# INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

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**INTRODUCTION**

**REVIEW OF LITERATURE**

**NEED/IMPORTANCE OF THE STUDY**

**STATEMENT OF THE PROBLEM**

**OBJECTIVES**

**HYPOTHESIS (ES)**

**RESEARCH METHODOLOGY**

**RESULTS & DISCUSSION**

**FINDINGS**

**RECOMMENDATIONS/SUGGESTIONS**

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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.

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- 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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**CONFERENCE PAPERS**

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

**UNPUBLISHED DISSERTATIONS**

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

**ONLINE RESOURCES**

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

**WEBSITES**

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

# WORKERS PARTICIPATION IN MANAGEMENT

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## ABSTRACT

*Worker's participation is a system where workers and management share important information with each other and participate in decision taking. It is viewed as industrial democracy based on the principles of equity, equality, and voluntarism. It is right to the worker representatives to criticize and offer constructive suggestions for better management. In the words of mantras, the concept of workers participation is, "a principle of democratic administration of industry, sharing the decision making power by the ranks of an industrial organization, through their proper representatives, at all appropriate levels of management, in the entire range of managerial action." The worker participation brings a sense of belongingness among them. They become a part and parcel of the organization and try to contribute maximum to it. Schemes of workers participation in management among other measures of industrial are expected to democratize the industrial milieu, and ensure egalitarianism in the process. This paper explores about workers participation in management aspects include: perception regarding organization conducting training programmes, perception of functioning of the management in participatory machineries and employees for their participation in managerial decision making.*

## KEYWORDS
workers, workers participation.

## I. INTRODUCTION

The concept of worker participation represents a popular theme in the analysis of the world of work among scholars in the fields of Industrial Sociology, Industrial Relations as well as management. It refers to any arrangement which is designed to involve low cadre employees (workers) in the important decision making within the workplace. This implies that rather than saddling only a group within the enterprise (for instance, management) with the responsibility of making decisions, all those who are to be affected by these decisions (including the workers) would be involved in its formulation and implementation.

Workers' Participation in Management John Leitch has defined Industrial Democracy as "the organization of any factory or other business institution into a little democratic state with a representative government which shall have both the legislative and executive phases". In the same manner as political democracy has converted subjects into citizens, with right of self-determination and self-government, industrial democracy converts the workers from the mere subjects obeying the orders of the employers, into citizens of the industrial world, with a right to self-determination and self-government, that is, representative participation in making rules and enforcing them. This is known as Workers' Participation in Management. Workers' participation in management means giving scope for workers to influence the managerial decision-making process at different levels by various forms in the organisation. The principal forms of workers' participation are information sharing, joint consultation, suggestion schemes, etc.

In recent time, scholars have directed increasing attention to the issue of worker participation and its broader corollary, industrial democracy (Mankidy, 1984: Yesufu, 1984, Adewumi 1989; Verma and Syha; 1991, Weller 1993; Kester and Pinaud, 1996; Adu-Amankwah, K. and Kester, G. 1999). These concerns reflect a growing interest in finding ways to make work more meaningful and satisfying to the workers. This rest on the belief that the organizational goals of high productivity and harmonious industrial relations are best achieved when the higher level needs of the human elements (workers) are satisfied.

Worker participation implies arrangements designed to involve workers in the enterprises decision making process. This allows for workers' involvement in the initiation, formulation and implementation of decisions within the enterprise. The concept can also be understood in terms of a new approach to industry and society in which people want to be interested with the taking of decisions which have direct bearing on them. In the words of G.D.H Cole, "better participation and greater responsibility in decision- making process on the part of general workers would perhaps tend to develop in them organization loyalty, confidence, trust, favorable attitude towards supervisors, a sense of involvement in the organization.

Macgregor (1960) contend that worker participation consists basically in creating opportunity under suitable conditions for people to influence decisions which affect them. It is a special case of delegation in which the subordinate gain greater control, greater freedom of choice with respect to bridging the communication gap between the management and the workers. This serves to create a sense of belonging among the workers as well as a conducive environment in which both the workers would voluntarily contribute to healthy industrial relations. According to the international institute for labor studies defined as "WPM is the

participation resulting from practices which increase the scope for employee's share of influence in decision-making at different tiers of organizational hierarchy with concomitant assumption of responsibility. Acc to Davis defined as "It is a mental and emotional involvement of a person in a group situation which encourages him to contribute to goals and share responsibilities in them"

## II. NEED FOR THE STUDY

To know the importance of participative management to resolve industrial disputes and increasing production simultaneously, to know the mutual cooperation of employees in achieving industrial peace, greater efficiency and productivity in the interest of the enterprise, the workers, the consumers and the nation. Further to know how trade unions cooperating with the empowered employees in managerial decision making. And to investigate the implications of workers participation in to the worker and their organization.

## III. OBJECTIVES OF THE STUDY

The central objective of the paper is to determine the level of worker participation in management decision making in the specific objective are to ascertain workers level of involvement in the decision making process of their work places, to establish the general attitude of workers towards worker participation in management decision making, to determine factors which aid or hinder the observed level of participation, to investigate the implications of worker participation to worker and their organizations. Further to propose suggestions to overcome the encountered lapses, to know the importance of participative management to improve quality of managerial decisions and team work, and to determine factors which aid or hinder the observed level of participation.

## IV. SCOPE OF THE STUDY

One view is that workers or the trade unions should, as equal partners, sit with the management and make joint managerial decisions. The other view is that workers should only be given an opportunity, through their representatives, to influence managerial decisions at various levels.

## V. METHODOLOGY

The study adopted the case study approach for the purpose of conducting an empirical investigation to the issue of worker participation in management decision making in BHEL work environment. The study was conducted between the months of april and may. Main data were collected both through the primary and secondary sources. Primary sources of data were derived from the questionnaire and in-depth interview from employees of all departments in BHEL like HR, finance, production, and sales & marketing. Secondary sources were got from company records, bulletins and other official documents. The adoption of these tools helped to collect both quantitative and qualitative data. The questionnaire was in three sections – the first contained questions on respondents personal data, the second on the level of worker participation while the third is on worker participation structures. A sample of 50 employees out of 100 has been chosen for the study**.** Simple random sampling technique is used to select the sample for conducting the study.

## VI. ANALYSIS & RESULTS
**CHI SQUARE AND TESTS OF CONTIGENCY OBSERVED**

**TABLE 1.1**

| PARTICULARS | EFFECTIVE | INEFFECTIVE | TOTAL |
|---|---|---|---|
| Executives | 40 | 5 | 45 |
| Non Executives | 5 | 0 | 5 |
| Total | 45 | 5 | N=50 |

- **H0:** There is no significant difference between executives and non executives on perception of functioning of the management in participatory machineries
- **H1:** There is significant difference between executives and non executives on perception of functioning of the management in participatory machineries

**CALCULATIONS**

Excepted values can be calculated by using the following formula
Excepted cell frequency = (row total * column total)/ N

**EXPECTED**

**TABLE 1.2**

| PARTICULARS | EFFECIVE | INEFFECTIVE |
|---|---|---|
| Executives | 40.5 | 4.5 |
| Non Executives | 4.5 | 0.5 |

Chi-square $X^2 = (O-E)^2/E$

**TABLE 1.3**

| PARTICULARS | EFFECTIVE | INEFFECTIVE |
|---|---|---|
| Executives | 6.172 | 0.055 |
| Non Executives | 0.055 | 0.5 |

$X^2$ total = 6.172+0.055+0.055 +0.5 = 6.782
The Degree of freedom in the chi square is computed by multiplying one minus the number of rows times and one minus the number of columns. The procedure is represented below:-
D f = (Rows-1) * (columns-1)
 = (2 - 1) * (2 - 1)
 = 1df
The critical or tabulated values of chi square distribution can be estimated from the chi square table were,
At df = 1,
a) Level of significance =95% then $X^2$ = 3.841
b) Level of significance = 99% then X2 = 6.635

**INTERPRETATION OF CHI**

- Null hypothesis: Since, the $X^2$ calculated is less than $X^2$ tabulated at 95% therefore the null hypothesis is accepted hence it is not significant accepted. Hence there is no significant difference between executives and non executives on the perception of functioning of the management in participatory machineries.
- Alternative Hypothesis: Since, the $X^2$ calculated is greater than $X^2$ tabulated at 99% therefore the null hypothesis is rejected hence it is alternative hypothesis is accepted.Hence there is significant difference between executives and non executives on the perception of functioning of the management in participatory machineries

**CHI SQUARE AND TESTS OF CONTIGENCY OBSERVED**

**TABLE 2.1**

| PARTICULARS | EFFECTIVE | INEFFECTIVE | TOTAL |
|---|---|---|---|
| Executives | 43 | 4 | 47 |
| Non Executives | 3 | 0 | 3 |
| Total | 46 | 4 | N=50 |

- **H0:** There is no significant difference between executives and non executives on perception regarding organization conducting training programmes
- **H1:** There is significant difference between executives and non executives on perception regarding organization conducting training programmes

**CALCULATIONS**

Excepted values can be calculated by using the following formula:

Excepted cell frequenc

y = (row total * column total)/ N

**EXPECTED**

**TABLE 2.2**

| PARTICULARS | EFFECTIVE | INEFFECTIVE |
|---|---|---|
| Executives | 43.24 | 3.76 |
| Non Executives | 2.76 | 0.24 |

Chi-square $X^2=(O-E)^2/E$

**TABLE 2.3**

| PARTICULARS | EFFECTIVE | INEFFECTIVE |
|---|---|---|
| Executives | 1.332 | 0.0153 |
| Non Executives | 0.020 | 1 |

$X^2$ total = 1.332+0.020+0.0153+1= 2.36

The Degree of freedom in the chi square is computed by multiplying one minus the number of rows times and one minus the number of columns. The procedure is represented below:-

D f = (Rows-1) * (columns-1)

 = (2 - 1) * (2 - 1)

 = 1df

The critical or tabulated values of chi square distribution can be estimated from the chi square table were,

At df = 1,

a) Level of significance =95% then $X^2$ = 3.841

b) Level of significance = 99% then X2 = 6.635

**INTERPRETATION OF CHI**

- Since, the $X^2$ calculated is less than $X^2$ tabulated at 95% and 99% therefore the null hypothesis is accepted hence it is not significant. Therefore the null hypothesis is accepted.Hence there is no significant difference between executives and non executives on the perception of regarding organization conducting training programmes

**CHI SQUARE AND TESTS OF CONTIGENCY OBSERVED**

**TABLE 3.1**

| PARTICULARS | EFFECTIVE | INEFFECTIVE | TOTAL |
|---|---|---|---|
| Executives | 45 | 3 | 48 |
| Non Executives | 2 | 0 | 2 |
| Total | 47 | 3 | N=50 |

- **H0:** There is no significant difference between executives and non executives on perception of trade unions which is necessary to empowered employees for their participation in managerial decision making
- **H1:** There is significant difference between executives and non executives on perception of trade unions which is necessary to empowered employees for their participation in managerial decision making**.**

**CALCULATIONS**

Excepted values can be calculated by using the following formula:

Excepted cell frequency = (row total * column total)/ N

**EXPECTED**

**TABLE 3.2**

| PARTICULARS | EFFECTIVE | INEFFECTIVE |
|---|---|---|
| Executives | 45.12 | 3 |
| Non Executives | 1.88 | 0 |

Chi-square $X^2=(O-E)^2/E$

**TABLE 3.3**

| Particulars | EFFECTIVE | INEFFECTIVE |
|---|---|---|
| Executives | 3.19 | 0 |
| Non Executives | 7.65 | 0 |

$X^2$ total = 3.19+7.65+0 +0 = 10.84

The Degree of freedom in the chi square is computed by multiplying one minus the number of rows times and one minus the number of columns. The procedure is represented below:-

D f = (Rows-1) * (columns-1)

 = (2 - 1) * (2 - 1)

 = 1df

The critical or tabulated values of chi square distribution can be estimated from the chi square table were,

At df = 1,

a) Level of significance =95% then $X^2$ = 3.841

b) Level of significance = 99% then X2 = 6.635

**INTERPRETATION OF CHI**

- Since, the $X^2$ calculated is greater than $X^2$ tabulated at 95% and 99% therefore the null hypothesis is rejected. Therefore the alternative hypothesis is accepted. Hence there is significant difference between executives and non executives on the perception of trade unions which is necessary to empowered employees for their participation in managerial decision making.

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## VII. FINDINGS & SUGGESTIONS

Most of the employees felt that there is a great extent of co-operation from their management to participate in managerial decision-making. Most of the employees at BHEL are satisfied with the functioning of management in existing participatory machineries. The employees are being treated with respect at their work place. Also the decisions taken by the company are well communicated among all of them. Participative management at BHEL is helpful in peaceful settlement of industrial disputes. There is a strong support of trade unions towards the employees to protect their interests. The management has brought changes in employee's broad outlook in life, their seniority and recognition levels as a part of their personal development and lifestyle.

Apart from co-operation from the management, providing incentives will also help in getting more participation from the employees. The management should more on employee career development programmes, which can generate an idea of equality, security and future development among the employees. This in turn results in developing high morale among employees. It can be suggested to motivate the employees who will stay back with the company and remove their apprehensive and fear. The management should develop interest among the employees to get involved in the participatory machineries. The employees should be more educated of the existing participatory machineries, so that their participation can be enhanced.

## VIII. CONCLUSIONS

BHEL is using only few methods like workers committees (safety, canteens), collective bargaining and joint management councils of participative management instead of using all participative methods. Employees at BHEL are participating only in two stages. They are information sharing and consultation or mutual discussion. Managerial approach to enable employees in decision making and employee's involvement in formulating future strategies is found to be moderate. Consultation is the more existing degree of participation at BHEL rather than communication and code determination. BHEL is applying only two ways (Decision-Making, initiative in organizational interest) of encouraging participation of employees for their effective and efficient functioning.

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# KNOWLEDGE MANAGEMENT STRATEGIES FOR ACHIEVING QUALITY STANDARDS IN EDUCATIONAL INSTITUTIONS

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ANAKAPALLI

## ABSTRACT

With the size and complexity of Indian population, it is a challenge for Educational Institutions to maintain Quality and competitiveness. The everchanging Global Educational Scenario in the 21st century is characterized by Innovative learning methodologies and state of the art infrastructure development, to facilitate various modes of learning. In the present context Knowledge Management strategies play a vital role in facilitating Quality achievement in Educational Institutions. The article investigates the impact of Knowledge management strategies in achieving Quality in Educational Institutions. Exploratory Factor Analysis is used to verify the Constructs and their reliability in achieving Quality standards in Higher Educational Institutions. The findings of the study have further contributed to the Literature in the area of knowledge management strategies and its application in the area of Educational Institutions.

## KEYWORDS

knowledge management strategies, educational institutions, quality, innovative learning tools, competitiveness.

## INTRODUCTION

In the 21st Century Educational Institutions in India have undergone unprecedented technological changes in the quest for achieving competitiveness. Knowledge Management in Educational Institutions is all set to become a critical success factor in day to day Academic activities viz planning, implementation and evaluation. Knowledge Management is unique in its importance and plays a vital role in disseminating value based information in Educational Institutions. Unlike other forms of Assets viz Man, Machine, Money, Materials, Knowledge Management cannot be copied, transferred or sold to other parties. Faculty play a prominent role in implementation of Knowledge management Strategies for achieving Quality in Educational Institutions. Therefore, the prime objective of Management is to facilitate the process of knowledge acquisition, retention and Integration of Knowledge management to achieve Quality.

Knowledge Management is a process oriented strategy which acquires, organizes, transfers knowledge management initiatives among various levels in Educational Institutions. Knowledge Management do consists of Work culture and values at work place [8]. In the process of enhancing the Quality and Values in Educational Institutions,Knowledge management strategies play a prominent role in implementation and evaluation[10].

## QUALITY DEFINED IN EDUCATIONAL INSTITUTIONS

The definition of quality teaching depends on the meaning of "quality", a multi-layered and complex word. As Chen (2009) points out, "quality" can be defined as an outcome, a property, or a process. Therefore it is hardly surprising that the phrase "quality teaching" has been given several definitions. The review of literature showed that there are many ways to define quality in higher education because definitions of quality are "stakeholder relative" (Dimovski, V. et al.,2008).

Lee (2005) also found that all stakeholders held their own view of what quality in education means to them. Some scholars define quality in higher education as the process of quality enhancement. Lee (2004) argues that quality in higher education, and quality teaching in particular, springs from a never-ending process of reduction and elimination of defects.

The Quality Procedures and Standards in Universities and Higher Educational Institutions (HEI's) in India are frequently assessed by National Assessment and Accreditation Council (NAAC), a statutory council which operates under the directions of UGC (University Grants Commission). The Process of Accreditation and Assessment in a time bound manner is a challenge for the Council to assess the various Qualitative processes and procedures practiced by Institutions. The Peer Team which visits Higher Educational Institutes (HEI) takes into account various Educational Systems and Protocols which are being thoroughly implemented. Finally the NAAC team awards grading to the Institutions with a detailed report on Educational Qualitiative Analysis and Standards for the Institutions to adhere in future course of time.

The Universities and Higher Educational Institutions (HEI) offering Professional and Technical Education are regulated by All India Council of Technical Education (AICTE) a statutory body formed to maintain Quality standards and regulations. National Board of Accreditation (NBA) plays a pivotal role in Accreditation of Technical and Professional Educational programs with focus on International modern innovative methods of teaching. The Board after periodic inspections of the Institutions suggests various Qualitative ways and means of Program identity and recognition on par with international standards and procedures. The Board further facilitates Transnational Recognition of Degrees and Programs, choice based Credit transfer (CBCT) System among the Accredidated Universities and Higher Educational Institutions. It plays a prominent role in mobility of young Graduates and Professionals across the Globe on par with International Standards and Agreements in Higher Education.

## LITERATURE REVIEW

Robinson, H. S. et al. (2006) identified Knowledge management for any type of Organization based on Knowledge gathering from their own experience and colleagues from process failures and success. As per Martin, V. A. et al. (2005) Knowledge management is an art and science of involved in the conversion of Experiences to Intellectual capital enduring values of stakeholders. According to Artail, H. A. (2006). Knowledge management is a process in organization which formulates and recognizes knowledge transformation within the Organization.

Greiner (2007) defines knowledge management as a process for capturing, deseminating knowledge base effective within the Organization. Williams (1994) information technology, human resources management, leadership, Organization learning, Organization culture, Organization structure and Organization strategy can be developed through Knowledge management. As per Marsh H.W (1985) Culture, Leadership, process, explicit, tacit, hub, market, measure, skill and infrastructure can be enhanced through knowledge management.

During the last decade many Academicians and Practitioners have contributed to the field of Knowledge Management Strategies and Institutional Performance. Perez, L. S. et al. (2004). show that combining the tactic-internal-oriented and explicit-external-oriented Knowledge management strategies implies synergistic effects on Institutional performance. The results of the study conducted by Zheng et al.(2009) shows that Knowledge management mediates the impact of organizational structure and design on Institutional effectiveness. Researchers do often articulate the positive effect of Knowledge management strategies on Institutional performance and Quality standards achievement. Empirical research proving the relationship between Knowledge management strategies and Institutional performance are less focus oriented. With this background to reduce the Gap and contribute to the domain of Knowledge management, the present article examines knowledge management strategies role in achieving Quality at Institutional level.

The paper is divided into five stages. First the Introduction and Theoretical background on Knowledge management strategies is discussed. Second, the Literature review related to the concepts and elements of Knowledge management strategies are highlighted. Third a relevant Hypothesis Model is developed related to the thematic area of the study. Fourth, the research methodology and data analysis is carried out with focus on the Questionnaire developed for the study and Fifth, finally the Conclusion and directions for Future Research are outlined.

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## FORMULATION OF RESEARCH HYPOTHESIS

The Literature review on Knowledge Management strategies and experiences from empirical research establishes a strong link between Organizaiton elements viz: information technology, organization culture, collaborative learning and its influence on achieving Quality in Educational institutions. The aim of the article is to investigate the role of knowledge management strategies in achieving quality at various levels in Educational Institutions. The findings from the Literature review and assumptions may be structured in the form of Hypothesis to be examined in the present article.

The linkage between knowledge management strategies and Information Technology was researched in the past and the results show considerable usage of I.T tools leads to better Knowledge creation process Kulkarni, U. & St Louis. R. (2003 ). The extensive use of I.T infrastructure and communication technologies leads to Quality achievement in Educational Institutions Artail, H. A. (2006).

Ha1: Knowledge management strategies have positive effect on achieving Quality standards in Educational Institutions

Ho1: Knowledge management strategies have no effect on achieving Quality standards in Educational Institutions.

