & Feldman,1996,Singh 1998) all have acknowledged this viewpoint in their research findings.

EI is becoming crucial today in global organisations in the context of an individual's role in the organisational context too. Nowadays firms are getting flatter and flexibility is what the organisations are looking for, also the span of control are being larger and managing relationships between the members and the leader is even more challenging. There is a shift now to facilitation –based empowering relationships rather than operating on a control basis. Also the task structure and reward mechanisms are more team oriented which require more accommodating and emotionally intelligent behaviour to be adopted to achieve both individual and organisational goals. Managing negative emotions, frustration and depression and maintaining healthy relationships with peers play a vital role in projecting a positive attitude towards work. Often managers who fail are those who are rigid and maintain poor relationships. They are unable to adapt themselves to changing workplace demands, organisational culture and technology. In global firms the workplace motivation of the employees also has changed. Hence to emerge successful managers need to pay attention to the emotional elements of decision making and leadership. Since a manager interacts with lot of people at the operational level, their interaction pattern, leadership style and communication skills affect the interacting individual employee's motivational needs. The employee's motivation, satisfaction and retention are therefore related to the manager's interaction with them; hence the managers have to play a dual role of both, a nurturing boss and that of a task oriented manager. This demands a high degree of emotional intelligence to remain calm and cool and control their emotions at trying situations with their follower as well as the leaders as the situation is. There is a saying in this regard that *"the effectiveness of a decision is directly related to its acceptance by others"*. Managers should learn to manage the emotional climate of the organisation with great proficiency as they are in getting the tasks done by others.

In this scenario, the construct of EI becomes even more important as it relates to motivation, adeptness in relationships and self regulation of emotions. Managers with high EI are able to create and maintain a competitive advantage by superior performance, enhanced innovation effective use of time and resources, restored trust, teamwork and motivation (Goleman, 2000).

THE EMOTIONAL INTELLIGENCE (EI) CONSTRUCT

Daniel Goleman (1998) defines emotional Intelligence as "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships. Emotional intelligence describes abilities distinct from, but complementary to, academic intelligence". Mayer & Salovey (1993) defines Emotional intelligence as the ability of a person to manage and monitor one's own emotions, recognise the emotions in others and manage this knowledge of self and others in their relationships and use this information for effective decision making.

Self awareness, self regulation, motivation, empathy and social skills are the basic building blocks of emotional intelligence. Goleman, Boyatzis, and McKee, among others, have researched the ''competencies'' of the four EI domains of self-awareness, self-management, social awareness, and relationship management and they claim to have identified 20 competencies or ''capabilities'' (Figure no: 1). The first component self awareness is described as an ability to be aware of one's own emotions and to be able to express one's emotional needs. Self management refers to one's ability to distinguish among different emotions they may be feeling and prioritize those that are influencing their thought processes .The third component – social awareness, is the ability to understand complex emotions such as simultaneous feelings of loyalty and betrayal. The ability to distinguish the emotions that emerge from perceptions is important in overcoming negative responses to emotions. This also includes the ability to understand other's emotional expressions and behaviours. Lastly, the social skills are the ability to connect or disconnect from an emotion, depending on its usefulness in any given situation. The last component is actually a natural expression of the other three components. Proficiency in building relationships and networking and maintaining rapport is important here .This also includes efficient leading, initiating change, communicating, persuading, expertise building, influencing and managing conflicts constructively.

FIGURE NO.: 1

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The relevance of EI on human behaviour has been researched decades ago. Many scholars have theorised the relationship of Ei with the success of ana individual in work and personal life. However the relevance of the same in the context of the workplace, has gained significant interest Goleman's main premise is that EI predicts life success. The construct has gained further momentum within organisations, with global organisations no longer being seen as "emotion-free" zones. Emotional Intelligence is now being considered to be important in organisational factors (See Figure no:2) such as organisational change (Ferres & Connell, 2004; Singh, 2003); leadership (Ashkanasy, 2002; Dearborn, 2002; Gardner & Stough, 2002; Weymes, 2002); management performance (Slaski & Cartwright, 2002); perceiving occupational stress (Nicklaou & Tsaousis, 2002; Oginska-Bulik, 2005); and life satisfaction (Palmer,Donaldson & Stough, 2002).