## RESEARCH MODEL
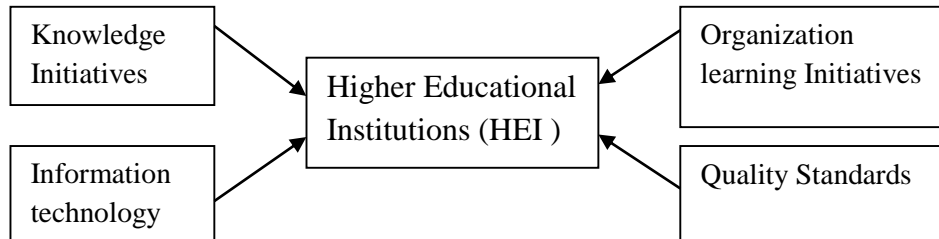


## RESEARCH METHODOLOGY

To test the formulated Hypothesis, an empirical research was conducted with the help of Questionnaire. The Questionnaire consists of 25 questions which are divided into three areas viz: Knowledge, Information Technology, Organization Learning elements and Quality Standards. The Questionnaire is further tested and validated with the help of a Panel who are subject experts in the area of Knowledge management practices and Education Management systems certification[21]. A five point Likert scale is used to further anlayse the respondents response to the Questions

The drafted Questionnaire is sent to 500 faculty members working in various Educational Institutions in Coastal Andhra region. With subsequent follow up, 150 filled in questionnaires were received from the respective Educational Institutions. The response rate is around 30% which is a valid response rate [24]

The present model was empirically tested through Structural equation modeling on a valid sample of 150 faculty members working in various Educational Institutions around Coastal Andhra Region.

The four Constructs which are formed as part of Research are First, Information Technology which determines the extent of I.T applications use, the benefits derived out of implementing Information technology and achievement of Quality in Educational Institutions. Second Organization Learning Initiatives which include Innovative learning mechanisms, collaborative learning and intra-knowledge transfer among the Faculty. Third Knowledge Initiatives which covers knowledge accumulation, depository, utilization, knowledge sharing practices and recognition. Fourth Quality is defined as Construct which is composed of Quality teaching, elimination of defects, practical reforms, Certification and Accreditation

Exploratory Factor Analysis (SPSS 16.0) is used to verify the Construct validity and reliability in this Model. The Principal Axis factoring extraction method with Varimax rotation is further used to determine validity and reliability of drafted Questionnaire. The results are presented in the following table, whereby factor loadings higher than 0.50 are considered.

## ANALYSIS

**TABLE 1: ROTATED FACTOR MATRIX FOR THE KNOWLEDGE INITIATIVES**

| KI Construct | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| KI1 | | | .584 |
| KI2 | .621 | | |
| KI3 | .650 | | |
| KI4 | | | |
| KI5 | .682 | | |
| KI6 | | | .625 |
| KI7 | .648 | | |
| KI8 | | .725 | |
| KI9 | | .628 | |
| KI10 | | .615 | |
| KI11 | | | .615 |
| KI12 | | | |
| KI13 | | .658 | |
| KI14 | .627 | | .658 |
| KI15 | .682 | | |
| KI16 | | | .618 |

Factors 1 and 3 are combined to articulate the elements of Knowledge Initiatives viz: collaborative learning, peer group learning, inter-active knowledge orientation, Domain area learning initiatives etc.Factor 2 represents the elements of Information technology and Factor 3 represents Quality. Several indicators were eliminated namely (KI4, KI12,KI14) as they did not meet the mimimum criteria and standards required for factor loadings( less than 0.5 or multiplied over several factors) which makes it difficult to differentiate.

Factor loadings higher than 0.50 for the Organizational learning Initiatives (OLI) construct are presented in Table 2

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**TABLE 2: ROTATED FACTOR MATRIX FOR ORGANIZATION LEARNING INITIATIVES(OLI)**

| OLI Construct | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| OLI1 | | | .584 |
| OLI2 | .621 | | |
| OLI3 | .650 | | |
| OLI4 | | | |
| OLI5 | .682 | | |
| OLI6 | | | .625 |
| OLI7 | .648 | | |
| OLI8 | | .725 | |
| OLI9 | | .628 | |
| OLI10 | | .615 | |
| OLI11 | | | .615 |
| OLI12 | | | |
| OLI13 | | .658 | |
| OLI14 | .627 | | .658 |
| OLI15 | .682 | | |
| OLI16 | | | .618 |

Factors 1 and 3 are combined to articulate the elements of Organizational Learning Initiatives viz: e-learning, digital resource labs, Quality circles, Peer Learning groups etc. Factor 2 represents the Quality standards and procedures. Several indicators were eliminated namely (OLI4,OLI2,OLI14) as they did not meet the minimum criteria and standards for factor loadings (less than 0.5 or multiplied over several factors) which is relatively difficult to differentiate.

## DISCUSSION

The prime intention behind the research is to investigate the relationship between Knowledge management strategies and its related effects on achieving Quality standards in Educational Institutions. Many Academicians and Researchers have articulated the positive effect of Knowledge management strategies on achieving Quality Standards but empirically proven research links are very rare in these areas. With this background and research information a new model was developed and tested with practitioners, academicians and Educational consultants.

The result of this Research model is a newly defined Knowledge management Strategic model which consists of four empirically tested constructs viz:Knowledge Initiatives, Information Technology, Orgaization Learning Initiatives and Quality.The Research model proves that the Constructs identified are a valid measure for establishing relationship between Knowledge management strategies and achieving Quality Standards. Empirical Research in these areas are rare which covers detailed aspects of knowledge management strategies and achievement of Quality standards in Educational Institutions.

## SUGGESTIONS FOR FURTHER RESEARCH

The following are the important results of the present Research with suitable implications and suggestions for future research.The present study defines Knowledge Management strategies as an important maturity model which assess the role of Constructs namely Knowledge Initiatives, Information technology and Organizational learning Initiatives in achieving Quality at Educational Institutions. The research proved that Knowledge Initiatives and Organizational Learning Initiatives are very much interlinked with Information technology in implementing knowledge strategies at Educational level. There is always a Change which occurs during the course of Strategies implementation in Educational Institutions. In practice Information technology play a prominent role in overcoming resisting to Change among the Educational framework. Achieving Quality in Educational Institutions will be successful only with conducive Organizational climate, culture and readiness to accept Organization change. It is important to maintain positive Organization learning environment for Trust, Transparency and Technology to reach all the Knowledge areas in Educational Institutions. Educational Institutions are differentiated on the basis of Knowledge Initiatives implementation and measurement of outcome in terms of Knowledge management efficiency (KM). The present Research is conducted primarily to ascertain the three Constructs which play a prominent role in achieving Quality standards at Educational Institutions. The research results clearly exhibit that the selected constructs articulate measurable Quality standards in Educational Institutions. The findings may be used as a Bench mark for achieving Quality standards in Educational Institutions.

## LIMITATIONS AND FURTHER RESEARCH

The study is confined only to a Region which consists of Engineering and Technology colleges in neighbouring districts of Visakhapatnam,Vizianagaram and Srikakulam. The sample size for the Research is taken as 500 and valid sample for the analysis is 150 which is 30% of sample. In comparison the valid sample is small and a larger sample will result in detailed in-depth analysis. The scope of the Research will be enhanced with a larger sample size and distribution of the sample around the region. Further research is possible and thorough investigation needs to be performed to compare the results with various Institutions across India.

## CONCLUSION

The important constructs viz: Knowledge Initiatives, Information technology, Organization learning Initiatives which are selected for the Research are proved to be valid in achieving Quality standards in Educational Institutions. The interlinkage between the Constructs are presented through Hypothesis which is tested and proved through empirical Research. The results of the Research confirm the Hypothesis formulation which states 'Knowledge Management strategies have positive effect on achieving Quality Standards in Educational Institutions '(Ha1). The Organizational elements viz Organization culture, Organization climate, Organization Learning Environment play a prominent role in implementing Quality Initiatives at Educational Institutions. The effects of Information Technology as an important enabler in the process of achieving Quality standards are also confirmed. The findings may be further applied to improve knowledge management strategies in Educational Institutions. The possible strategies include Knowledge mapping, cross-functional working as Teams, formal channels of knowledge sharing and collaboration at work place. Finally we conclude that Knowledge management strategies positively influence the Quality standards in Educational Institutions. The Conclusion may be applied by Managers, Practitioners and Academicians who want to implement and research in allied areas of Knowledge Management and Organization Learning mechanisms.

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# COST MANAGEMENT IN SERVICE INDUSTRY

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## ABSTRACT

*Cost management information is crucial for decision making in any organizational planning, operations and control activities. However, the type of cost information and the format in which it requires varies as per the prevailing situation. Different situations call for use of different types of costs. Cost can vary in different circumstances. Proportion of different cost components, even in similar circumstances, also varies with the scale of operation. This article introduces basic concepts and issues in cost management in managing organizations at different levels. The cost management information, in addition to costing products and services, is useful in planning and controlling the operations and behavior of people. The advanced level involves employing cost information for better operational choices, performance measurement and making long-term strategic decisions in increasing order of sophistication. The article also highlights the issues in costing of services arising out of intangible, inseparable, heterogeneous, and perishable aspects of services.*

## KEYWORDS

cost management in service industry, costing issues in service industry, cost management concepts.

## 1. INTRODUCTION TO COST MANAGEMENT

Cost management to most people is about budgets and financial profits, some may extend cost management to include operations and performance management, while for few cost management encompass wider business ecosystem including strategy and decision making on the premise that nonfinancial activities generate financial results. Traditional cost control systems focuses on cost containment by comparing actual results with that of budgeted targets and then taking remedial actions for the identified variances. Cost management, on the other hand, involves tools and techniques to reduce costs either using cost accounting information or with the help of process improvements that ultimately results in cost reduction. Cost management represents internal environment and cost structure. It involves managing two separate but interrelated issues – cost control and profitability. While profitability is determined by costs and revenues, the control is not only limited to cost but also spread over other nonfinancial areas such as performance management and strategy execution. The numerous costing approaches such as activity based management, bench marking, budgeting, business process reengineering, just in time, target costing, value chain, etc. may be used (Catherine Stenzel, Joe Stenzel, 2003; Colin Drury, 2001).

A strategic approach to cost management requires a broad view to ensure long-term success by way of an assessment of the company's cost position with an investigation of the underlying cost drivers and comparison of company's cost structures with that of competitors. The analysis of cost driver determine cost behaviour of firm's value adding activities that provides basis for working out firm's cost position and how it might be improved. A detailed analysis of the cost position helps not only to identify needs for cost reduction but also to provide ideas on how to realise cost savings. Cost management practices can be applied in delivering strategy. Strategic cost management focuses on using cost data for effective strategy development. Strategic cost management is more about decision making processes and cost structure that facilitate strategy execution with the help of concepts and tools from marketing, finance and economics, etc. All organizational activities involve cost of employing resources, and therefore, cost management – with the strategic emphasis – is the about using of costing information for optimum utilization of firm's valuable resources. It involves decisions about investments, expenditure, and pricing of products or services. Costing information plays a vital role at each stage of business process from formulating and communicating to implementing and controlling the strategies for efficient resource utilization. Cost management practices incorporate systematic approach for calculation, allocation and containment of costs, as well as revenue forecasts (Edward J. Blocher, et. al., 2010; John K. Shank and Vijay Govindrajan, 1993; Peter Kajüter, 2003; Shannon W. Anderson, 2007).

In short, cost management is all about management of cost in the process of achieving desired outcomes for effective strategy execution by leveraging available resources with the help of financial as well as nonfinancial approaches such as activity based management, bench marking, budgeting, business process reengineering, just in time, target costing, value chain, etc.

## 2. CONCEPTS AND ISSUES IN COST MANAGEMENT

Cost management practices put together valuable information to improve organizational efficiency and decision making. The decisions in organizations can broadly be classified as operational decisions and strategic decisions. Strategic decisions are major decision and have long term impact on organization while operational decisions are part of day-to-day functioning of the organization. The business decisions include decisions about investment of resources, about operations employing these resources and about financing these resources. These decisions – collective or individual, strategic or operational – are essentially about making economic trade off in deploying available resources in a ways that create value, in monetary terms. Cost reflects this monetary measure of the deployed resources. The cost management information is useful in planning and controlling the operations and behavior of people. The advanced level involves employing cost information for better operational choices and performance measurement. At the more advanced level, cost management information is used for making long-term strategic decisions. However, cost analysis for costing products and services plays a vital role at the most basic level. Different situations call for use of different types of costs. Cost can vary in different circumstances. Proportion of different cost components, even in similar circumstances, also varies with the scale of operation. (Erich A. Helfert, 1997; Hugh Coombs, et. al., 2005).

### 2.1 BASIC CONCEPTS

Cost accounting is central to issues and concepts in designing management accounting system and cost management practices. The appropriate definition of the cost unit which can be a product, customer, function or responsibility centre – is crucial to cost management practices. Cost unit is also termed as cost object. All the expenditures that a firm incurs can be classified under different heads called cost pools such as manufacturing expenses, selling expenses, distribution expenses, service delivery expenses, etc. that can further be subdivided into direct expenses and indirect expenses. The fundamental issue is attribution of expenses to cost objectives i.e. a purpose or activity for which the cost is incurred. Direct expenses are directly traced to the cost unit. Indirect expenses are those that are difficult to trace to cost unit and hence are spread fairly over multiple relevant cost objects. Distinction between direct and indirect cost may differ when cost objectives changes, for example, salaries of salespersons and expenses on advertisements are treated as direct costs for computing cost of sales, however, the same expenses are treated as indirect costs when cost objective is product valuation (Hugh Coombs, et. al., 2005).

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Another fundamental issue in the process of cost management is of classification of costs. Costs can be classified as fixed and variable costs. Fixed costs is unaffected by the volume of the activity over a considerable period of time, for example, plant and machinery, salaries of management, etc. Variable costs are directly proportional to the volume of the activity and increases with increase in volume of the activity. Examples of variable costs are piecewise labor cost, direct material costs, sales commission and fuel costs. In semi-variable cost, part of total cost is fixed and remaining is a varying variable element, for example, a telephone bill wherein monthly rental is fixed and each outgoing call is charged and hence the cost per call will depend on number of calls made during the month. Semi-fixed costs, also called stepped costs, are unaffected by the volume of activity up to a certain extend or band and then increases stepwise and remain fixed for till another band of activities, and so on. Costs can also be classified as sunk costs as costs that are already incurred and are irrelevant to future decisions; opportunity costs as a cost of opportunity foregone in pursing one course of action over the other; and marginal cost as incremental cost which is usually an increase in variable cost in altering the present course action (Hugh Coombs, et. al., 2005).

Costs are computed as unit costs for products or service provided. The three key approaches to product costing are as below.

### 2.1.1 Absorption Costing
The final cost of product is determined by subdividing the expenditures into direct and indirect costs. Indirect costs are spread over all the products proportionately. However, department's total cost would change if apportionment basis of any one indirect cost is changed; secondly, computed cost may be higher than actual cost for one product and less for other product.

### 2.1.2 Marginal Costing
Marginal costing considers total costs as consisting of variable costs and fixed costs. Marginal costing employs a concept of contribution which is equal to selling price minus variable costs. The contribution initially goes for covering fixed costs and then contributes to profit.

### 2.1.3 Activity Based Costing (ABC)
According to ABC, activities are involved in producing products or rendering services, and resources are consumed in performing these activities. It employs concept of cost drivers which is a factor that alters the costs for example production volume, items sold, or labor days. Indirect costs are traced and assigned to activities performed (e.g. production, administration, sales) in producing cost object such as products, works executed, services, orders (Eva Labro, 2006; Gary Cokins, Sorinel Căpuşneanu, 2010).

## 2.2 PLANNING AND CONTROL ISSUES
For organizations to survive and grow, it needs to put its long term strategy in place. This involves defining specific strategies for key marketing, production, financial and other functional issues. For these strategies to be operational it is essential for organization to develop specific plans and performance targets. Ideally, planning will take place at various levels within organization viz. strategic, business and operational levels. The financial plan that integrates specific tasks, performance targets, and resources is known as budgets. Budget is a financial plan expressed in monetary as well as non-monetary quantitative terms, such as labor hours, units of sales, etc. Budget highlights revenue and costs for future planned period. A budget may be short term usually 1 year or less, it can be for about 2 to 3 years or more in the longer terms.

Budget is internal to the organization. Budgets are primarily used to quantify expected incomes and allotted resources. At the next level, budgets are used to quantify payment required for procurement of these resources and collection of incomes, cash, etc. At the even higher layer, budgets may be used as means of communication to describe targets, payments and incentive schemes to employees. The detailed budgets are prepared from higher layer estimates, called master budget, thus ensuring detailed budgets relates to the overall organizational goal. Budget preparation involves forecasting of likely results and cost estimation of the future activity for the budgeted period. Budgeted figures may differ from what is actually achieved. The process of comparing actual results with that of planned is called management control. Budgets are essential tool in control. Standard costs, that represent unit costs of products and services, form the basis for budgeting. Standard costs are calculated either by analyzing past costs from production history or by the analysis of production inputs such as amount work involved, material requirement, labor hours required, etc. and cost driver consumption if activity based costing is used. Standard costs facilitate computing variances by comparing standard costs with the actual costs. The progress in firm's day to day activities is reviewed at regular interval e.g. monthly. The actual results in the year are compared with the budgeted target and the reasons for the shortfall (viz. inefficiency in operations, incorrect plans, poor communication of targets, etc.) are investigated for corrective action to be taken (Hugh Coombs, et. al., 2005).

## 2.3 OPERATIONS AND PERFORMANCE MANAGEMENT ISSUES
All accounting theories, in general, are expected to translate accounting data into management information. The ever intensifying competitive environment and growing innovations in production technologies made organizations to look for accurate information for making important decisions about pricing, product mix, and processes. The reliable and organized information enables manager exercise various strategic options, such as dropping less profitable products, product/ process redesign, price increases, outsourcing, etc. The important questions to ask in order to identify and prioritize the information requirement are: What information do we need? When? What format? And where do we get it? The answers to these questions form the foundation for the cost management practices, in the context of both organization and its environment (Peter Drucker, 1992; Robin Cooper and Robert S. Kaplan, 1988).

The context and purpose for which decision is being made determine the type and use of cost information and costing technique. For example, contribution analysis makes use of marginal cost and marginal revenue to compute contribution per unit of product or service. Another technique, similar to contribution analysis, is break-even analysis. Break-even point in terms of number of units of products is calculated by dividing fixed cost by contribution per unit. The total contribution before break-even point covers fixed cost and every extra unit sold thereafter contributes to profit. The objective for decision using these techniques may be to increase contribution. On the other hand, organizations may also be attempting to minimize costs. Crucial to use of costing information for these decisions is to consider only relevant costs and benefits. Relevant costs and benefits are those that are affected by future change in cash flows. There are numerous decision making situations that affect future cash flow, for example, decisions about pricing the product or service, decision of making product in house or buying from external supplier, decision about ceasing the production of product or service altogether, etc. In general, pricing decisions focuses on covering total cost and making profit by adding desired margin. This involves deciding upon what to include in cost when arriving the selling price of unit of products and services. In one approach, variable cost is computed and then a margin is added to cover fixed costs and expected profit. In another approach, the total cost is worked out by adding production overhead to variable costs. Yet another approach adds variable costs, production overheads and non-production costs (such as selling and distribution costs) to determine total costs. Full cost or total costs thus calculated is used as a basis for addition of markup percentage in setting selling unit price. However, whatever price is set with any of this cost based methods, firm also need to consider prevailing market prices. Target costing overcomes this limitation by setting a target price in advance using demand analysis and market intelligence (Hugh Coombs, et. al., 2005).

While profitability is determined by costs and revenues, the control is not only limited to cost but also spread over other areas of nonfinancial measures such as performance management and strategy execution. A detailed analysis of the cost position helps not only to identify needs for cost reduction but also to provide ideas on how to realise cost savings. Cost management information plays a vital role at each stage of business process from formulating and communicating to implementing and controlling of strategies (Hugh Coombs, et. al., 2005).

## 2.4 STRATEGIC ISSUES
Strategic decisions involve significant investment, and impact costs and benefits over the longer period. Important in this decision context is appraisal of investment decisions using discounting and non-discounting cash flow methods, sensitivity analysis, and cost-benefit analysis. The concepts such as compounding, discounting and present value are important. Compounding evaluates accumulated value of the present investment for a specified period while discounting computes present value of future cash flows, at an appropriate rate of return. Payback, a non-discounted cash flow method, represents the number of years where the initial investment equals sum of the future annual cash flows. A project with shorter payback gets precedence. Accounting Rate of Return (ARR) is another form of non-discounted investment appraisal technique where ARR is defined as percent ratio of average annual profit from the investment to average investment. The project with ARR more than company's targeted returns is accepted. The project with highest ARR is selected in case more projects are under consideration. The major disadvantage of both, payback and ARR method, is that it ignores the time value of money. Discounted cash flow methods for investment appraisal offer an improvement. Net Present Value (NPV) is a discounted cash flow method. It computes NPV as a sum of present value of future net cash flows over useful life of

project less the initial investment. The project having positive NPV or the highest positive NPV (if more projects are being evaluated) is accepted. Another discounted cash flow method is Internal Rate of Return (IRR). IRR represents the discount rate at which NPV is zero. The project having IRR greater than expected return or the highest IRR (if more projects are being evaluated) is accepted. Taxation and inflation affects project appraisal. Taxes are to be paid on cash in-flows. Also value of the cash flows in the longer duration gets influenced by inflation. Hence these effects need to be included as outflows (Hugh Coombs, et. al., 2005). A common approach to cost reduction is to take an isolated initiative to reduce costs across individual function of business. The benefits arising out of such isolated initiatives are short-lived. Cost saving in one part usually pop up in other part of the organization. This makes cost management too complex issue to deal with at a level other than the strategic level. Strategic cost management is more about decision making processes and cost structure that facilitate strategy execution with the help of concepts and tools from marketing, strategy, economics, etc. Cost structure reflects business model of the company. There is a need to restructure the operations and possibly whole business model around lower cost by exploring cost saving alternatives offered by outsourcing, shared service centers, off-shoring, internet sales, etc. This requires cost improvements across whole processes on the basis of reliable cost data and realistic cost saving targets. Companies that made changes at the strategic level, reflecting on cost as a function of their business model, could achieve the cost reduction on sustainable basis (KPMG Report, 2007).