FIGURE 2: A MODEL OF THE EI COMPETENCIES TO ORGANISATIONAL
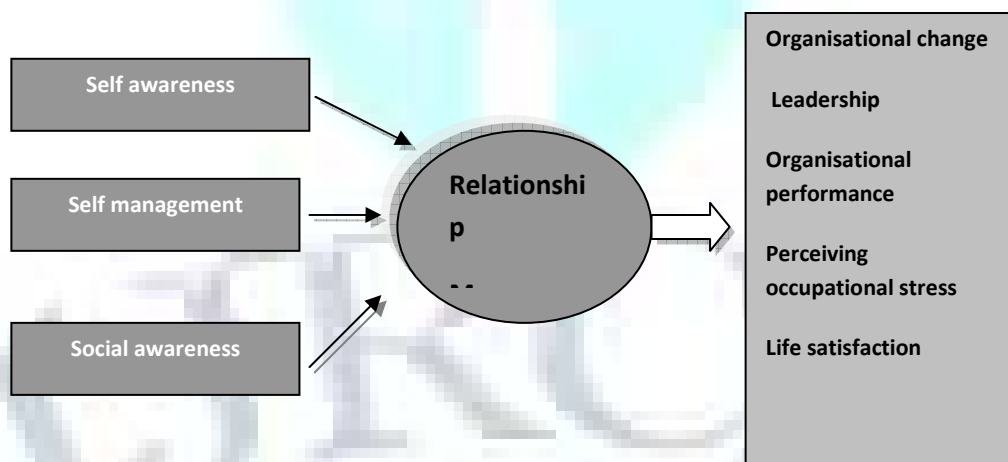
DEVELOPING EMOTIONAL INTELLIGENCE

According to UCLA research, just 7% of leadership success is due to intellect. The rest results from trust, integrity, authenticity, honesty, creativity, presence, and resilience all a part of emotional intelligence. The Center for Creative Leadership found that when careers of leaders get derailed, the most common reason (75%) is that people lack crucial emotional competencies they can't deal effectively with interpersonal problems, they can't guide teams through conflicts and other turbulence, and they can't adapt to change or gain trust. There are numerous studies like these which support the view that emotional competencies need to be developed. It is said that Unlike IQ, EQ can be developed in an individual. One can upgrade your emotional skills at any stage of your life. In fact, age and maturity are positively correlated with the EQ. Same is not true with the case of IQ which is more or less static.

Baron (2000) in his study mentions that EQ is generally seen to be on the higher side for older employees as EQ can be developed with life experience over a period of time. How ever if the EQ is not very high, we cannot generalise that EQ will develop with maturity, unless a sustained effort and attention is given by the employees in developing the four competencies of emotional intelligence. The development of self, social and emotional competencies calls for a lot of persistence, commitment and sustained effort, from the part of the employee. (Cherniss & Adler, 2000; Cherniss & Goleman, 2001; Cherniss, Goleman, Emmerling,Cowan and Adler, 1998; Goleman, 1998; Goleman, Boyatzis, & McKee, 2002). A wide range of findings from the fields of psychotherapy (Barlow, 1985); training programs (Marrow, Jarrett, Rupinski, 1981) and executive education (Boyatzis, Cowen, & Kolb, 1995) all provide evidence for people's ability to improve their social and emotional competence with sustained effort and a systematic program. In addition, new findings in the emerging field of affective neuroscience have begun to demonstrate that the brain circuitry of emotion exhibits a fair degree of plasticity, even in adulthood (Davidson, Jackson, & Kalin, 2000). A recent research on "mindfulness" training-an emotional self-regulation strategy-has also shown that training can actually alter the brain centers that regulate negative and positive emotions. Mindfulness training focuses on helping people to better stay focused on the present, thus keeping distressful and distracting thoughts (e.g. worries) at bay, and to pause before acting on emotional impulse. (Boyatzis, Cowan, & Kolb, 1995) in their work reiterates that EI competencies can be developed with an intensive individualised competence building plan. On a personal level too EI competencies can be developed by assessing oneself first and reflecting about oneself and regulating ones positive and negative emotions.

There is a considerable body of research suggesting that a person's ability to perceive, identify, and manage emotion provides the basis for the kinds of social and emotional competencies that are important for success in almost any job. As the pace of change is getting faster day by day and the nature of work beckons greater demands on a person's cognitive, emotional, and physical resources, this particular set of abilities will become increasingly important for the managers in workplaces that meet global standards .Hence it is imperative that organisations try to allocate resources and time for increasing the emotional intelligence of managers. Organisations by introducing capability development training in this domain will ultimately develop a breed of committed emotionally intelligent employees. To conclude it is not lack of managerial prowess alone , but the complexity of individual situations that makes a managers job more challenging and to grapple with these challenges ,EI becomes paramount in today' workplaces .

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