The advanced approaches to cost management encompass wider business ecosystem on the premise that nonfinancial activities generate financial results. The numerous approaches such as target costing, activity based management, business process reengineering, value chain analysis, bench marking, just in time etc. may be used.

## 3. COST MANAGEMENT ISSUES IN SERVICE INDUSTRY

For costing purposes services are different from products because of different product manufacturing and service provisioning processes. Manufacturing processes are classified as project, job, batch, line/mass and continuous process. Project process is suitable for producing highly customized products, at one end, while line/ mass process is used for producing high volume products, at the other end. Job and batch processes are suitable for manufacture of low volume products and products in batches respectively. Fluid products, such as pharmaceutical or food, are manufactured using continuous processes. Computing accurate products costs is one of the major requirements for pricing, planning and control in product manufacturing businesses. The processes for services, on the other hand, can be classified as professional services, service shops and mass services with the decreasing order of customization and customer contact. In service industries costs of functional activities are more appropriate than product costs for pricing, planning and control. Costs in service sector are increasing due to slower improvements in service sector productivity as compared to manufacturing productivity and hence service organizations strive for continuous improvements by cost control and process improvement initiatives. (Rogelio Oliva, 2001; Susan Miller, 2011; T. J. Brignall, et. al., 1991).

All service costs are period costs and difficult to compute. In addition, intangibility, inseparability, heterogeneity, perish-ability of services further complicates the costing of services. Intangibility as a lack of physical evidence is one of the most important characteristic of services that separate it from products. For example, when we purchase a product such as bicycle or four-wheeler we have a physical product with two wheels or four wheels to demonstrate, on the other hand, when we purchase a service such as holiday package we hardly have anything tangible to demonstrate apart from intangible experience to share. This intangibility of services makes it difficult to describe or communicate services, to measure or define quality, and to understand value added by the organization. Inseparability implies simultaneous production and consumption of services. Services are produced and consumed instantaneously as against the products which are first manufactured, then stored as inventory before being consumed, at different times. Product manufacturing companies can carry inventory of finished products which is absent in service companies because of perishability of services. Services are produced and delivered while customer is present and hence cannot be stored, returned or resold. Services are heterogeneous in a sense that different customers perceive quality of the same service offering differently. Quality of service is partly dependent on personality of service personnel and partly on customers' expectations, thus, making it difficult to guarantee standard service experience. The costing systems that are widely used for financial reporting requirement in manufacturing may not apply to service industries. In service organizations cost calculation and control is performed via cost centers. The pricing decision in service organizations is not fully based on full costs for the reasons of difficulty in tracing the costs and the strategies of competing organizations. Despite these differences there are similarities as well in manufacturing and service costing. Both product and service production drives activities that consume resources. Challenges faced by service and manufacturing companies are more or less similar. However, it is difficult to calculate exact cost for individual services using any of absorption, marginal and activity based costing approaches due to presence of numerous joint costs. The question is not about whether traditional accounting or contemporary accounting, such as ABC, but about choice of accounting practices and sophistication required for context specific joint costs assignments (Belund Terzioglu and Elsie S.K. Chan, 2013; Susan Miller, 2011; Susan Segal – Horn, 2003; T. J. Brignall, et. al., 1991).

## 4. CONCLUSION

Cost management is all about management of cost in the process of achieving desired outcomes for effective strategy execution by leveraging available resources. Cost management practices incorporate systematic approach for calculation, allocation and containment of costs, as well as revenue forecasts.

Cost management issues in service industry are different from manufacturing industry owing to different product manufacturing and service provisioning processes. The presence of numerous joint costs in addition to the characteristics such as intangibility, inseparability, heterogeneity and perish-ability of services complicates the costing of services.

Cost management extends from financial to non financial activities and takes account of wider areas ranging from financial planning and control, operations management, performance management, strategy and decision making using numerous approaches such as activity based management, bench marking, budgeting, business process reengineering, just in time, life cycle costing, standard costing, target costing, value chain analysis, etc.

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# KNOWLEDGE MANAGEMENT THROUGH TRANSFORMATIONAL LEADERSHIP IN ARMED FORCES: AN IAF PERCEPTIVE

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## ABSTRACT

*The 21st century is a world of changes with the most pertinent change of being a change in the managing of different sectors with the help of enhanced updated new knowledge. Armed forces being a technologically intensive service, knowledge management becomes all the more important in today's high tech world where knowledge creation is galloping exponentially. The capturing of tacit knowledge and converting into explicit knowledge is the biggest challenge for all organizations and the armed forces is no exception. A leaders' function is to disseminate the knowledge to lower echelons of the pyramid so that employees have a better knowledge and are able to minimize their weakness. Today's requirement is to attract and retain best talent who have potential to excel as professional air warriors, ready to fight air battle in today's net centric environment. In sharp contrast to the civil organizations, the goals of a military organization are substantially different. The goal of Armed Forces is 'National security', which being non-negotiable, requires a total belief and commitment from its leaders. It requires a different type of followers and, more importantly, a leadership style that transcends onto a much higher plane through collective wisdom, knowledge management initiatives so as to arrive at innovative and effective solutions to various complex operational issues. The researcher attempts to find out the importance of transformational leader which is vital element to execute and implement the policies and procedures with the dissemination of knowledge in armed forces. Views expressed in the paper are author's view and do not reflect organizational views.*

## KEYWORDS
knowledge management, transformational leadership, pest, motivation and aspirations.

## 1.0 INTRODUCTION
Various approaches to the study of leadership, viz Traits approach, behavioural approach, situational approach and functional approach have been widely practiced in the Armed Forces globally since time immemorial and IAF is no exception. These approaches relate more or less to the general tenets of leadership irrespective of time. With growing industrialization, burgeoning population, increasing aspirations of better quality of life, higher stress levels at the work place and the perpetual need for change management, some contemporary concepts like Transformational leadership etc. have gained increasing acceptance in the corporate world as also in some of the Armed Forces world over. However, it needs to be understood that while these contemporary concepts may be considered new discovery in the Western world, in the context of Indian Armed Forces, these concepts were practiced by successful military leaders from time immemorial. It can even be stated that it is a re-discovery of age old tenets of leadership.

The 21st century poses a lot of challenge to the leaders of armed forces to make their presence felt in dynamic environment. The air campaign of 21st century will certainly be different than what have been seen so far. This is, primarily, due to explosion of knowledge and technological advancements which have taken place over the years. Under these circumstances, armed forces being one of the biggest and potent forces of the world has no option except to take cognizance of the fact and embrace knowledge management in a big way to remain relevant and current with exemplary leadership styles.

With the increase in workforce diversity it becomes pertinent to continuously enhance the knowledge base of the organization through new ideas, innovative methods of working and better cordial relationships. Globalization, rationalization and automation has furthered the cause of sharing and enhancing of knowledge. The armed forces have undergone sea change over the years to keep pace with the change and has become technology- driven force. It has transformed from a parochial, inbred instrument of battle to a highly sophisticated, multifunctional organization closely linked to society. The socio economic environment has made inroads into the forces as well.To make optimal use of all resources, it is incumbent on the part of armed forces to have a robust mechanism with visionary leadership which percolates to the bottom of the pyramid. Change is required in leadership across all quarters in dealing with interpersonal relationships so that goals can be achieved in harmonious manner with endeavour for greater success.

## 2.0 AIM OF THE STUDY
The aim of the study was to analyse whether there is a need for a change in the leadership styles practiced in the IAF to keep pace with multi-dimensional changes in the environment.

## 3.0 HYPOTHESIS AND METHODOLOGY
To study the gamut of leadership in Indian Air Force (IAF), keeping the aim in mind, a questionnaire addressing the following issues were administered to the IAF officers to seek their responses along with personal interviews.100 questionnaires were distributed out of which 80 were completed and returned.Simple random sampling technique was used to distribute questionnaires to officers of Group Captain and below the hierarchy level. The questions were judged on Likerts scale.Some of the questions are reflected below.
1.　　Are Officers (Group Captain. and below) of the Indian Air Force satisfied with the Leadership attributes and behaviours of their superior officers?
2.　　Is there a need for change in the leadership attributes and behaviour of officers in order to enhance the effectiveness of leadership and enhance organizational efficiency in the IAF?

### HYPOTHESIS
Null hypothesis and alternate hypothesis was formed regarding expectation of change in leadership attributes of officers. The hypothesis were:
$H_0$: There is no need of change in leadership attributes and behaviour of officers in the IAF.
$H_1$: There is need of change in leadership attributes and behaviour of officers in the IAF.

## 4.0 ANALYSIS OF THE DATA AND TESTING OF HYPOTHESIS

$H_0$: There is no need of change in leadership attributes and behaviour of officers in the IAF.

A null hypothesis was framed to assess whether there is a need of change in leadership.The above stated hypothesis was analysed by using one sample **t test** applied on the measure to assess the attitude of employees towards need of change in leadership through a scale ranging from Strongly Disagree to Strongly Agree.

To judge the above stated hypothesis the test value of t is set to be at 3 ( Neither Agree nor Disagree or Neutral ) as null hypothesis states that there is no need of change in leadership in influencing behaviour of employees.

### TABLE 1 A: ONE-SAMPLE STATISTICS OF ATTITUDE TOWARDS CHANGE IN LEADERSHIP

|                           | N  | Mean | Std. Deviation | Std. Error Mean |
|---------------------------|----|------|----------------|-----------------|
| Leadership Change Measure | 80 | 3.93 | 1.251          | .140            |

*Source: Researcher data analysis*

### TABLE 1 B: ONE-SAMPLE T TEST OF ATTITUDE TOWARDS CHANGE IN LEADERSHIP

|                           | Test Value = 3 | | | | |
|---------------------------|-------|----|----------------|-----------------|----------------|----------------|
|                           |       |    |                |                 | 95% Confidence Interval of the Difference | |
|                           | t     | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Leadership Change Measure | 6.616 | 79 | .000           | .925            | .65   | 1.20  |

*Source: Researcher data analysis*

The table 1-B shown above indicated that Significance value (p value) of two tailed test is 0.000 which is less than 0.05 (α value) at 5 % level of significance so the null hypothesis is rejected.

Again the critical value of t for 2 tail test at 5 % level of significance for 79 degree of freedom is 1.99 and the calculated value of t test is 14.15. Now since $t_{calculated}$ > $t_{critical}$ the hypothesis is rejected.

The table A also shows that Mean of Leadership Change Measure is 3.93 which is inclined towards positive side of the scale. This implied that opinion of officers is towards the statement that there should be change in leadership.

As null hypothesis is rejected we accept alternate hypothesis which states that there should be change in leadership attributes of officers. The statistical analysis further states that officers are though satisfied with the leadership attributes and behaviour of senior officers, meaning that dissatisfaction among mid-level and younger officers with the senior leadership of the IAF is not yet catastrophic, still officers have simultaneously agreed that there is a need for change in the leadership styles, attributes and behaviour of senior as well as junior officers in order to make the leadership more effective and the organization more productive. The varying nature of the response indicated the soundness of fabric of military leadership in the IAF, which has withstood the pressures of changes in the environment so far and the continuing trust of mid-level and younger officers in the leadership prevalent in the IAF. At the same time, it also suggested that it is perhaps the right time that we begin to think about the future and bring about a paradigm shift in the leadership styles and behaviour of today's and tomorrow's leaders – a shift in focus from the self (and individualistic aims) to organizational goals and basic needs of individuals to higher-order needs of self-esteem and self-actualization.

Perceptions, aspirations and expectations of today's young officers are bound to differ from those leadership attributes and behaviour practiced by senior officers, which were predominantly based upon Traits, behavioural, Situational or Transactional approach of leadership learnt from and passed down traditionally through their superior officers. With growing aspirations for better quality of life, larger exposure to technological advancements and societal changes, high level of stress in work places as well as normal living environment and ever changing roles of the Armed Forces, the Young officers aspire for more contemporary concept of leadership that attempts to arouse enthusiasm, faith, loyalty and pride through holistic growth of those being led.

There are proven records to show that large numbers of organizations who have embarked on a knowledge management program have immensely benefitted which include better decision making, improved communication, enhanced collaboration, improved employee skills etc. Therefore, there is a well-established fact to suggest why armed forces should go for knowledge management in lines with other big forces of the world.

## 5.0 TRANSFORMATIONAL LEADERSHIP

The term transformational leadership has its roots when, in 1973,in of the study conducted by J.V. Dowton author of the research study *"Real Leadership, Commitment & Charisma in the revolutionary process."* used this phrase.If we take orthodox implication of leadership, the advocates believed in dominance of one person while the rest followed the instructions. But with the advent of knowledge workers this way of routing commands has become obsolete Today's generation has much more expectations from its leaders. They want to be the part of change making mechanism. This necessity has given way to new breed of leadership i.e. transformational leadership. This style encourages all the participants of the group to generate new ideas and be responsible for their tasks.Many studies have in fact proved that teams where leadership is shared are much higher performing teams'.A leader sets an example for its followers by displacing these characteristics which are essential for the development of organization and employees:

FIG. 1: SOURCE *RESEARCHER*
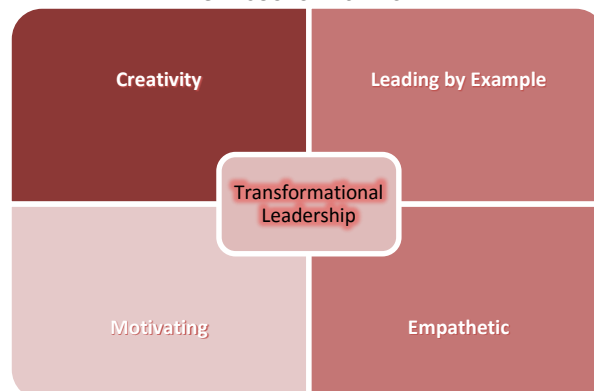


- **Creativity**- Leader should be able to inculcate and imbibe creativity and innovation among his followers. He should be ready to ward off the mistakes done during new idea generation and is pleased to displace off any redundant methodology used currently in practice in the organization even if it was his idea.
- **Leading by example**- An individual follows what he sees.If a leader displays ethical values, follows code of conduct the followers easily idealize him and want to step in his shoes. He becomes a role model for his employees.
- **Motivating**-A leader can be attributed as a true leader only when he can truly inspire his members to aim for the vision, mission of the organization.He is able to nurture a sense of commitment, responsibility and team spirit among the members..

- **Empathetic**-A transformational leader is considerate.He pays individual attention to the anguish of his members. He is not hesitant to provide them with autonomy which builds a climate of zeal in the organization. He is rational to the problems and pays individual attention to the problems be it personal or professional.

## 6.0 COMPONENTS OF MANAGING KNOWLEDGE

We have come a long way from management of information which was predominate from 1966-1995 to management of knowledge since the time when processing of data was predominant from 1945-1965.Knowledge management is basically the generation and systematic organizing of knowledge for the well-being of organization and its employees. Basically the term connotes how knowledge can be reached to masses or each individual for their betterment for the achievement of individual and organizational goals. The essential ingredients of knowledge management are as follows:

**FIG. 2**
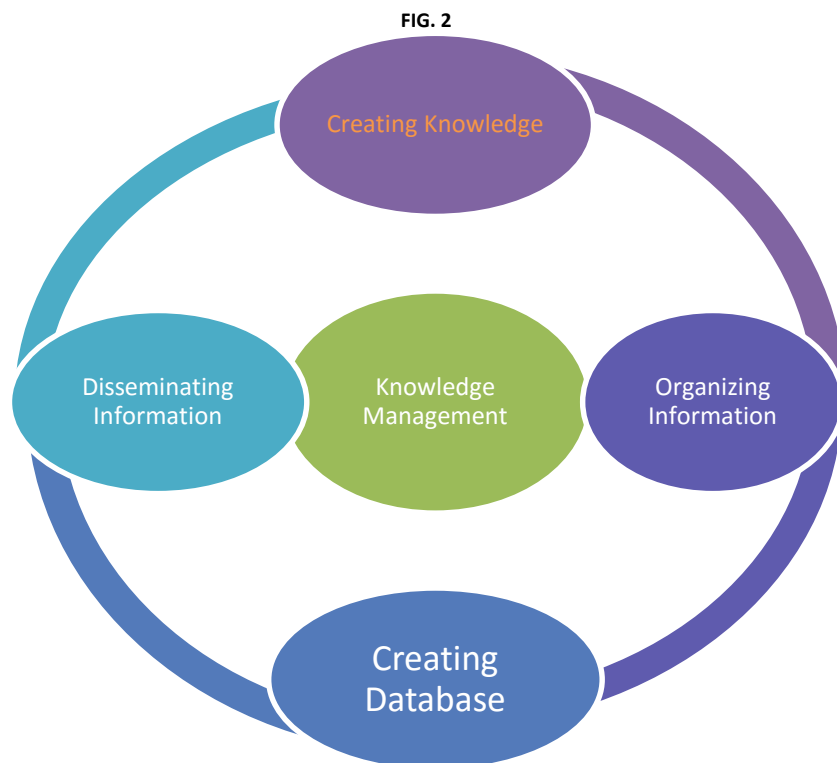


- **Creating Knowledge.** Nearly all organizations aim for becoming learning organizations. They are continuously looking for new information, new knowledge and try to collect it both from internal and external atmosphere.Employees are encouraged to experiment, innovate and generate new way of thinking.
- **Organizing Relevant Information.** Information gathered is stored and filtered.Only relevant information is organized and stocked for future usage.
- **Creating Database** Relevant information is then coded and kept in easy accessible format. The information is coded in an easy language which could be understood by all and can be used for present and future use.
- **Disseminating information** to employees which can be of current use with relation to PEST that is political, economic, social and technological environment.Tools and language both are kept simple so that all users can identify with it.

## 7.0 KNOWLEDGE MANAGEMENT THROUGH TRANSFORMATIONAL LEADERSHIP IN AIR FORCE

It is often believed that we have ample number of managers but dearth of leaders.To be in the forefront an organization needs a leader who not only changes their working conditions but also changes their thinking pattern and believes.Such a transformational leader will create a climate of growth of knowledge where people will be reluctant to share their ideas and would be ready to help each other. Through his exemplary behaviour he could inculcate a sense of responsibility in them and would be facilitator in their learning and sharing paradigms.Only then we see hope for a new ease of chase of change in organizations.To operate / maintain aircraft and systems, expertise and knowledge of enormous magnitude are required. Therefore, systematic management of knowledge with visionary leadership becomes absolutely essential. Currently, few initiatives are being practiced in managing collective knowledge in air force. These are as enumerated below:-

(a) Knowledge learnt is shared after briefings, events and exercises.
(b) Regular briefing to technicians helps in knowledge sharing.
(c) Interactions in conferences and meetings help to dissipate knowledge
(d) Trainings are held regularly to update the knowledge and knowledge sharing.
(e) Interactions with other organization in India and abroad enrich the knowledge base
(f) Armed forces becoming more IT friendly with secure IT infrastructure in place for capturing, sharing and integrating knowledge.

## 8.0 FACTORS AFFECTING KNOWLEDGE MANAGEMENT IN AIR FORCE

Leadership and Culture of an organization is greatly responsible for the adequate management of knowledge.Air Force has beyond doubt introduced and implemented various measures for the effective sharing of knowledge but still certain areas require improvement. Some of the factors to enhance knowledge sharing are as discussed below:-

**CULTURE:** An open culture is pertinent for smoothing the functionality of the organization. An ideal organization relies on OCTAPACE values. These are Openness, Confrontation, Trust, Authenticity, Proactivity, Automation, Collaboration and Experimentation.. Interestingly, air force caters to all these factors in some form or the other. Still some lacunas do exist like briefings just become a routine affair and hierarchy comes in midway for feedback. It should be more transparent and devoid of any preconceived notions.

**LEADERSHIP:** It is a proven fact that strong leadership is an essential element for successful implementation of knowledge management program. They are required to create a conducive environment where knowledge creation and sharing become part and parcel of the system. The environmental changes in all the spheres of life is too rapid and this necessitates leadership to be more proactive and change friendly. Therefore, there is a system in place to look after the aspirations and growth of people in the forces. In fact, the officers serve as knowledge champions and change agents for the forces knowledge management program. They need

to have clear strategic direction and intent of the forces to make it happen. This would certainly contribute in enhancing organization effectiveness of the armed forces.

**IT INFRASTRUCTURE:** IT infrastructure serves as backbone to the organization when it comes to knowledge management. It means a better way of doing business with new improved software, better tools to ease the working and easy sharing of knowledge. An organization that has proper IT system can boast of channelizing new innovations, ideas with a click to all the employees thereby sustaining a culture of organization which is continuously learning and upgrading itself. IT infrastructure of air force is very comprehensive to take care of knowledge management issues. This needs to be tapped adequately by the air warriors to draw maximum gain out of the existing infrastructure. The **AFNET** is the right step in this direction..Need of the hour is Transformational leadership which mitigates the chiding of information and helps in creating an environment of knowledge sharing.

## 9.0 RECOMMENDATIONS FOR COMPREHENSIVE LEADERSHIP DEVELOPMENT STRATEGY IN AIR FORCE

Leadership in air force should focus on "**People First Mission Always**" as its motto proclaims. The challenges in the changed environment converge most forcefully at strategic levels and leaders at those levels must gain the appropriate frame of reference. A comprehensive leadership development strategy is required to be in place today for coping with the future challenges the forces is likely to face. Some of the recommendations are:

(a) Top leadership needs to be sensitive to create awareness amongst all categories of personnel including civilians.

(b) Knowledge management teams need to be constituted at unit, command and HQ levels to oversee the functions of knowledge management.Team would essentially include experts from all branches and trades and made to function under unit, command and HQ levels respectively.

(c) Delivery of Knowledge management as a part of course curriculum in courses for various categories of personnel.

(d) The entire environment in IAF needs to be sensitized about the behavioural pattern of the young officers. Their effectiveness need to be mapped in the light of leadership style of the superiors.

(e) Delegation of authority and responsibility should be given due importance at all levels of functioning.

(f) To begin the process of change and to manage the change needed in the leadership style in the IAF, open house discussions and debates may be held on the subject to sensitize all concerned.

(g) Senior leadership needs to acknowledge the fact that environment needs change and they have to prepare themselves well for embracing change to keep pace with the changing world. They traditional leadership style may not give desired dividends in the changed environment.

(h) Well thought out strategy needs to be put into place for effecting change any quick fix solution may be counterproductive.

(i) Inspecting teams such as **DASI** may be tasked to carry out knowledge audit periodically to assess the gaps.

(j) Strengthening of IT infrastructure to nurture knowledge management

(k) Policies and procedures reviewed periodically with changing PEST that is political, economic, social, technological changes to smoothen way for knowledge management.

(l) Incentives to be instituted to encourage sharing of knowledge.

(m) Training in empathetic leadership should be provided. It must involve all individuals and not just the management.

(n) Benchmarking of leadership and knowledge structure.

## 10.0 CONCLUSION

Armed forces are the backbone of the country.They need to strengthen their workforce through instilling motivation, knowledge sharing and strengthen their skill base so that they are ample leaders in the pipeline. Forces needs to create state of the art IT infrastructure to support knowledge management program. With the improvement in knowledge management, the effectiveness of the IAF is bound to go up and the air power of the nation will no doubt be a potent force to reckon with. But all this is possible with the combined efforts across the board. A transformational leader is imperative to build the trust of sharing among the warriors.

A transformational leadership will change the perception of the warriors regarding sharing of new ideas and knowledge with their team. The new visionary warrior will further instil positivity enhancing the culture of the organization and enhancing free flow of communication among employees

The findings suggest that the effectiveness may get enhanced with the adoption of transformational leadership along with contemporary leadership being practiced in IAF. An organization needs a visionary transformational leader who has the vision of looking after all the segments of the organization along with having the people in high spirits. Only then can the organization hope to attain the zenith of glory.

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# A STUDY ON RETURNS AND VOLATILITY OF FMCG AND IT SECTORS OF NIFTY

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## ABSTRACT

*This paper is a modest attempt to dwell on the returns and volatility of the Fast Movers Consumer Goods (FMCG) and Information Technology (IT) sectors of Nifty, during pre and post recession period. FMCG and IT indices are constructed using index construction methodology of Nifty companies for a period of 12 years. Analysis of data is made by taking daily log returns of the indices, with the help of Mean, Skewness, Kurtosis, Jarque Bera Statistics, Standard Deviation, Co-efficient of Variation, Autocorrelation, Augmented Dickey Fuller-Unit Root Test, Auto Regressive Conditional Heteroskedasticity and its generalized form of Generalized Auto Regressive Conditional Heteroskedasticity. It is found that a significant different in returns between the FMCG and IT sectors of Nifty, and also it found that the significance volatility clustering and volatility persistence between FMCG and IT indices of Nifty during pre and post recession period. It concluded that IT index is reported high volatility persistence during pre and post recession period whereas; the FMCG index is reported low volatility persistence. Investors have to give appropriate weight to the sectors to minimize the risk and maximize the return.*

## KEYWORDS

recession, volatility persistence, heteroskedasticity.

## I. INTRODUCTION

Understanding the dynamics of the Indian stock market may be of use to traders, investors and policy makers. The sector-based index is designed to provide a single value for the aggregate performance of a number of companies representing a group of related industries or a sector of the economy.[1] The index is based on a statistical compilation of the share prices of a number of representative stocks. These market indices are convenient gauges of the stock market that also indicate the direction of the market over a period of time. This segmentation tends to put companies with similar operating characteristics and industry fundamentals into the same sector. The economic cycle and interest rate environment also tend to impact companies of a given sector in a similar manner. These factors cause the performance of sectors to vary significantly—relative to the market as a whole, and to other sectors. Companies are classified based upon the nature of their major business line and tend to remain in their sector. Volatility of stock returns/Index returns have been mainly studied with the help of Autoregressive Conditional Heteroskedasticity (ARCH) model and its generalized form (GARCH).

The Great Recession[2] which started in December of 2007 in the US had substantial negative impact on the world economy. On account of the Great Recession, the SENSEX and Nifty tumbled from more than 20,000 and 6000 points in Dec 2007 to little over 8000 and 2600 points in March 2009 respectively. In this study, it is proposed to analyze the changes in FMCG and IT indices of Nifty during the pre and the post-recession period.

## II. REVIEW OF LITERATURE

Several research studies have been undertaken on stock market return and volatility in India. However, their results have been mixed in nature and at certain time contradictory with each other. Some of the major studies and their summarized findings are as follows:

Engle (1982)[1] "Autoregressive Conditional Heteroskedasticity with estimates of the variance of United Kingdom inflation" designed the autoregressive conditional Heteroskedasticity i.e. ARCH model to estimate the mean and variance of inflation in the United Kingdom. The author found that the ARCH effect is significant and useful in estimating the volatility more accurately.

De Santis and Imrohoroglu (1997)[2] "Stock Returns and Volatility in Emerging Financial Markets "Study focused on the emerging markets relationship between stock return and volatility, they found that there is high level of volatility found in emerging stock markets as compared to developed markets. Conditional volatility is very high and the frequency is also higher for the large price changes i.e. fat tails for emerging markets. In another set of model, they relaxed the assumption of full market segmentation and observed the relationship between expected return and market risks; they also found that the liberalization is not beneficial for all types of countries and it may lead to the increase in volatility of domestic stock market of emerging nations.

Robert Engle (2001)[3]in his paper "The Use of ARCH/GARCH Models in Applied Econometrics" presented an example of risk measurement that could be the input to a variety of economic decisions. He analyzed the ARCH and GARCH models and their many extensions.

M.T. Raju, Anirban Ghosh (SEBI Working Paper)(2004)[4] in the paper on Stock market Volatility- An International Comparison found that the daily average return and daily volatility across markets vary over time and space. Their divergencies are highly demonstrable. Some countries (US) provide as high as0.04 percentage return while some of the emerging markets such as Indonesia recorded negative returns of -0.01 percentages. India is a bright spot. In the sample period Indian investors obtained as high as 0.04 percentage return with a moderate volatility of 1.89percent Volatility or rather the lack of it.

Hourvouliades (2007)[5] studied the Athens FTSE 20 index futures contract data to understand the volatility forecasting ability of various models. The basic objective of the study is to gain an insight into the stylized facts such as volatility clustering, leverage effects for domestic derivative market in Greece. The various models which were analyzed in terms of their forecasting abilities were simple regression, single exponential smoothing, holt-Winter's multiplicative smoothing, GRACH (1.1) and EGARCH (1.1) models. The data analysis showed that the return is normally distributed and it showed the presence of volatility clustering. The forecasting ability of exponential smoothing was found to be superior to the GARCH models.

Arindam Mandal and Prasun Bhattacharjee (2012)[6]in their study on "The Indian stock market and Great Recession" found a substantial change in behavior of the SENSEX following the outbreak of the recession. Prior to the Great Recession, the Indian market was characterized by positive daily returns, but such returns turned negative after the recession. But they did not find any significant statistical difference between the pre and post-recession daily mean returns. Major changes were observed in terms of volatility of returns.

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[1] http://www.nseindia.com/products/content/equities/indices/indices.htm2014
[2] Arindam Mandal and Prasun bhattacharjee article titled"The Indian Stock Market and the Great Recession" published in "Theoretical and Applied Economics" Volume XIX 2012 No. 3(568) pp, 59-76, USA.

P. Bhanu Sireesha (2014) [7] "Volatility on the Indian Stock Market a Study", the sample return series was estimated through GARCH (1, 1) model. On the whole, the analysis of 20 year data starting from January 1993 to December2012 established two phases in volatility in Nifty, namely, the boom and subsequent crash of the Indian stock market during 1999-2000 and the subprime financial crisis that cropped up across the globe during 2008-2009. The 28 day persistence in volatility of Nifty return series indicates that volatility in the Indian stock market reacts intensely to the market movements and takes long time to die out the shocks it faces from the market movements. Examine the impact of select macro economic Variables on stock, gold and silver returns by using linear regression technique.

## III. PERIOD OF STUDY

The study covers a time period of twelve years from 2002 to 2014. Pre recession period is from 1-4-2002 to 24 -10- 2008, (Nifty melt down above 13% on 23/10/2008 is a cut-off date for pre and post period) post recession period is from 27-10-2008 to 31-03-2014

## IV. SCOPE OF THE STUDY

The study is restricted to the NSE listed companies which are part of CNX Nifty50 of FMCG and IT companies only

## V. RESEARCH GAP

Stock market returns and volatility and its comparison over the world stock markets have been analyzed by many studies. Some of the studies were focused on the impact of financial crisis on major stock indices in terms of return and volatility by applying various models of econometrics. Few studies in respect of returns and volatility of sectoral Indices are found but they are unique in nature whereas, in this study analyses of FMCG and IT indices of Nifty. These indices are constructed by using listed companies of Nifty, which are representing the FMCG and IT sectors, by applying stock index construction methodology. This study breaks up into pre and post-recession period for the purpose of analysis of returns and volatility of returns over the time span of 2002 to 2014. This becomes a comprehensive study in the perspectives of time and factor.

## VI. NEED FOR AND IMPORTANCE OF THE STUDY

Stock market volatility has been a major cause of concern for policy makers, investors and academia throughout the world, especially for the last two decades. The global economic slowdown, the US real estate decline, the credit crisis and the reversal in the resource trend created a great deal of turbulence and worry in the capital markets. Hence, volatility plays a significant role in determining a portfolio's compound return, which ultimately affect the value of the portfolio. Sector exposure has been a major determinant of stock market returns, and is widely considered the second-largest return factor, after individual security selection. Also sectoral stock indices provide a yardstick, with which investors can compare the performance of their individual stocks pertaining to that sector. Thus, thorough analysis of FMCG and IT sector fundamentals is important for determining the potential for outperformance. This includes valuation analysis that looks at whether a sector is outperformed or underperformed, and expensive or cheap relative to its own history, and relative to other sectors. So the study is aimed at a detailed analysis of the sectoral FMCG and IT indices of the Nifty, to find out the returns and the risk associated with the sectors. IT sector is highly sensitive for the global factors as well, and FMCG sector is not much sensitive as IT sector, because it is defensive in nature. Hence, study evaluates current level of volatility in historical perspective and examines the various themes of volatility involved in the sectoral of FMCG and IT indices of Nifty at pre and post recession period. The findings of this study have important implications for the securities analysts, equity investors and market regulators

## VII. STATEMENT OF THE PROBLEM

However, returns and volatility may have important consequences for investors and policy makers if the same increases, investors may equate greater risk with higher volatility and may alter their investment decisions due to increased volatility. In this context the following question emerge

- What is the pattern of returns of FMCG and IT indices of Nifty?
- What is the pattern of volatility of FMCG and IT indices of Nifty?

## VIII. OBJECTIVES OF THE STUDY

The objectives of the study are:
1. To study the returns of FMCG and IT indices of Nifty during pre and post-recession period
2. To examine the Volatility of FMCG and IT Indices of Nifty using GARCH(1,1) Model during pre and post-recession period

## IX. HYPOTHESES

In order to ascertain the objectives of the following hypotheses are formulated and tested

**Objective-I**
- H01= There is no significant difference in the returns of FMCG and IT indices of Nifty

**Objective -II**
- H02= There is no significant difference in Volatility FMCG and IT indices of Nifty.
- H03= There is no significant leverage effect of FMCG and IT indices of Nifty
- H04= There is no significant volatility clustering of FMCG and IT indices of Nifty

## X. DATA SOURCE AND METHODOLOGY

The present study is analytical in nature and relies mostly on secondary data. It is based on the closing time series data Nifty companies of NSE. The study covers a period of 12 years from 2002 to 2014 covering both pre (2002 to 2008) and post-recession period (2008 to 2014). The required data will be collected from the NSE Fact Book year wise and NSE website. The total time period of the study covers the time span from April, 2002 to March 2014, it is divided into two parts for the purpose of analysis. The first part starts from April, 2002-03 to 24-10-2008 and 27-10-2008 to 31-3-2014 which is in sample period and it is used to estimate the various parameters of volatility. The data is collected in daily frequency. The time span spread over 12 years and it covers not only 2008 financial crises but also some years before and after the financial crises. The daily data series has 3000 observations for the all companies FMCG and IT companies of listed in Nifty.

**Price Index Calculations Formula**

Market Capitalization = Equity Capital * Price

Free Float Market Capitalization = Equity Capital * Price * IWF

Index Value = Current Market Value / Base Market Capital * Base Index Value (1000)

**The logarithmic return**

$$R_{t+1} = \ln\left(\frac{P_{t+1}}{P_t}\right) = ln(P_{t+1}) - ln(P_t)$$

Variance: the variance is equal to the second moment about mean. Thus, we can state that the equation represent variance is

$$\sigma^2 = \frac{\sum (X - \bar{X})^2}{N - 1}$$

$\sigma^2$=Variance

**Skewness**

$$\beta_1 = \frac{\mu_3^2}{\mu_2^3}$$

Where $\mu3$=is the third moment about mean and $\mu_2$=is the second moment about the mean. It can tell us whether the distribution is symmetrical or not.

**Autocorrelation coefficient** $\rho(k) = \frac{cov(r_t, r_{t-k})}{Var(r_t)}$

Where $\rho(k)$ is the autocorrelation coefficient of the time series, and $r_t$, and $r_{t-k}$ are the logarithmic return at time t and t-k where k is the lag of the period.

GARCH Model: Mean equation

$$r_t = \gamma + \epsilon_t$$

Where $\gamma$ is a constant, $\epsilon_t$ is conditional on the past information set and with time varying variance term and further assumption is that it follows normal distribution.

Variance equation

$$\sigma_t^2 = \omega + \sum_{i=1}^{p} \alpha_i \epsilon_{t-i}^2 + \sum_{j=1}^{q} \beta_j \sigma_{t-j}^2$$

Where, $\sigma_t^2$ is the conditional variance, $\epsilon_{t-i}^2$ is the previous days squared error and $\sigma_{t-j}^2$ is the previous time period volatility.

## XI. ANALYSIS, DISCUSSION AND FINDINGS

**FMCG INDEX OF NIFTY**

From the Table 1 presents the summary statistics for the daily Nifty based FMCG Index returns for the pre and post recession outbreak period. The mean return during the pre recession period is lower than the post recession and study period. Mean return of post recession period is higher than pre recession period and even entire study period. It resembles that FMCG Index is slightly affected by recession signals in times of recession period. Whereas, in the times of relatively stable economic conditions i.e. post recession period it is reported higher return. Even in economic booms and busts for study period. Nifty based Pharma Index is posted good return it is higher than pre recession period return, and lower than post recession period. Maximum return per day and maximum loss per day at pre recession period are lower than the post recession period that is why the FMCG Index is called the defensive sector because this Index is merely affected by the recession shocks, when we compare to Nifty50 (-13.43)[3]. Volatility of the returns as measured by standard deviation is more during pre recession period rather than post recession period. The coefficient of Variation is also more during pre recession period than the post recession and also study period. It indicates that more risk and volatility in returns is associated during pre recession period, that the volatility in return is muted by recession shocks. In the long run FMCG Index is nullifying the recessionary effect that is proved by above statistics of study period. It is a result of risk return trade-off between two periods. We reject null hypothesis that the returns of Pharma Index are not normally distributed, for both the pre and post recession period. The same fact is observed in Jarque-Bera test where the null hypothesis of normality is rejected for all the series as it viewed by observing the zero p-values for all the series. It also reported the skewness in Table 1 in order to shed light on the asymmetry of the probability distribution of the FMCG Index, return is negatively skewed during pre and post recession periods. The spread of the distribution of returns as measured by Kurtosis declines slightly in the post recession period. Higher Kurtosis would imply fatter tail, and thus higher risk because of higher probability of observing an extreme event. Sum of the total accumulated returns of this Index is posted during pre recession period, is lower than the post recession period, for the study period it is posted 252 per cent (See Table 1)

**TABLE 1: FMCG INDEX OF NIFTY AT DIFFERENT PERIODS**

| FMCG Index | Pre-recession period (1-4-2002 to 24-10-2008) | Post-recession period (27-10-2008 to 31-3-2014) | Total Period (2002-2014) |
|---|---|---|---|
| Mean | 0.068021 | 0.103911 | 0.084163 |
| Median | 0.002 | 0.054391 | 0.031171 |
| Maximum | 15.69626 | 9.347645 | 15.69626 |
| Minimum | -10.9644 | -7.02427 | -10.96443 |
| Std. Dev. | 1.771375 | 1.432136 | 1.627402 |
| Coefficient of Variation | 26.04 | 13.78 | 19.33 |
| Skewness | 0.36905 | 0.352234 | 0.362935 |
| Kurtosis | 9.456429 | 6.058873 | 8.927987 |
| Jarque-Bera | 2901.571 | 553.4091 | 4454.031 |
| Probability | 0 | 0 | 0 |
| Sum | 112.1658 | 140.0715 | 252.2373 |

Source: Compiled Data Analysis

**IT INDEX OF NIFTY**

Table 2 presents the summary statistics for the daily Nifty based IT Index returns for the pre and post-recession outbreak periods. The mean return during the pre-recession period is lower than the post-recession and study period also. Whereas, Mean return of post-recession period is higher than pre-recession period and even study period. It resembles that IT Index is tuned by economic crisis during recession period. Whereas, in the times of relatively stable economic conditions i.e. post-recession period, it is reported higher return. Even in economic booms and busts for the total study period IT Index is posted normal return, it is higher than pre-recession period return and lower than post-recession period. Maximum return per day during pre-recession period is lower than the post-recession period and maximum loss per day during pre-recession period is more than the post-recession period, that the sector is strongly affected by the recession shocks while compare to Nifty50 (-13.43)[4] Volatility of the returns as measured by standard deviation is more during pre-recession period rather than post-recession period. The coefficient of Variation is also more at pre-recession period than the post-recession and also study period. It indicates that more volatility in returns is associated during pre-recession period. Volatility in return is muted by recession shocks. Moreover, in the long run effects of economic busts are nullified, that is proved by above statistics of study period. It is a result of risk return trade-off between two periods. The Jarque Bera test clearly fails to accept the null hypothesis of normally distributed daily IT Index return, for both the periods of pre and post-recession. It also reported the Skewness in Table 2 in order to shed light on the asymmetry of the probability distribution of the Nifty based IT Index return is negatively skewed, in the pre and post-recession periods. The spread of the distribution of returns, as measured by Kurtosis declines slightly in the post-recession period. Higher Kurtosis would imply fatter tail and thus higher risk because of higher probability of observing an extreme event. Sum of the accumulated log returns for the period of pre recession is posted lower than the post recession period, and the entire study period posted 191 per cent. (See Table 2)

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[3] http://www.nseindia.com/products/content/equities/indices/historical_index_data.htm 23/10/2008 and 24/10/2008 of Nifty
[4] http://www.nseindia.com/products/content/equities/indices/historical_index_data.htm 23/10/2008 and 24/10/2008 of Nifty

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**TABLE 2: SUMMARY STATISTICS OF IT INDEX OF NIFTY**

| IT Index | Pre-recession period (1-4-2002 to 24-10-2008) | Post-recession period (27-10-2008 to 31-3-2014) | Total Period (2002-2014) |
|---|---|---|---|
| Mean | 0.042664 | 0.08984 | 0.063883 |
| Median | 0.04947 | 0.090565 | 0.065128 |
| Maximum | 10.5107 | 12.3866 | 12.3866 |
| Minimum | -28.1396 | -15.8202 | -28.13963 |
| Std. Dev. | 2.240162 | 1.815261 | 2.059727 |
| Coefficient of Variation | 52.50 | 20.20 | 32.24 |
| Skewness | -1.18538 | -0.59192 | -1.027776 |
| Kurtosis | 20.19695 | 14.74359 | 19.56386 |
| Jarque-Bera | 20705.65 | 7824.764 | 34788.54 |
| Probability | 0 | 0 | 0 |
| Sum | 70.35347 | 121.1046 | 191.4581 |
| Observations | 1649 | 1348 | 2997 |

Source: Compiled Data Analysis

**STEPS USED FOR GARCH (1, 1) MODEL**
- Test of Stationarity -ADF- Augmented Dickey-Fuller Unit Root Test
- Test of Autocorrelation of squared residuals
- Volatility clustering and Leverage effect
- ARCH Effect
- Application of GARCH (1,1) model to estimate volatility

**TEST OF STATIONARITY**

The series is non-stationary in the presence of unit root in the series. This unit root can be tested by using Augmented Dickey Fuller (ADF) test. The null hypothesis of unit root representing non-Stationarity is rejected for all Sectoral Indices using ADF test where p-value is close to zero in all cases as reported (Table 3). All series are stationary and we can proceed further to the next step is to find out presence of Heteroskedasticity in the series

**TABLE 3: TEST FOR STATIONARITY: NIFTY BASED SECTORAL INDICES DAILY DATA**

| ADF- Augmented Dickey-Fuller Unit Root Test | | | | | | |
|---|---|---|---|---|---|---|
| Null Hypothesis: Indices are unit root | | | | | | |
| Name of the Indices | Pre recession Period | | Post recession Period | | Total Period | |
| | t-Statistic | Prob.* | t-Statistic | Prob.* | t-Statistic | Prob.* |
| FMCG Index | -41.24779 | 0.0 | -37.75 | 0.001 | -56.11469 | 0.001 |
| IT Index | -30.8677 | 0.0001 | -27.899 | 0.0001 | -41.71297 | 0.0 |
| Test critical values: | 1% level | | -3.4323 | | | |
| | 5% level | | -2.8623 | | | |
| | 10% level | | -2.5672 | | | |

Source: Compiled Data Analysis

From the Table 3 is exhibited ADF- Augmented Dickey-Fuller Unit Root Test result using E-views software that the Nifty Based sectoral indices at pre and post recession period. Here we reject the Null hypothesis because the t-statistic value of all series are more than the test critical value at all levels and the corresponding p-value at all the levels of 1%, 5% and 10% are showing less than 5 per cent, so we reject the Null hypothesis that Indices are unit root meaning that we fail to accept all series are Non-Stationary. Hence, we accept the Alternative hypothesis at all the levels of 1%, 5% and 10% that Indices are not in unit root, as the t-statistic p-value is less than 5 per cent so we conclude that all the series are Stationary so we can proceed further

**Volatility clustering and Leverage effect of sectoral Indices of Nifty for 12 years**

**Volatility Clustering**: It means large return changes are followed by large changes and small changes are followed by small changes

**Leverage Effect**: The conditional variance responds to the positive and negative shocks asymmetrically, higher volatility is observed after negative socks

**FMCG INDEX OF NIFTY**

**TABLE 3.1: NIFTY BASED FMCG INDEX- AUTOCORRELATION OF SQUARED RETURNS**

| Autocorrelation | Partial Correlation | | AC | PAC | Q-Stat | Prob |
|---|---|---|---|---|---|---|
| \|*\| | \|*\| | 1 | 0.198 | 0.198 | 118.15 | 0 |
| \|*\| | \|\| | 2 | 0.106 | 0.07 | 152.07 | 0 |
| \|*\| | \|\| | 3 | 0.104 | 0.074 | 184.4 | 0 |
| \|*\| | \|\| | 4 | 0.099 | 0.063 | 213.89 | 0 |
| \|*\| | \|\| | 5 | 0.088 | 0.049 | 237.4 | 0 |

Source: Compiled Data Analysis

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**FIGURE 1**



Residuals of FMCG index of Nifty

Residual (below)
Actual(above)
Fitted
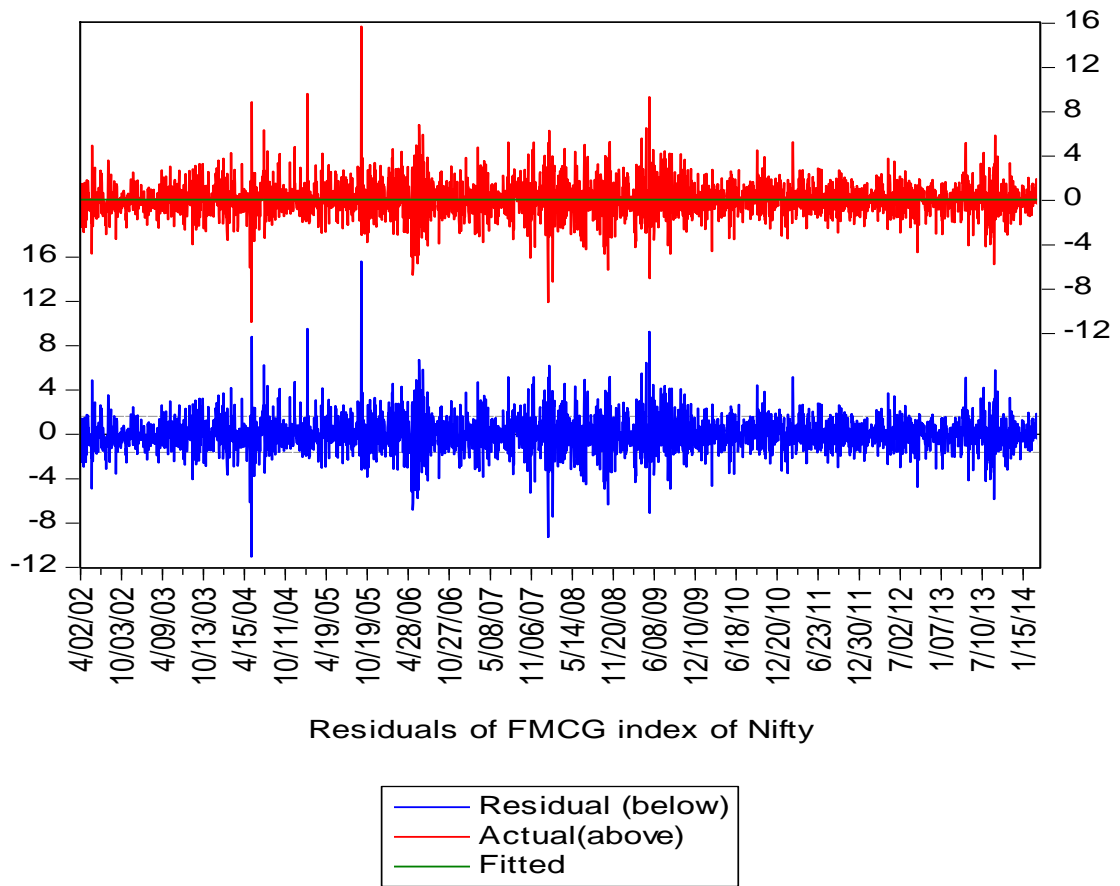
**GRAPH 1**



NIfty Based FMCGs  Index- Daily Value
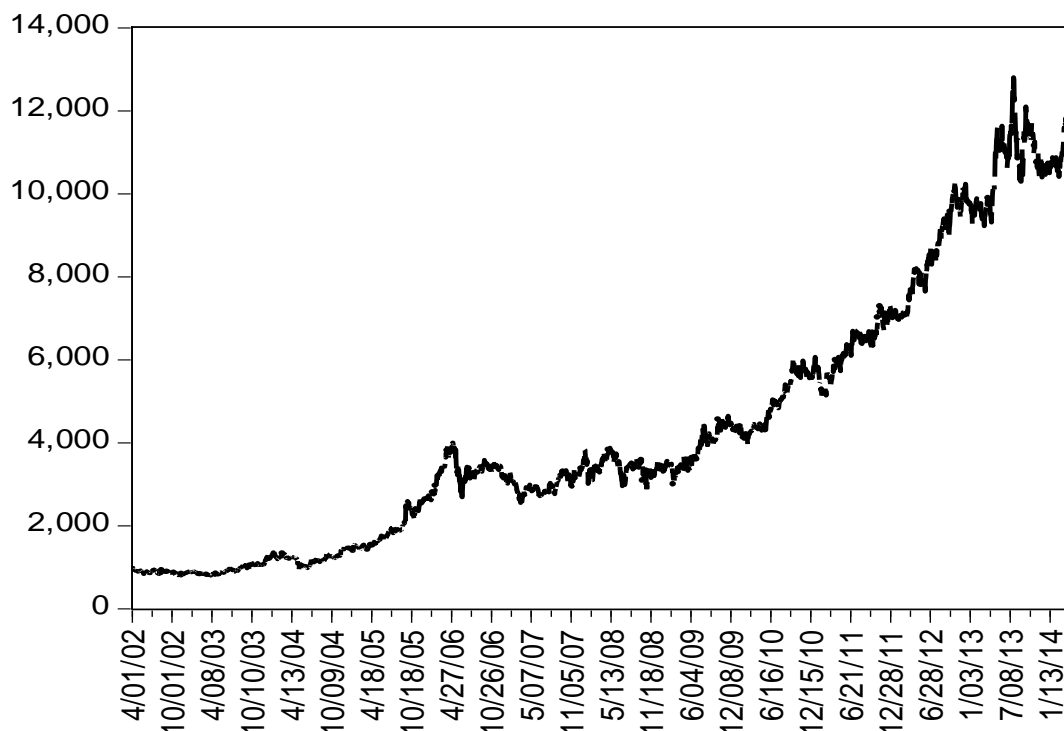
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The significant autocorrelation is found in all cases for squared returns computed up to 5 lags as shown in Table 3. The five lags are chosen because the series is being analyzed daily, and it has five working days in week. Taking the data beyond five days would not make any meaningful interpretation of the results. All the asterisk marks are placed right side of the straight line; it indicates that the squared residuals are positively correlated. These autocorrelations are all positive for the week it is a strong indication of volatility clustering. It means high volatility is followed by high volatility and low volatility is followed by low volatility. It see from figure 1 that there is prolonged period of high volatility from 2007 to 2009, and also there exist a prolonged period of low volatility from 2009 to mid of 2014. In other words, period of low volatility is followed by period of low volatility and period of high volatility tend to be followed by period of high volatility. The volatility is higher after negative shocks as compared to the situation of positive shocks is nothing but leverage effect that is reflect in Graph 1. The above Graph 1 and Figure 1 are shown together to the movement of Index price, and Index return changes, that are helpful to study the effect of price rise and fall on level of volatility. This suggests that residuals or error term is conditionally heteroskedasticity, and it can be represented by ARCH and GARCH Model

**IT INDEX OF NIFTY**

**TABLE 4: NIFTY BASED IT INDEX- AUTOCORRELATION OF SQUARED RETURNS**

| Autocorrelation | Partial Correlation | | AC | PAC | Q-Stat | Prob |
|---|---|---|---|---|---|---|
| \|* \| | \|* \| | 1 | 0.19 | 0.19 | 108.54 | 0 |
| \| \| | \| \| | 2 | 0.06 | 0.025 | 119.43 | 0 |
| \| \| | \| \| | 3 | 0.022 | 0.007 | 120.94 | 0 |
| \| \| | \| \| | 4 | 0.031 | 0.025 | 123.89 | 0 |
| \| \| | \| \| | 5 | 0.028 | 0.017 | 126.26 | 0 |

Source: Compiled Data Analysis

**FIGURE 2**
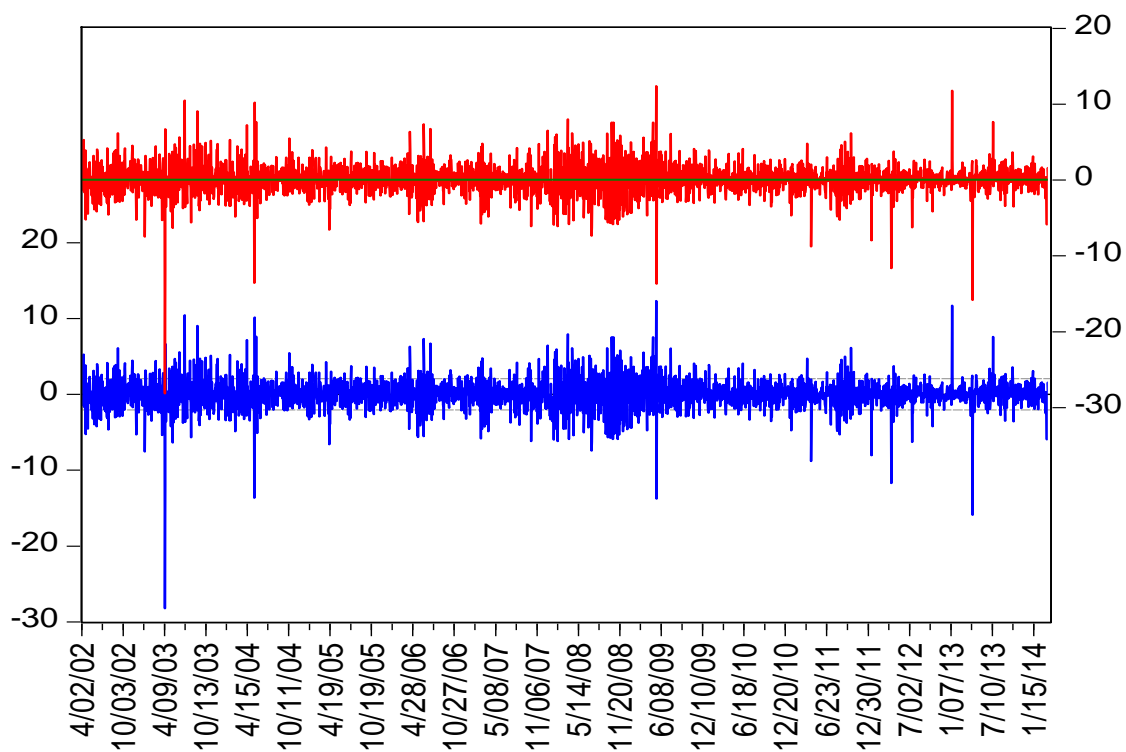


Residuals of IT index of Nifty

Residual (below)
Actual ( Above)
Fitted
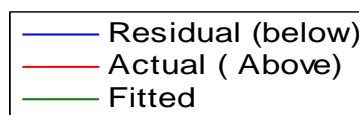
**GRAPH 2**

## NIfty Based IT Index- Daily Value
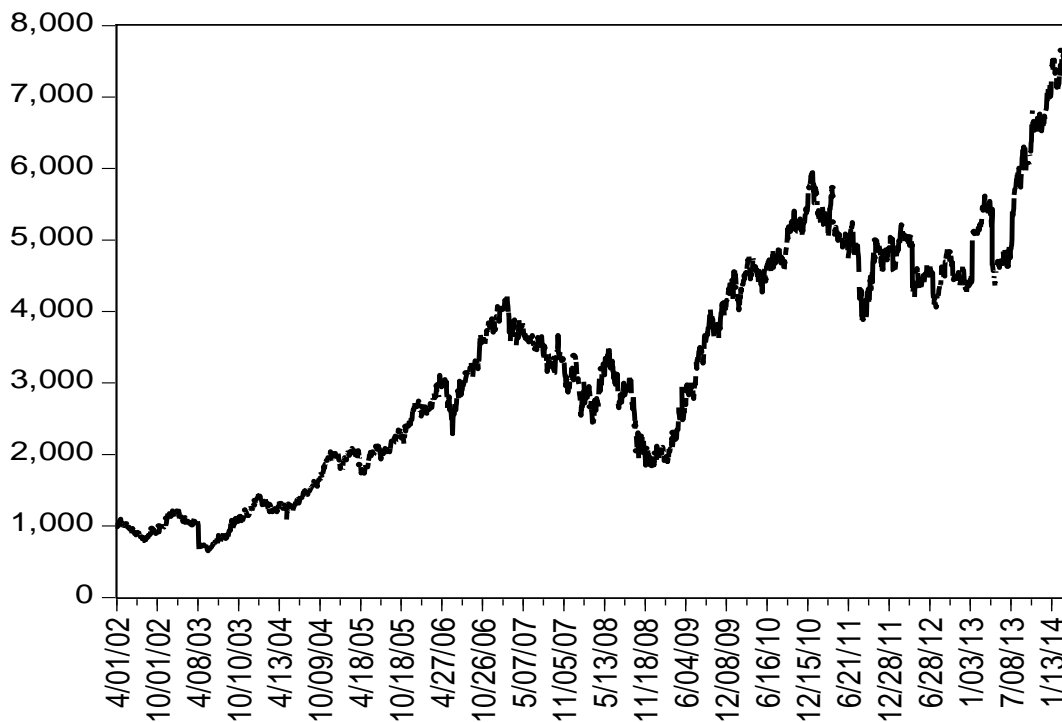


The significant autocorrelation is found in all cases for squared returns computed up to 5 lags as shown in Table 4. The five lags are chosen because the series is being analyzed daily, and it has five working days in week. Taking the data beyond five days would not make any meaningful interpretation of the results. All the asterisk marks are placed right sided of the straight line; it indicates that the squared residuals are positively correlated. These autocorrelations are all positive for the week it is a strong indication of volatility clustering. It means high volatility is followed by high volatility and low volatility is followed by low volatility. We see from figure 2 that there is prolonged period of high volatility from 2007to 2009, and also there exist a prolonged period of low volatility from 2009 to mid of 2014. In other words, period of low volatility is followed by period of low volatility, and period of high volatility tend to be followed by period of high volatility. The volatility is higher after negative shocks, as compared to the situation of positive shocks is nothing but leverage effect that is reflect in Graph 2. The above Graph 2 and Figure 2 are shown together to the movement of Index price, and Index return changes, that are helpful to study the effect of price rise and fall on level of volatility. This suggests that residuals or error term is conditionally heteroskedasticity, and it can be represented by ARCH and GARCH Model

**ARCH EFFECT**

**TEST OF THE PRESENCE OF HETEROSKEDASTICITY IN SELECTED ARMA MODELS**

The autoregressive Conditional Heteroskedasticity- test is used to test the heteroskedasticity. Here the null hypothesis is of no ARCH effect, it means homoscedasticity. The results as shown in table 5 exhibit the presence of heteroskedasticity in the residuals of ARMA Model for the all sectoral Indices. The t-statistics, and the Observed R squares probability is showing the zero meaning that, all the sectoral indices are rejected the null hypothesis and accept the alter native hypothesis that the presence of heteroskedasticity in sectoral indices returns

**TABLE 5**

| Heteroskedasticity Test: | ARCH | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Null Hypothesis: There is no ARCH | | | effect | | | | | |
| Name of the Indices | Pre recession Period | | | | Post recession Period | | | |
| | f-Statistic | Prob.* | Obs*R-squared | Prob. Chi-Square(1) | f-Statistic | Prob.* | Obs*R-squared | Prob. Chi-Square(1) |
| FMCG Index | 57.01 | 0.0011 | 55.17 | 0.0045 | 80.14 | 0.0015 | 75.74 | 0.0026 |
| IT Index | 62.99 | 0.0004 | 60.74 | 0.0026 | 40.50 | 0.00012 | 39.38 | 0.0011 |

Source: Compiled Data Analysis

As reported in the table 5 that the F-statistics is significant for all the indices at 5% as well as 1% level of significance. Thus we reject the null hypothesis of no ARCH effects for all the indices. The presence of ARCH effects means that the series is heteroskedasticity and we should use the GARCH model to estimate the volatility for various indices as this model is capable of capturing volatility clustering.

**GARCH (1, 1) MODEL FOR NIFTY BASED SECTORAL INDICES AT PRE AND POST RECESSION PERIOD**

When the assumption of homoscedasticity is violated it is appropriate to use the model of volatility which takes into consideration time varying feature of volatility, one such model is GARCH model. ARCH Model daily data-Pre recession period 1649 observations and Post-recession period observations are 1348 Total observations are 2997

GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) all indices are significant at 5% level of confidence

**FMCG INDEX OF NIFTY**

**TABLE 6: GARCH MODEL OUTCOME**

| Nifty Based FMCG | Pre recession period | | | Post recession period | | |
|---|---|---|---|---|---|---|
| Name of the Index | ARCH | GARCH | Volatility persistence | ARCH | GARCH | Volatility persistence |
| FMCG Index | 0.21474* | 0.66903* | 0.883785 | 0.065222* | 0.89848* | 0.96371 |

Source: Compiled Data Analysis

Pre recession period the ARCH term coefficient 0.214746 and the GARCH term coefficient is 0.669039 it shows high persistence. The sign of both the coefficients is positive as require by GARCH model. The most of the information (66.90%) comes from the previous day's volatility. The sum of the above two coefficient is 0.883785, the closer the sum of parameters to the unity, the greater is the volatility persistence

Post recession period the ARCH term coefficient 0.065222 and the GARCH term coefficient is 0.898488 it shows high persistence. The sign of both the coefficients is positive as require by GARCH model. The most of the information (89.84%) comes from the previous day's volatility. The sum of the above two coefficient is 0.963710, the closer the sum of parameters to the unity, the greater is the volatility persistence

**IT INDEX OF NIFTY**

**TABLE 7: GARCH MODEL OUTCOME**

| Nifty Based IT | Pre recession period | | | Post recession period | | |
|---|---|---|---|---|---|---|
| Name of the Index | ARCH | GARCH | Volatility persistence | ARCH | GARCH | Volatility persistence |
| IT Index | 0.16780* | 0.8130* | 0.980874 | 0.32326* | 0.54358* | 0.866844 |

SSource: Compiled Data Analysis

*=Indicates that significant at5 per cent level of confidence

Pre recession period the ARCH term coefficient 0.167806 and the GARCH term coefficient is 0.813068 it shows high persistence the sign of both the coefficients is positive as require by GARCH model. The most of the information (81.30%) comes from the previous day's volatility. The sum of the above two coefficient is 0.980874, the closer the sum of parameters to the unity, the greater is the volatility persistence

Post recession period the ARCH term coefficient 0.323261 and the GARCH term coefficient is 0.543583 it shows high persistence. The sign of both the coefficients is positive as require by GARCH model. The most of the information (54.35%) comes from the previous day's volatility. The sum of the above two coefficient is 0.866844, the closer the sum of parameters to the unity, the greater is the volatility persistence

**RISK RETURN RELATIONSHIP BETWEEN FMCG AND IT INDICES OF NIFTY**

Table 8 exhibits that pre recession period FMCG Index log return per day is higher than the IT Index, during post recession period FMCG index of Nifty is reported more return than the IT index of Nifty. Volatility persistence of IT Index is more during pre recession period than the FMCG Index, but in the post recession period IT index is reported lower volatility persistence in the relative stable economic period than the FMCG index. Whereas, IT Index reported Standard Deviation is higher than the FMCG Index under both the conditions it resembles that the IT Index have more risk than FMCG index. During pre and post recession periods IT index reported higher fluctuations as higher Coefficient of Variation, It clears that IT Index higher volatile than FMCG Index, but in the long run, log returns of the FMCG index reported more than the IT index of Nifty, it clears that there is significant difference in returns between FMCG and IT sectors of Nifty. Hence, it rejects the null hypothesis. (see table 8)

**TABLE 8: SUMMARY STATISTICS OF FMCG AND IT INDICES**

| Name of the sector | Pre recession | | | | Post recession | | | |
|---|---|---|---|---|---|---|---|---|
| | Volatility Persistence (GARCH) | S.D | Mean return | C.V | Volatility Persistence (GARCH) | S.D | Mean Return | C.V |
| FMCG Index | 0.883785 | 1.771 | 0.068021 | 26.04 | 0.96371 | 1.43 | 0.103911 | 13.78 |
| IT Index | 0.980874 | 2.240 | 0.042664 | 52.50 | 0.866844 | 1.815 | 0.08984 | 20.20 |
| S.D= Standard Deviation, C.V= Coefficient of Variation, GARCH=GARCH and ARCH terms | | | | | | | | |

Source: Compiled Data Analysis

## XII. CONCLUSTION AND SUGGESTIONS

The main goal of investment analysts is to manage the risk of investment, which requires a better understanding, measurement and forecasting of risk. It depends on a suitable volatility model that can forecast volatility accurately and give a scope to set off the risk. The study concludes that financial crisis were severely affected the IT Index but not FMCG index as such. At the end it can be asserted that investors should give proportionate weight to the industry to their investment for minimizing risk and maximize the return under the recession time by diversifying funds among sectors to hedge the risk.

## XIII. SCOPE FOR FURTHER STUDY

Research is a continuous process. It is a never ending process. In other words, no research study is considered complete as new developments occur, new policies have a bearing, new ways of looking at the same objects emerge, and new tools of analysis emerge impacting the way research is conducted. Hence, there will always be a scope for further study in the same theme or problem. In the course of conducting the research, it was realized there are areas where further research could be conducted.

They are:
1. An attempt could be made to compare the sectoral indices of Nifty with other country sectoral indices
2. The impact of volatility spillovers, leverage effect, contagion effect may be taken up for a closer analysis by taking the macroeconomic indicators.
3. The impact of FIIs on sectoral indices can be taken up as an independent study
4. A scrip level analysis, inter sector analysis and inter market analysis may be useful to capture specific influences

## XIV. LIMITATIONS

1. This study pertains to Nifty listed companies only
2. Factors that are external to the companies (uncontrollable) such as IIP, Bank Rate, Inflation Rate, Currency Rate, GDP Rate etc., and Factors which are internal to the companies (Controllable) such as fundamentals of the company are not considered in this study.
3. The analyses were based on the secondary data any limitations pertaining to them would significantly affect the accuracy of the results.
4. The pattern of return and volatility of sectoral stock indices of Nifty in India is studied only for the pre and post recession period 2002 to 2014

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**APPENDIX**

### TABLE 9: FMCG COMPANIES REPRESENTING TO NIFTY

| Name of the Sector | Year | Companies represented to CNX NIFTY | | |
|---|---|---|---|---|
| FMCG | 2002-03 | BRITANIA | | DABUR |
| | | DABUR | | HUL |
| | | HUL | | ITC |
| | | ITC | | |
| | | | | DABUR |
| | 2003-04 | | | HUL |
| | | BRITANIA | | ITC |
| | | DABUR | | DABUR |
| | | HUL | | |
| | | ITC | 2009-10 | HUL |
| | 2006-07 | | | ITC |
| | | DABUR | | |
| | | HUL | | |
| | | ITC | 2010-11 | HUL |
| | | | | ITC |
| | 2007-08 | | | |
| | | HUL | | |
| | | ITC | 2011-12 | HUL |
| | | | | ITC |
| | 2008-09 | | 2012-13 | HUL |
| | | HUL | | ITC |
| | | ITC | 2013-14 | HUL |
| | | | | ITC |

### TABLE 10 PART 1: IT COMPANIES REPRESENTING TO NIFTY

| Name of the Sector | Year | Companies represented to CNX NIFTY | | |
|---|---|---|---|---|
| IT INDEX | 2002-03 | | 2005-06 | |
| | | HCL TECH | | HCL TECH |
| | | NIIT | | INFOSYS |
| | | INFOSYS | | SATYAM COMP |
| | | SATYAM COMP | | TCS |
| | | WIPRO | | WIPRO |
| | | | | |
| | 2003-04 | | 2006-07 | |
| | | HCL TECH | | HCL TECH |
| | | INFOSYS | | INFOSYS |
| | | SATYAM COMP | | SATYAM COMP |
| | | WIPRO | | TCS |
| | | | | WIPRO |
| | 2004-05 | | | |
| | | HCL TECH | 2007-08 | |
| | | INFOSYS | | HCL TECH |
| | | SATYAM COMP | | INFOSYS |
| | | WIPRO | | SATYAM COMP |
| | | | | TCS |
| | | | | WIPRO |

### TABLE 10 PART II: IT COMPANIES REPRESENTING TO NIFTY

| | | | |
|---|---|---|---|
| 2008-09 | | 2011-12 | |
| | HCL TECH | | HCL TECH |
| | INFOSYS | | INFOSYS |
| | TCS | | TCS |
| | WIPRO | | WIPRO |
| | | | |
| 2009-10 | | 2012-13 | |
| | HCL TECH | | HCL TECH |
| | INFOSYS | | INFOSYS |
| | TCS | | TCS |
| | WIPRO | | WIPRO |
| | | | |
| 2010-11 | | 2013-14 | |
| | HCL TECH | | HCL TECH |
| | INFOSYS | | INFOSYS |
| | TCS | | TCS |
| | WIPRO | | TECH MAHINDRA |
| | | | WIPRO |
| | | | |

# MEASURE OF OCTAPACE CULTURE ON JUNIOR LEADERS IN THE ARMY: A STATISTICAL PERSPECTIVE

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**ABSTRACT**

*The Indian Army has evolved to its current form during the last 6 decades of independent India. Factors contributing to this evolution are intent and modus operandi of our Adversaries, Technology, demographic issues, and finally the Human Resource Management. It is prudent that impact of Organisation Culture on related HR issues in the Army be periodically measured or tested. This would ensure the senior leadership gets a truthful evaluation of contemporary situation and evolve framework and policies akin to the need of the day. This paper focuses on one such tool "OCTAPACE" duly adapted to assess the Organisation Culture of the Army at the Functional level. Army nurtures three distinct attributes during the formative years; Firstly Team Work and Leadership; Secondly, Initiative; Thirdly, Degree of Autonomy. The eight dimensions of OCTAPACE have been grouped as these three factors and analysed. A descriptive research design was undertaken using the standard OCTAPACE questionnaire. Analysis of the responses from 55 Junior Leaders of the army, using statistical tools indicate that the over all OCTAPACE score is 112.34 on a max of 130. The results show that the unilaterally excellent OCTAPACE Culture. Openness and Trust are complementing each other. The correlations between confrontation and collaboration indicate that Team Work is constantly nurtured. Values of Authenticity are not encouraging though this a key component of Team Work. Initiative at junior leadership level has been confirmed by high mean values and high correlation of Proaction and experimentation. Certain know facts on restricted degree of autonomy, requires a relook by the Army. Next, downward trend of authenticity at Junior Level requires immediate attention. The role of junior leadership in the overall organisational effectiveness is crucial and the need to create the required environment for OCTAPACE culture.*

## KEYWORDS

team work, initiative, autonomy, OCTAPACE,army organisation culture.

## 1. INTRODUCTION

rganization culture starts up with a decorum adopted by its stakeholders in form of sharing information, behaviours, values & interests. This provides the team with the clarity of the way things are done around them in their setup; This aspect is a common understanding between employees regarding their organization.

Culture in an organization differs with the hierarchy. Predominantly the culture which is shared & accepted by the majority of the organizations members, at the micro level it could reflect the common problems & situations faced by every member in the organization within his own group or department.

A study of organizational culture is relevant. OCTAPACE profiling is used to shortlist such factors in government organisation too. Similar study for the Indian Army is essential to gauge the internal dynamics at functional, directional and conceptual levels.

OBJECTIVE

The virtues of team work, initiatives and autonomy are key factors to achieve combat effectiveness. Mapping them with the time tested parameters of the OCTAPACE technique as propagated by Pareek would be the basic template for the army.

The next objective would be to identify how well the OCTAPACE template can be used to measure the Organisation culture of an institution as the Army. This is a necessity as army is non profit organisation, issues related to exodus of its soldiers are non existant, there is no retrenchment, lastly, it is an organisation which cannot fail when called upon to deliver both in peace and in war.

## 2. LITERATURE REVIEW

Appropriate literature review was undertaken to answer our objectives. We have used key words like **Team Work, Initiative, Autonomy, OCTAPACE**, to search literature.

We have adopted the principle of inclusion/exclusion based on review of abstracts. However, no single study reflected on the Indian Army and Organisation Climate of Indian Army. The work force in the army is primarily human, thus measure of OCTAPACE CULTURE assumes importance.

Organizational culture (Peters & Waterman,1982) defines it as a sequence evolution of of beliefs, rituals, symbols, and myths, with the aim of reducing human variability and control. In addition, to influence employee behaviour in organization.

Organizational culture (Subrahmanian,2012) in addition to ethics, values and beliefs, factors such as attitudes, norms, ethos, climate, environment, and culture do have an impact.

According to Pareek (Pareek,U,1996), root of a culture, has a three level concept ; at first level is "values" which give a unique identity and pivots the ethos of a group. He defines ethos as "Underlying spirit of character or group and is the root of culture". At the second is "climate", which is (Pareek,U,1996) the perceived characteristics of members and their organisation. "Atmosphere", is the third level these are factors which affect the growth and progression of an organisation. The (Pareek,U,1996) eight dimensions of OCTAPACE culture are Openness, Confrontation, Trust, Authenticity, Pro-action, Autonomy, Collaboration, and Experimentation. Any organisation scoring high on the OCTAPACE values have a greater chance of success. This is due to the cohesive, homogeneous and conducive conditions for team effort.

A study (Feza, T. A and Sharma,2007) comparing the organizational culture of IT and Banking sectors in India using OCTAPACE reveals that the mean score of IT companies on "Openness", "Proaction", and "Experimentation" were high, where as in the banking sectors other dimensions excelled. It is also concluded that similar industry has displayed similar cultural values.

Implementation of OCTAPACE Culture enhances the company performance level, this has been proven by successful TPM initiative undertaken (Srivastav, S.K and Srivastava,.P 2004).

A review paper (Farokhi, Murty 2014) homes on to Organisational Context, Organisation Structure, Relationship between superior and subordinates, Physical environment and Values and Norms and suggests that following techniques may be helpful in improving the organisational climate: (i) Open Communication, (ii) Concern for People, (iii) Participative Decision-making (iv) Change in Policies: (v) Technological Changes

S.A. Mufeed and S.N.Rafai, in their study related to the Tourism Sector reveal that high organization dynamics and effectiveness manifest itself as high OCTAPACE profile.

Another study (S Jain, N Mehta and V Bagai,2014) on an Indian Nationalized Bank using OCTAPACE survey analysed that ethos fosters honesty and trust, it replenish member's energy, build collective strength and develop emotionally intelligent culture, this must be encouraged. Thus, a positive workplace atmosphere deriving out of the unique culture is worth developing, as it becomes the foundation of true organizational success.

## 3. RESEARCH GAPS IDENTIFIED

Similar study on the Army organisation culture has not been reviewed. The Table 1 below maps the essential factors that promotes effective junior leaders and also identifies their priority. These are Team Work; Initiative and Autonomy. Based on these guidelines OCTAPACE measure has been undertaken.

TABLE 1: OCTAPACE MAPPING FOR THE ARMY

| Corporate | OCTAPACE MAPPING | | Army |
|---|---|---|---|
| | Meaning | Outcome | |
| Openness | Freedom to communicate, share and interact without hesitation. Receiving feedback from customers and giving ideas and suggestions to team members. | Greater clarity of objectives and free interaction among people. Frank & candid performance feedback. Openness will manifest as productive meetings & participative decision making. All inclusive contribution towards selection and maintenance of goals. | Courage of Conviction Expression Moral Courage **Promotes: Team Work** |
| Confrontation | Raising up to the challenges and not bypassing it. Also Implies intrapersonal Problems | Reduced ambiguty, self involvement & eagerness to resolve problems especially with 'difficult' employees. There will be willingness of stakeholders for a dialogues on sensitive issues. Outcomes, are guided by periodical discussions firm actions and not procrastinating awkward matters Facing a problem and Jointly resolving seeking clarity. | **Promotes: Team Work** |
| Trust | The etiquette of discretness in handling of information shared by others and company. | Faith, esprit de corps & camaradrie Reduction of paper work, empowerment and improved performance index | Dependability |
| Authenticity | The ability to convey as per ones conscience. Accepting ones faults | No inhibitions "Open Book" approach & Avoiding clutter in communication. | Camaraderie **Promotes: Team Work** |
| Pro action | Taking initiative, Preparation for contingencies | Readiness to embark on bold new ventures or immediate concerns. | **Promotes: Initiative** |
| Autonomy | The liberty to act within ones domain, area of influence | Being free from the control of superiors. Ownership of ones decisions | Delegation |
| Collaboration | Mutual support to team members | Synergy, positivity & assured success. | **Promotes: Team Work** |
| Experimentation | "Out of the Box" Solutions; Creativity | Path-breaki ng methods; Pioneering efforts to problem solving | Innovativeness **Promotes: Initiative** |

Openness is the start point for **Team Work** which is fuelled by effective Confrontation, Authenticity and Collaboration ultimately leading to Trust / Dependability. This virtue is essential in junior leadership. (Greater Trust implies Greater Dependability). Next factor is Initiative, Pro Action and Experimentation promotes Initiative. The last factor is Autonomy.

Independent survey of such details has been undertaken to identify the degree of job satisfaction and its contribution towards combat performance at functional level.

## 4. OBJECTIVES FOR THE STUDY

1. To measure the organizational culture of the Army at junior leadership level
2. To identify the perceptions of junior officers with regards to OCTAPACE culture at functional level.
3. To analyze the relationship among OCTAPACE dimensions to promote effective junior leadership.

## 5. HYPOTHESIS

**Null Hypothesis (Ho)** :- The mean values of Octapace variable equate with each other ie $\mu1=2\mu=3\mu=4\mu=5\mu=6\mu=7\mu=8\mu$

All components of Octapace hold equal Importance in an Organization

Where $\mu1$=Mean of openness; $\mu2$= Mean of Confrontation; $\mu3$= Mean of Trust; $\mu4$= Mean of Authenticity; $\mu5$=Mean Pro-Autonomy; $\mu6$=Mean of Autonomy; $\mu7$=Mean of Collaboration; $\mu8$=Mean of Experimentation.

**Alternate Hypothesis (H1)** :- The mean values of Octapace variables do not equate with each other. $\mu1\neq \mu2\neq\mu \neq3\mu\neq4\mu\neq5\mu\neq6\mu\neq7\mu\neq8\mu$

## 6. RESEARCH DESIGN

Research Design is discussed in the succeeding paragraph.

**RESPONDENTS:** The main source of primary data was Junior Officers of the Army (Rank of Captain & Majors below 8 Years of Service) on their perception / assessment of Organisation Culture.

**SAMPLES:** Random sampling technique has been used, where in we selected a group of subjects (a sample) for study from a larger group (a population).In the context of the subject, respondents were appropriately identified. To reduce the **non-response bias**, the team physically issued the questionnaire, held a cross dialogue and retrieved the necessary inputs from the respondents for primary data. In addition, conducting validation studies and other data quality control measures were considered as alternative to reduce inadvertent errors. **A Sample Size of 55 Army Officers was utilised.**

**METHOD OF INVESTIGATION:** Descriptive research was performed with the aim to ascertain and be able to explore the characteristics of variables to be focussed. This would enable us to arrive at new insights into the culture, and build a comprehensive picture of organizational culture affecting effectiveness of junior leadership. Based on the experiences of Young Officers of the Army, In the context of the subject, respondents were appropriately identified maintaining randomness. The data have been analyzed using "SPSS" Version 19.0.

**INSTRUMENT USED :** The instrument designed by Udai k. Pareek has been used in this study. This 40-item instrument that gives the profile of organization's ethos on the following values: Openness, Confrontation, Trust, Authenticity, Proaction, Autonomy, Collaboration and Experimentation.

**QUESTIONNAIRE DESIGN:** The questionnaire uses four point rating scale is divided into two parts. In part I, includes questions 1 to 24 (three statements of each of the eight values), rating on a four point scale indicates the respondants perception of his organisation. Similarly, Part 2 contains sixteen statements on beliefs, two each for eight values.

## 7. DATA COLLATION, ANALYSIS AND FINDINGS

**RELIABILITY STATISTICS**

Table 2 below gives the measure of internal consistency & reliability Cronbach's Alpha value of 0.870 indicates highly levels of data consistency & reliability.

**TABLE 2: RELIABILITY STATISTICS**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .870 | .859 | 8 |

**DESCRIPTIVE STATISTICS**

Refer Table 3 below Grouping based on Army prioritised three Factors the OCTAPACE dimensions is analysed as follows:

**TABLE 3: DESCRIPTIVE STATISTICS**

| | N | Range | Min | Max | Sum | Mean | Std. Dev | Skewness | |
|---|---|---|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error |
| Openness | 55 | 14 | 6 | 20 | 771 | 14.02 | 3.739 | -.447 | .322 |
| Confrontation | 55 | 9 | 10 | 19 | 842 | 15.31 | 2.755 | -.429 | .322 |
| Trust | 55 | 8 | 9 | 17 | 764 | 13.89 | 2.386 | -.545 | .322 |
| Authenticity | 55 | 9 | 6 | 15 | 642 | 11.67 | 1.906 | -.893 | .322 |
| Pro Action | 55 | 10 | 10 | 20 | 895 | 16.27 | 2.745 | -.726 | .322 |
| Autonomy | 55 | 8 | 8 | 16 | 680 | 12.36 | 2.076 | -.212 | .322 |
| Collaboration | 55 | 8 | 10 | 18 | 802 | 14.58 | 2.016 | -.075 | .322 |
| Experimentation | 55 | 10 | 9 | 19 | 799 | 14.53 | 2.918 | -.328 | .322 |
| Valid N (listwise) | 55 | | | | | | | | |
| **Respondents** | **Openness** | **Confrontation** | **Trust** | **Authenticity** | **Pro Action** | **Autonomy** | **Collaboration** | **Experimentation** | **Total** |
| Low | 13 | 10 | 10 | 10 | 12 | 11 | 13 | 11 | 90 |
| High | 17 | 16 | 16 | 14 | 18 | 16 | 17 | 16 | 130 |
| RANGE | 4 | 6 | 6 | 4 | 6 | 5 | 4 | 5 | |
| Excellent | 16-17 | 14.5-16 | 14.5-16 | 13-14 | 16.5-18 | 14.75-16 | 16-17 | 14.75-16 | |
| Very Good | 15-16 | 13-14.5 | 13-14.5 | 12-13 | 15-16.5 | 13.5-14.75 | 15-16 | 13.5-14.75 | |
| Good | 14-15 | 11.5-13 | 11.5-13 | 11-12 | 13.5-15 | 12.25-13.5 | 14-15 | 12.25-13.5 | |
| Satisfactory | 13-14 | 10-11.5 | 10-11.5 | 10-11 | 12-13.5 | 11-12.25 | 13-14 | 11-12.25 | |
| Below Satisfactory | <13 | <10 | <10 | <10 | <12 | <11 | <13 | <11 | |
| Max | 20 | 19 | 17 | 15 | 20 | 16 | 18 | 19 | |
| Min | 6 | 10 | 9 | 6 | 10 | 8 | 10 | 9 | |
| **Mean** | **14.018** | **15.309** | **13.891** | **11.673** | **16.273** | **12.364** | **14.582** | **14.527** | **112.636** |
| Sd | 3.739 | 2.755 | 2.386 | 1.906 | 2.745 | 2.076 | 2.016 | 2.918 | |
| **Grading** | **Good** | **Excellent** | **Very Good** | **Good** | **Very Good** | **Good** | **Good** | **Very Good** | |

The Null Hypothesis (Ho) fails ie The mean values of Octapace variable <u>Do Not</u> equate with each other.

**Team Work** : The contributors are:

Openness in the organization is at low level this shows that junior officers do not have the freedom to communicate within the Army.

Confrontation is closer to the higher norms which specify that junior leaders face their challengess and have clarity in resolving issues.

Trust among the peer group and subordinates is at the highest level which indicates greater level of mutual understanding and confidence between them.

Authenticity is in the lower level implies that junior leaders have limited edelegation of work and responsibility.

Collaboration, mean scores indicates average level of assistance to each other in problem solving.

To summarise Openness, Authenticity& Collaboration are in the proximity of lower norms of the value, while Trust and Confrontation lean towards higher norms.

**Initiative:** The contributors are:

Higher level of Proaction depicts that readiness & initiative exists in the organization.

Experimentation is also at the higher level which represents that the junior leaders can invest on their innovative thoughts. Foster new ideas and processes which is essential in combat environment

**Autonomy**: Autonomy is closer to lower norms, thus, limited freedom is given to take decisions. Implying limited autonomy may be due to focus is on battle drills and need for implicit obedience.

**In addition to the above a vital observation relates to low scores in Authenticity and Autonomy**.

**Correlation Analysis:** To find out the relationship between the OCTAPACE dimensions

**TABLE 4: CORRELATION ANALYSIS**

| Inter-Item Correlation Matrix | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Openness | Confrontation | Trust | Authenticity | Pro Action | Autonomy | Collaboration | Experimentation |
| Openness | 1.000 | .704 | .762 | .183 | .535 | .631 | .534 | .722 |
| Confrontation | **.704** | 1.000 | .755 | .228 | .721 | .255 | .661 | .629 |
| Trust | **.762** | **.755** | 1.000 | .310 | .542 | .195 | .633 | .546 |
| Authenticity | .183 | .228 | .310 | 1.000 | .042 | .101 | -.022 | .068 |
| Pro Action | .535 | **.721** | .542 | .042 | 1.000 | .018 | .617 | .648 |
| Autonomy | **.631** | .255 | .195 | .101 | .018 | 1.000 | .210 | .322 |
| Collaboration | .534 | **.661** | **.633** | -.022 | **.617** | .210 | 1.000 | .580 |
| Experimentation | **.722** | **.629** | .546 | .068 | .648 | .322 | .580 | 1.000 |

Data in table4 above enables us to analyse the degree of correlation and the relationship between the dimensions of OCTAPACE

**Between Team Work factors**

Correlations between Openness & Trust (r=0.762), Openness & Confrontation (r=0.704), Openness & Collaboration (r=0.534) while **Openness & Authenticity (r=0.183)**

Correlations between Trust & Confrontation (r=0.755), Trust & Collaboration (r=0.633) while **Trust & Authenticity(r=0.310)**

Correlation between **Confrontation & Authenticity (r=0.228),**Confrontation & Collaboration (r=0.661)

Correlation between **Authenticity & Collaboration (r= -0.022)**

**Between Initiative Factors**

Correlations between Proaction & Experimentation (r=0.648) Proaction & Openness (r=0.535), Proaction & Trust (r=0.542), and Experimentation & Openness (r=0.722), Experimentation & Trust (r=0.546)

**Degree of Autonomy with others**

Correlations between Autonomy & Openness (r=0.631), Autonomy & Trust (r=0.195), Autonomy & ProAction (r=0.018), Autonomy & Experimentation (r=0.322)

## 8. SUMMARY & IMPLICATIONS

The results of correlation indicate majority of the factors are highly correlated to each other. Negative correlation exists between Authenticity & Collaboration (r= - 0.022)

Trust and Openness (r =0.762 ) are positively correlated to each other which indicates that the Junior Leaders confide in each other.

The high correlation between Confrontation and Experimentation (r=0.629) conveys that junior leaders are creative and take new steps in facing challenges and solving problem.

Correlation of Proaction and Experimentation r=0.648 is reassuring that Junior leaders in the army do take initiatives, induce fresh ideas and pioneer methods in mission accomplishment.

## 9. RECOMMENDATIONS

From the findings it is evident that in the context of the requirement of the army and the opportunity for Junior leaders to perform, OCTAPACE CULTURE measures well. Issues which require attention are:

1. Team work factors. Amongst team work factors Authenticity scores are at the lowest level, as it is the convergence between what one feels, says and does. There exist inhibitions "to own up up one's mistakes and sharing of feelings". This issue has to be addressed.
2. Autonomy is the next aspect. Freedom to plan and execute beyond one's own area of influence seems to be restricted. Information on Need to Know basis limited delegation at Junior leadership level must require a relook and clean demarcation between operation / combat conditions and peace time/ training requirements. In Peace, implementing would encompass develops willingness to take responsibility; mentoring for succession planning. The indicators are effective delegation of work and limited or minimal references of existing approved plans in peace conditions. Autonomy at functional level is essential to sustain progressiveness. While, Combat conditions will require a different set of yard stick.

## 10. CONCLUSIONS

Team work, Initiative and Autonomy together has the synergic effect for successful combat mission. Based on the need, equi-participation of all combatants must be welcomed. "Selection and Maintenance of Aim" a primary principle of the armed forces must always be the focal point. Traditional leadership in the Armed forces has a tendency to propagate "Need to Know/Involvement Basis" approach on all matters.

## 11. LIMITATIONS OF THE STUDY & WAY AHEAD

This is a review and analysis of survey conducted in-house with Junior leaders, Similar options with middle level and senior level Officers of the army must be undertaken. Subsequently, the combat arms and Services have to be assessed. The components considered are not comprehensive enough to come to a conclusion.

Reviewing OCTAPACE culture periodically requires a sagacious mind and judgment. There are no mathematical formula used to determine the outcome and no standard measures can be applied. While we assess the components singularly to identify any dynamism, we need to view them as a complete package when arriving at conclusions.

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# DIVIDEND POLICY AND DIVIDEND THEORIES: THE WAY AHEAD

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## ABSTRACT

*A major issue concerning dividend policy is whether decisions by corporate management as to the amount of dividend paid actually affect the wealth of the shareholders. However, the effect of dividend policy decision on the firm's market value of share is a long standing controversy. Conventional corporate finance wisdom specifies that the dividend decision does matter and that the time and effort spent by management and the board of directors on this decision is justified. The fact that dividends paid today have more value than those received tomorrow must be considered in the payout decision (Gordon, 1962). In other words, traditional financial theorists and most practitioners feel that dividends do matter. Arbitrary changes in dividends, especially dividend cuts, must be carefully considered (Lintner, 1956). Certain theories consider the dividends decision as relevant to the value of the firm measured in terms of market price of the shares. On the other hand, some theories says dividends paid has no effect on the valuation of the firm. So in this paper an attempt has been made with respect to dividend policy and dividend distribution theories in the context of relevant and irrelevant.*

## KEYWORDS

Dividend policy, corporate finance, Dividend decision, valuation.

## INTRODUCTION

ividend policy decision is considered one of the three major decisions of financial management. The decision of the firm regarding how much earnings could be paid out as dividend and how much could be retained is the concern of dividend policy decision. It determines what proportion of earnings is paid out to shareholders by way of dividends and what proportion is ploughed back in the company for reinvestment purposes. The development of such policy will be greatly influenced by investment opportunities available to the firm and the value of dividends as against capital gains to the shareholders. Management should develop such a dividend policy, which divides the net earnings into dividends and retained earnings in an optimum way to achieve the objective of maximizing the wealth of shareholders.

The dividend policy has been an issue of interest in financial literature since Joint Stock Companies came into existence. Academicians and researchers have attempted to solve several issues pertaining to dividends and formulate theories and models to explain corporate dividend behaviour. Despite many research conducted by financial economists, the issue of dividend policy determinants still remains debatable. Researchers have primarily focused on developed markets; however, additional insights into the dividend policy debate can be gained by an examination of developing countries which is currently lacking in the literature.

## DIVIDEND DEFINED

Dividend is defined as the distribution of a portion of a company's earnings, decided by the board of directors, to a class of its shareholders. Dividends can be issued as cash payments, as shares of stock, or other property.

While determining dividend payment, a prudent manager strikes a balance between shareholder's expectations and firm's long-term interest. Such analysis is of great relevance to policy makers, because as the dividend literature suggest, if these decisions are handled efficiently, this is expected to be reflected in the firms' value.

## LITERATURE REVIEW

- Mahapatra and Sahu (1993) analyzed the determinants of dividend policy using the models developed by Lintner (1956), for a sample of 90 companies for the period from 1977-78 to 1988-99. They found that cash flow was a major determinant of dividend followed by net earnings. Further, their analysis showed that past dividend-and not past earnings was a significant factor in influencing the dividend decision of companies.
- Gugler and Yurtoglu (2003) investigated the relationship between dividends, ownership structure and control rights for German and Australian firms, respectively and they found large shareholding of the largest owner reduces dividends pay-out ratio, while shareholdings by the second larger owner increases it and interpreted the results that state controlled firms engaged in dividend smoothening, while family controlled firms do not. The behaviour of the foreign controlled firms lie in between state controlled and family controlled firms in consistent with the "expected ranking" of information asymmetries and managerial agency cost hypothesis.
- De Angelo, De Angelo and Skinner (2004) observe that during the period of their study (1978-2000) nominal dividends paid by the companies in US increased manifold, even real dividends doubled during this period. This aggregate dividend increase is even in the face of radical decline in the number of dividend-payers. They find that both dividend and earnings concentration have increased substantially from the already high level.
- Subba Reddy Y. and Rath S. (2005) examined Dividend trends for large sample of stocks traded on Indian markets indicated that the percentage of companies paying dividend declined from over 57% in 1991 to 32% in 2001, and that only few firms paid regular dividends. Dividend – paying companies were less likely to be larger and more profitable than non-paying companies, though growth opportunities do not seem to have significantly influenced the dividend policies of Indian firms. The rise of the number of firms not paying dividends is not supported by the requirements of cash for investments
- Pal and Goyal (2009) conducted a study on the determinants of dividend policy pertaining to Indian IT industry for the period 1996-97 to 2005-06. They concluded that lagged dividend, PAT, Depreciation and sales are the most important factors affecting dividend decisions of the industry.

## OBJECTIVES OF THE STUDY

1) To know the dividend policy decisions taken by the firm.
2) To know the dividend decision and value of shares based on dividend theories.
3) To trace out the assumptions and criticism of the dividend theories.

## RESEARCH METHODOLOGY

This paper is theoretical modal based on the extensive research for which the secondary source of information has gathered. The sources include online publications, Books and journals.

## DIVIDEND POLICY

Dividend is the part of company's profit which is given by company to its shareholders. As the shareholders invest their valuable money in the company, so they want to get the maximum return out of it. But in case the company pays the more of it's earning in form of dividend than the company has to depend upon the outside resources for its survival. So it is necessary for the growth of the company to pay adequate amount of dividend.

Dividend policy can be of two types: managed and residual. In residual dividend policy the amount of dividend is simply the cash left after the firm makes desirable investments using Net Present Value (NPV) rule. Normally, the amount of dividend is highly variable and often zero. If the manager believes dividend policy is important to their investors and it positively influences share price valuation, they will adopt managed dividend policy. Firms generally adopt dividend policies that suit the stage of life cycle they are in. For instance, high- growth firms with larger cash flows and fewer projects tend to pay more of their earnings out as dividends. The dividend policies of firms may follow several interesting patterns adding further to the complexity of such decisions. First, dividends tend to lag behind earnings, that is, increases in earnings are followed by increases in dividends and decreases in earnings sometimes by dividend cuts. Second, dividends are "sticky" because firms are typically reluctant to change dividends; in particular, firms avoid cutting dividends even when earnings drop. Third, dividends tend to follow a much smoother path than do earnings. Finally, there are distinct differences in dividend policy over the life cycle of a firm, resulting from changes in growth rates, cash flows, and project investments in hand. Especially the companies that are vulnerable to macroeconomic vicissitudes, such as those in cyclical industries, are less likely to be tempted to set a relatively low maintainable regular dividend so as to avoid the dreaded consequences of a reduced dividend in a particularly bad year. Over time, the number of factors identified in the literature as being important to be considered in making dividend decisions increased substantially. A number of conflicting theoretical models, all lacking strong empirical support, define recent attempts by researchers in finance to explain the dividend phenomenon. But to come with concrete conclusions an exhaustive study of all theoretical models together with empirical proof is needed. Previous empirical studies have focused mainly on developed economies. In Indian context, few studies have analyzed the dividend behavior of corporate firms. However, it is still not apparent what the dividend payment pattern of firms in India is.

## DIVIDEND DECISIONS AND VALUATION OF SHARES

It is generally said that the value of the firm is maximized if the shareholders get maximum wealth which means if they get maximum dividend. But some believe that the dividend decision does not affect the value of the firm. For this purpose the two theories have been given and these are discussed below.

### 1) THEORY OF IRRELEVANCE

This theory states that the dividend decision does not affect the shareholders wealth as well as value of the firm. That's why this theory is called theory of irrelevance. This theory further explained with the help of two different approaches.

**i) Residual approach:** as per this approach dividend decision does not affect the shareholders wealth as well as value of the firm. The investors don't want to earn dividend only they want to earn high return on their investment. This means that if the firm is in the situation to gain high profit than the shareholders would like to keep their money with the firm and on the other hand if the firm is not in a position to get profitable opportunity than the shareholders would like to receive the earning in form of dividend.

**ii) Modigliani and miller approach:** as per this approach also dividend decision does not affect the shareholders wealth as well as value of the firm rather it is decided by the earning capacity of the firm or its investment policy. This theory assumes:

a) There are no taxes
b) There is a perfect market
c) Investors act rationally
d) No transaction cost
e) All earning goes to the shareholders
f) Rigid investment policy of the firm

**Po = D1+P1/1+Ke**

The above formula means that the market price of the shares at the beginning of the period (Po ) is equal to the present value of dividend paid at the end of the period (D1 ) plus market price of the shares at the end of the period (P1 ) divided by 1+ cost of equity (1+ Ke)

**FIGURE 1**

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**Criticism of the approach:** this approach has been criticized on the following grounds.
1. Perfect capital market does not really exist.
2. The firm has to incur flotation cost.
3. Taxes really exist.
4. There is no rigid investment policy.
5. The company information is available to all.

**2) THEORY OF RELEVANCE**

This theory states that the dividend decision affect the shareholders wealth as well as value of the firm. Because the dividend communicate the investors the information about the company's profit. That's why this theory is called theory of relevance. This theory further explained with the help of two different approaches.

**a.) Walter's approach:** as per this approach dividend decision affect the shareholders wealth as well as value of the firm. The relationship between the internal rate of return and cost of capital is helpful in determining the dividend policy, as this approach is based upon return on investment (r) and cost of capital (k). James. E. Walter has given three types of the firm

i) **growth firm;** in this case the r > k, it means that the firm earns higher rate of return than the required rate of return and have maximum value of the firm and optimum payout ratio would be 0 %.

ii) **Declining firm**; in this case the r < k, it means that the firm don't have enough profits and they have to give the entire earning as dividend optimum payout ratio would be 100 %.

iii) **Normal firm**; in this case the r = k, it means that the shareholders will get same return as expected by them. There is no optimum payout ratio.

**THIS THEORY ASSUMES**

a) Earnings per share, dividend per share do not change

b) External sources are not used by the firm

c) The company has long life

d) IRR and cost of capital are constant.

**P = D/Ke + r (E-D)/ Ke / Ke**

**Criticism**

a) Internal rate of return and cost of capital not always constant.

b) The firm need outside funds in real life.

**b) Gordon's approach:** his theory is similar to that of Prof. Walter. According to him market value of share is equal to the present value of dividend.

**This theory assumes**

a) There are no corporate taxes.

b) External sources are not used by the firm

c) Cost of capital is higher than growth rate.

d) IRR and cost of capital are constant.

**P = D/ Ke-g**

**Criticism**

a) Internal rate of return and cost of capital not always constant.

b) The firm need outside funds in real life.

## CONCLUSION

Dividend decisions definition of dividend relevance or irrelevance are shown to be unnecessarily rigid and based on semantic conventions. While not all feasible dividend policies are optimal, all feasible dividend policies are optimal if the zero-NPV assumption is made (regardless of retention). Dividend decisions correct stance about misconceptions of dividend irrelevance is underlined, not only investment policy matters, dividend policy is an important determinant as well.

This paper shows that relevance or irrelevance of dividend policy has not to do with retention; it has to do with the rate of return of the extra funds (excess cash) used for reinvestment or financing: dividend policy is irrelevant if and only if zero-NPV activities are undertaken, with or without assumption of retention. The dichotomy retention/no-retention is nevertheless useful, if it is reinterpreted as a regard for agency problems.

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# A STUDY ON FINANCIAL PERFORMANCE OF NEW GENERATION PRIVATE SECTORS COMMERCIAL BANKS IN INDIA

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## ABSTRACT

*The banking sector offers several facilities and opportunities to their customers. All the banks safeguards the money and valuables and provide loans, credit and payment service, such as checking accounts, money orders and cashier's cheques. The banks also offer investment and insurance products.In the early 1990's the then Narsimha Rao Government embarked on a policy of liberalization and licensing a small number of private banks. On the suggestions of Narsimhan committee, the banking Regulation Act was amended in 1993 and thus the gates from the new private sectors banks were opened. This came to be known as the new generation tech-savvy banks, and included Global Trust Bank ( the first of such new generation banks to be set up), which later amalgamated with oriental bank of commerce, Axis Bank (earlier as UTI Bank), ICICI Bank, Development Credit Bank, IndusInd Bank, Kotak Mahindra Bank, Yes Bank and HDFC Bank. the private sectors played a strategic role in the growth of joint stock banks in India. The country is flooded with foreign banks and their ATM stations. Efforts are being put to give a satisfactory service to customers. Phone banking, Net banking and machine deposit is introduced.*

## KEYWORDS
financial performance, private banks.

## INTRODUCTION

The private sector banks are always trying to innovate new products avenues new schemes, services and make the industries to achieve expertise in their respective fields by offering quality service and guidance. They introduce new technology in the banking service. Thus, they lead the other banks in various new fields for example introduction of computerized operations credit card business, ATM services. The banks that were under the control of the private sector before the Second World War have enormous experience and expertise under their belt. Also there were many foreign banks which were functioning under complete private ownership since the 1950s. The prominent private sector banks had many unique characteristics However, after the great depression, the government gave permission for private entrepreneurs to set up private sector banks on a massive scale. These private sector banks can be broadly classified into two categories. They are follows
* Old Private sectors banks
* New Private sector banks

## OLD PRIVATE SECTOR BANKS
The old private sector banks were those banks which were working in the private sector before the great depression. The old private sector banks have been operating since a long time and may be referred to those banks, which are in operation from before 1991. These banks are more than 50 years old. The banks, which were not nationalized at the time of bank nationalization that took place during 1969 and 1980 are known to be the old private sector banks.

## NEW PRIVATE SECTOR BANKS
The new private sector banks are those that have come into operation very recently. The banks, which came in operation after1991, with the introduction of economic reforms and financial sector reforms are called as new private sector banks. Banking regulation act was then amended in 1993, which permitted the entry of new private sector banks in the Indian banking sector. However there were certain criteria set for the establishment of the new private sector banks.
* The bank should have a minimum net worth of ₹100 crores.
* The promoters holding should be a minimum of 25% of the paid up capital.
* Within 3 years of the starting of the operations, the bank should offer shares to public.

The new private sector banks that were established in the private sector after the Second World War actually escaped from the conditions of nationalisation. There are seven new generation private sector banks in India. They are Axis Bank, Development Credit Bank, HDFC Bank, ICICI Bank, Indusind Bank, Kotak Mahindra Bank and Yes Bank.

## STATEMENT OF THE PROBLEM
The present structure of commercial banks in India is characterized by a mix of public sector banks and private sector banks. The share of public sector banks was around 2% in 1960. It increased to over 80%in 1987. A reverse trend is observed in respect of private sector banking. The share of private sector banks has declined from 98% in 1960 to less than 20% in 1987. The trend implies a reduction in the private sector banks concentration of economic power in the hands of a few private individuals. It is no longer adequate for private sector banks to provide only traditional banking services. The developing countries like India, still has a huge number of people who do not have are availing banking services and their expectations are raising as the level of services are increasing due to the emergence of information technology and competition.
* How private sector banks are moving growth and achievements
* To what extent the deposits and advances of the private sector banks grow during the period of this study.
* What are the factors affecting the profitability of the private sector banks?

## SCOPE OF THE STUDY
This study is undertaken to measure the financial performance of New Generation private sector commercial banks in India. The study will provide details about the growth of deposits and advances, profitability analysis of the selected banks. It is hoped that the result of this study will propose policy measures for the betterment of the new generation private sector banks to achieve the good financial performance

**OBJECTIVES OF THE STUDY**

The main objectives framed for the present study are as follows:

- To study the growth of New Generation private sector commercial banks.
- To examine the growth of deposit and advances of selected banks.

**HYPOTHESES**

Keeping the above objectives and the data collected for this study, the following hypotheses were framed and tested.

- There is no significant difference between the mean values of AAGR in deposits among the selected banks.
- There is no significant different between the mean value of AAGR in advances among the selected banks.

**METHODOLOGY**

The present study is designed to analyse the financial performance of New Generation private sector commercial banks.

**SAMPLING DESIGN**

In India banks are being segregated into three groups such as public sector banks, private sector banks and forging banks in order to find the solution to the problems faced by the private sector banks this study focus only on new generation private sector banks. There are seven new generation private sector banks, registered in India as on 31.3.2014.

**EXHIBIT 1**

| S.No | Name of the Bank | Year of establishment | Origin (state) |
|---|---|---|---|
| 1 | Axis Bank Ltd | 1995 | Andhrapradesh |
| 2 | Development credit bank Ltd | 1995 | Maharashtra |
| 3 | HDFC Bank Ltd | 1994 | Maharashtra |
| 4 | ICICI Bank Ltd | 1996 | Maharashtra |
| 5 | IndusInd Bank Ltd | 1994 | Maharashtra |
| 6 | Kotak Mahindra Bank Ltd | 1985 | Maharashtra |
| 7 | Yes Bank Ltd | 2005 | Maharashtra |

From the above table the researcher has taken ICICI,HDFC, AXIS, FEDERAL BANK & KOTAK MAHINDRA BANK.. These banks are selected based on market capitalization. These are the top five banks in new generation banks.

**DATA COLLECTION**

The study comprises the secondary data only. The secondary data pertaining to the study were collected from the head offices of selected banks websites, journals, and magazines

**STATISTICAL TOOLS USED**

The collected data were codified, classified and then Tabulated with the help of computer statistical tools such as mean, standard Deviation (SD), coefficient of Variation (CV), Compound Annual Growth Rate (CAGR), Average Annual Growth Rate (AAGR), ANOVA, and 't' were used.

**AREA OF STUDY**

The area of study for the present study is whole of India. Because all the selected banks have branches all over India.

**PERIOD OF STUDY**

The secondary data were collected for the period of ten years from 2004-05 to 2013-14.

**LIMITATIONS OF THE STUDY**

The study suffers from the following limitations

- The analysis is made only by using secondary data which has its own limitation.
- The study is confined to New Generation Private sectors banks only which is expected to represent the industry. In other words industry comparisons are not conducted.

**Deposits;** The Money deposits with the bank is assured as for as its safety is concerned. Further the depositor is allowed to withdraw it whenever required. Banks allow interest on deposits. Such interest helps in growth of funds deposited with the bank.

**Advances**; The advances may be regarded as 'credit' granted where the money is disbursed and its recovery is made on a later date. It is a debt for the borrower. Loan is given for a definite purpose and for a predetermined period. Interest is charged on the loan at agreed rate and intervals of payment.

**TREND ANALYSIS**

Trend analysis refers to the study of movement of figures over a period. The trend may be regular or irregular. If it is regular it may show an increasing tendency or decreasing tendency. For financial statement analysis, trend percentages can be calculated when data relating to several years are to be analysed. Generally the earliest year is taken as the base year. The figures for the base year are taken as 100 and the figures for the other years are expressed as a percentage to the base year and the trend is determined

Formula for CAGR is [(End value ÷ Starting value) $^{(1/ (Number of years-1))}$] -1.

**TABLE 1**

| Years | ICICI Amount | Times of Base Year Value | Trend % | HDFC Amount | Times of Base Year Value | Trend % | AXIS Amount | Times of Base Year Value | Trend % | YES BANK Amount | Times of Base Year Value | Trend % | KOTAK MAHINDRA Amount | Times of Base Year Value | Trend % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2004-05 | 9981878 | 1.00 | 100.00 | 3635425 | 1.00 | 100.00 | 3171199 | 1.00 | 100.00 | 66304 | 1.00 | 100.00 | 429953 | 1.00 | 100.00 |
| 2005-06 | 16508316 | 1.65 | 165.38 | 5579682 | 1.53 | 153.48 | 4011353 | 1.26 | 126.49 | 291038 | 4.39 | 438.94 | 656592 | 1.53 | 152.71 |
| 2006-07 | 23051019 | 2.31 | 230.93 | 6829794 | 1.88 | 187.87 | 5878560 | 1.85 | 185.37 | 822040 | 12.40 | 1239.80 | 1100009 | 2.56 | 255.84 |
| 2007-08 | 24443104 | 2.45 | 244.87 | 10076860 | 2.77 | 277.19 | 8762622 | 2.76 | 276.32 | 1327316 | 20.02 | 2001.86 | 1642365 | 3.82 | 381.99 |
| 2008-09 | 21834783 | 2.19 | 218.74 | 14281158 | 3.93 | 392.83 | 11737411 | 3.70 | 370.13 | 1616943 | 24.39 | 2438.68 | 1564493 | 3.64 | 363.88 |
| 2009-10 | 20201660 | 2.02 | 202.38 | 16740444 | 4.60 | 460.48 | 14130022 | 4.46 | 445.57 | 2679857 | 40.42 | 4041.77 | 2388647 | 5.56 | 555.56 |
| 2010-11 | 22560211 | 2.26 | 226.01 | 20858641 | 5.74 | 573.76 | 18923780 | 5.97 | 596.74 | 4593893 | 69.29 | 6928.53 | 2926097 | 6.81 | 680.56 |
| 2011-12 | 25550000 | 2.56 | 255.96 | 24670640 | 6.79 | 678.62 | 22010430 | 6.94 | 694.07 | 4915170 | 74.13 | 7413.08 | 3853650 | 8.96 | 896.30 |
| 2012-13 | 29261360 | 2.93 | 293.14 | 29624700 | 8.15 | 814.89 | 25261360 | 7.97 | 796.59 | 6695560 | 100.98 | 10098.27 | 5102880 | 11.87 | 1186.85 |
| 2013-14 | 33191370 | 3.33 | 332.52 | 36733750 | 10.10 | 1010.44 | 28094460 | 8.86 | 885.93 | 7419200 | 111.90 | 11189.67 | 5907230 | 13.74 | 1373.92 |
| AAGR | | | 227.00 | | | 464.96 | | | 447.72 | | | 4589.06 | | | 594.76 |
| CAGR | | | 14.28 | | | 29.30 | | | 27.43 | | | 68.91 | | | 33.80 |
| SD | | | 64.36 | | | 302.76 | | | 283.81 | | | 4049.38 | | | 436.03 |
| CV | | | 28.35 | | | 65.12 | | | 63.39 | | | 88.24 | | | 73.31 |

Source: Compiled and calculated by published RBI reports

The above Table 1 show the value of AAGR in deposits were the highest at 4589.06% and the value of CAGR in deposits was the highest at 68.91% for YES Bank and it denotes that YES Bank had a highest growth in its deposits than all other selected banks. The deposit of YES Bank goes up to the maximum of 111.90 times of its base year value during the year 2013-14. The value of AAGR in deposits were the lowest at 227.00% and the value of CAGR in deposits was the lowest at

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14.28% for ICICI Bank and it denotes that ICICI Bank had a lesser growth in its deposits than all other selected banks. The deposit of ICICI Bank goes up to the maximum of 3.33 times of its base year value during the year 2013-14. The lowest co-efficient of variation of AGR in deposits of ICICI Bank at 28.35 shows its stable growth in deposits during the period of this study.

**TABLE 2**

| years | ICICI | | | HDFC | | | AXIS | | | YES BANK | | | KOTAK MAHINDRA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Amount | Times of Base Year Value | Trend % | Amount | Times of Base Year Value | Trend % | Amount | Times of Base Year Value | Trend % | Amount | Times of Base Year Value | Trend % | Amount | Times of Base Year Value | Trend % |
| 2004-05 | 9140515 | 1.00 | 100.00 | 2556630 | 1.00 | 100.00 | 1560292 | 1.00 | 100.00 | 76098 | 1.00 | 100.00 | 401715 | 1.00 | 100.00 |
| 2005-06 | 14616311 | 1.60 | 159.91 | 3506126 | 1.37 | 137.14 | 2231423 | 1.43 | 143.01 | 240709 | 3.16 | 316.31 | 634831 | 1.58 | 158.03 |
| 2006-07 | 19586560 | 2.14 | 214.28 | 4694478 | 1.84 | 183.62 | 3687648 | 2.36 | 236.34 | 628973 | 8.27 | 826.53 | 1092406 | 2.72 | 271.94 |
| 2007-08 | 22561608 | 2.47 | 246.83 | 6342689 | 2.48 | 248.09 | 5966114 | 3.82 | 382.37 | 943027 | 12.39 | 1239.23 | 1555222 | 3.87 | 387.15 |
| 2008-09 | 21831085 | 2.39 | 238.84 | 9888305 | 3.87 | 386.77 | 8155677 | 5.23 | 522.70 | 1240309 | 16.30 | 1629.88 | 1662534 | 4.14 | 413.86 |
| 2009-10 | 18120560 | 1.98 | 198.24 | 12583059 | 4.92 | 492.17 | 10434095 | 6.69 | 668.73 | 2219312 | 29.16 | 2916.39 | 2077505 | 5.17 | 517.16 |
| 2010-11 | 21636590 | 2.37 | 236.71 | 15998267 | 6.26 | 625.76 | 14240783 | 9.13 | 912.70 | 3436364 | 45.16 | 4515.71 | 2932931 | 7.30 | 730.10 |
| 2011-12 | 25372770 | 2.78 | 277.59 | 19542000 | 7.64 | 764.37 | 16975950 | 10.88 | 1088.00 | 3798860 | 49.92 | 4992.06 | 3907920 | 9.73 | 972.81 |
| 2012-13 | 29024940 | 3.18 | 317.54 | 23972060 | 9.38 | 937.64 | 19696600 | 12.62 | 1262.37 | 4699960 | 61.76 | 6176.19 | 4846900 | 12.07 | 1206.55 |
| 2013-14 | 33870260 | 3.71 | 370.55 | 30300030 | 11.85 | 1185.16 | 23006680 | 14.75 | 1474.51 | 5563300 | 73.11 | 7310.70 | 5302760 | 13.20 | 1320.03 |
| AAGR | | | 236.05 | | | 506.07 | | | 679.07 | | | 3002.30 | | | 607.76 |
| CAGR | | | 15.67 | | | 31.62 | | | 34.85 | | | 61.10 | | | 33.20 |
| SD | | | 76.59 | | | 367.33 | | | 486.03 | | | 2587.51 | | | 432.23 |
| CV | | | 32.45 | | | 72.59 | | | 71.57 | | | 86.18 | | | 71.12 |

The above **Table 2** show the value of AAGR in advances were the highest at 3002.30% and the value of CAGR in advances was the highest at 61/10% for YES Bank and it denotes that YES Bank had a highest growth in its advances than all other selected banks. The advances YES Bank goes up to the maximum of 73.11 times of its base year value during the year 2013-14. The value of AAGR in advances were the lowest at 236.05% and the value of CAGR in advances was the lowest at 15.67% for ICICI Bank and it denotes that ICICI Bank had a lesser growth in its advances than all other selected banks. The advance of ICICI Bank goes up to the maximum

**ANALYSIS OF VARIANCE (ANOVA)**

The analysis of variances technique, developed by R.A. Fisher in 1920's is capable of fruitful application to a diversity of practical problems. Basically, it consists of classifying and cross-classifying statistical results and testing whether the mean of a specified classification differ significantly. The variance is the square of the standard deviation of a series and gives an idea about the variability of the values of various items from the mean of the series. In the analysis of variance an attempt is made to find out whether the means given by a number of samples are significantly differ from one another. With the help of analysis of variance it is possible to study the significance of the difference of mean values of a large number of samples at the same time. In order to find out the significant difference of mean values of Annual Growth Rate in deposits and loans of selected banks single factor analysis of variance has been used. Suitable hypothesis are framed for the each items and the results are shows in the ANOVA tables.

**Deposits**

**Ho:** There is no significant difference between the mean values of AAGR in deposits among selected banks.

**TABLE 3: ANOVA FOR AGR IN DEPOSITS**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 138840686.431 | 4 | 34710171.608 | 10.353 | .000 |
| Within Groups | 150875951.119 | 45 | 3352798.914 | | |
| Total | 289716637.551 | 49 | | | |

Source: calculated in SPSS by using published RBI reports

With a view to test the significance of variance of the AGR in deposits among the selected banks under the study, the 'F' test has been applied. The analysis of Table 3 shows that the calculated value of 'F' ratio came to 10.353 between the selected banks. The Table value of 'F' at 5 percent level of significance for V1= 4 and V2 = 45 is 2.581. The calculated value of 'F' is greater than the Table value. Therefore hypothesis is rejected. This shows that there is significant difference between the mean values of AAGR in deposits among the selected banks

**Advances**

**Ho:** There is no significant different between the mean value of AAGR in advances among the selected banks.

**TABLE 4: ANOVA FOR AAGR IN ADVANCES**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 50934398.931 | 4 | 12733599.733 | 8.771 | .000 |
| Within Groups | 65331331.332 | 45 | 1451807.363 | | |
| Total | 116265730.263 | 49 | | | |

With a view to test the significance of variance of the AGR in Advances among the selected banks under the study, the 'F' test has been applied. The analysis of Table 4 shows that the calculated value of 'F' ratio came to 8.771 between the selected banks. The Table value of 'F' at 5 percent level of significance for V1= 4 and V2 = 45 is 2.581. The calculated value of 'F' is greater than the Table value. Therefore hypothesis is rejected. This shows that there is significant difference between the mean values of AAGR in deposits among the selected banks

**TEST OF SIGNIFICANCE ('T' TEST)**

The 'T' test has been applied to identify whether there is significant difference between two variables. In this analysis significant difference between AAGR in deposits and advances are analyzed.

AAGR in Deposits and AAGR in Advances

**Ho:** There is no significant difference in the mean values of AAGR in deposits and AAGR in advances.

**TABLE 5: 'T'TEST VALUES OF AAGR IN DEPOSITS AND AAGR IN AND ADVANCES**

| BANK | TRENDS IN DEPOSIT | | TRENDS IN ADVANCES | | t' VALUE | TABLE VALUE | Ho |
|---|---|---|---|---|---|---|---|
| | MEAN | SD | MEAN | SD | | | |
| ICICI BANK | **227.00** | 64.36 | 236.05 | 76.59 | -0.27 | 2.10 | Accepted |
| HDFC BANK | 464.96 | 302.76 | 506.07 | 367.33 | -0.26 | 2.10 | Accepted |
| AXIS BANK | 447.72 | 283.81 | 679.07 | 486.03 | -1.23 | 2.10 | Accepted |
| YES BANK | 4589.0 | 4049.38 | 3002.30 | 2587.51 | 0.99 | 2.10 | Accepted |
| KOTAK MAHINDRA | 594.76 | 436.03 | 607.76 | 432.23 | -0.06 | 2.10 | Accepted |

Source: calculated in SPSS by using published RBI report

**Table 5** shows that YES Bank lead with the highest mean values in AGR in deposits and AGR in advances. The smaller standard deviation of ICICI Bank in AGR in deposits and AGR in advances depicts that it has maintained stability in its growth of deposits and advances. The 't' test has been applied to test the significant difference between the AGR in deposits and AGR in advances. It shows that the calculated value of 't' came for  AXIS Bank at -1.23, ICICI Bank at -0.27, HDFC Bank at -0.26 and KOTAK MAHINDRA Bank at -0.06 and YES bank has positive value of 0.99. The table value of 't' at 5 percent level of significance for df is 2.10. The calculated value of 't' for all the selected banks were less than table value at 5 percent significant level. Therefore hypothesis is accepted. This shows that there is no significant difference between the mean values of AGR in deposits and AGR in advances.

## CONCLUSION

This research was aimed at studying the financial performance of new generation private sector commercial banks Private sector banks an important role in the development of Indian economy. After introduction of new generation private sector banks, the banking industry underwent major changes. The Indian banking industry was dominated by public sector banks. But now the situation has changed private sector banks like ICICI, HDFC etc. with use of technology and professional management has gained a reasonable position in the banking industry. Banking constitutes an important link in several socio-economic activities. Therefore, the banking industry must be on a sound footing, while in India, there is stress on the social responsibility of banks, the significance of liquidity and profitability is not to be neglected. The financial viability of the banking system is certainly essential; not only to instill public confidence but also to make banks capable of discharging their social responsibilities.

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# OFFENCES AGAINST WOMEN UNDER INDIAN PENAL CODE

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## ABSTRACT

*Article 6 of the Universal Declaration of Human Rights recognises personality before law. Unfortunately, though UDHR is a part of the Indian legal system still the 'personhood' to a woman in many cases is denied as discussed in various sections of the Indian Penal Code. Feminism is an alternative political movement which deconstruct male lore and myth of the society and reconstruct the legal system with their viewpoints, life experiences. Thus necessary ameliorative amendments, repealing are to be initiated to free the Indian Penal Code from bias of the mainstream views.*

## KEYWORDS
Women safety, feminism.

## INTRODUCTION

tephen the famous jurist defined crime as "A crime is a violation of a right, considered in reference to the evil tendency of such violation- as regards the community at large".[1] Women are surely part of the community yet they are the worst sufferer of crime perpetrated against them.[2] The most unfortunate fact is Criminal law especially Indian Penal Code as such reflect male solipsism and at the best totally insensitive to the typical female experiences of life. Indian Penal Code as a general Penal statute fails to incorporate the female life experiences and thus suffer from overdose of male mainstream(so called) reason based categorisations.Subjectivism is dismissed as emotional nonsense whereas view of the dominant are held to be normal, standard and reasonable. We may discuss the following illustrations to grasp about the one sided biased outlook of the Indian Penal Code.

## GENERAL PROVISIONS OF INDIAN PENAL CODE

Section 10 of Indian penal Code defines "Man "as a male human being of any age. The word Woman denotes female human being of any age.
Section 8 of Indian Penal Code provides that, "he" and its derivative are used of any person, whether male or female.
Section 477 of Indian Penal Code punishes any person whoever fraudulently or dishonestly attempts or cancels, destroys defaces any will, things or an authority to adopt a son. However Indian Penal Code is strangely silent about the Crime of attempt and destroying will or an authority to adopt a daughter.
Section 40 of the Indian Penal Code provides the word offence denotes a thing punishable under this Code, or under any special or local law as hereinafter defined.
Section 27 of Indian Penal Code states that, property in possession of "wife" "clerk" or "servant" is deemed to be in the possession of the man. Thus property taken without permission of the man is an offence. However the reverse situation is not true.Strangely "wife" word is proximate to "clerk "and "servant".

## SEXUAL OFFENCES

"Rape" is a grave sexual offence committed against women. It is violation of basic "Human rights" of women. To commit rape two basic elements are required (i) attempt to penetration and (ii) penetration. In RadhakrishnaNagesh(Appelant) vs State of A.P[3] (Respondent);at paragraph 27, the Apex Court quotes TarakeshwawrSahuvs State of Bihar(Now Jharkhand)[4]. The Court held as under, at paragraph 10 " under section 375 Indian Penal Code,six categories indicated above are the basic ingredients of the offence.----- No offence under section 376 Indian Penal Code can be made out unless there was penetration to some extent. In the absence of penetration to some extent, it would not bring the offence of the appellant within the four corners of section 375 of the Penal Code. Therefore, the basic ingredients for proving a charge of rape are the accomplishment of the act with force. The other important ingredient is penetration of the male organ within the labia majora or the vulva or pudenda with or without any emission of semen or even an attempt at penetration into the private part of the victim completely, partially or slightly would be enough for the purpose of sections 375 and 376 Indian Penal Code."

In State of U.P, vs Babulnath,[5] it is said by the Court " It may here be noticed that section 375 Indian Penal code defines rape and the explanation to section 375 reads as follows:
Explanation- Penetration is sufficient to constitute the sexual intercourse necessary to the offence of rape.
From the explanation reproduced aboveit is distinctly clear that ingredients which are essential for proving a charge of rape are the accomplishment of the act with force and resistance".

Paragraph 26 of RadhakrishnaNagesh[6] provides that "The word "attempt" is not itself defined and must therefore be taken in its ordinary meaning. This is exactly what the provisions of section 511(Indian Penal Code) require. An attempt to commit a crime is to be distinguished from an intention to commit it and from preparation made for its commission".

Now if we go through Criminal Amendment Act 2013, we find presence of two elements; the requirement of penetration or attempt to penetration in committing rape under section 375.We may notice Explanation 2 of the section 375. It provides that consent means an unequivocal voluntary agreement when the woman by words, gestures, or any form of verbal or non-verbal communication communicates willingness to participate in the specific act.

Provided that a woman who does not physically resist to the act of penetration shall not by the reason only of that fact, be regarded as consenting to the sexual activity.

In S. Pillaivs V.R. Pattabhiraman[7] it was held that an explanation added to a statutory provision is not a substantive provision in any sense of the term but has the plain meaning of the word and itself shows that it is merely meant to explain or clarify certain ambiguities which may have crept in a statutory provision.

One can note that explanation 2 is applicable for clause(a),(b),(c),(d) of section 375 of Criminal Amendment Act,2013.

Thus having established the ingredient of penetration or its attempt for rape one can question the necessity of these ingredients. Rape is recognised as seizure by force. Then why any assault on the female reproductive organ should not be recognised as rape? One can assume the male emphasizing of "penetration" is reflection of masculine ego of recognising sole ownership over the female genitalia by the husband and resultant child bearing.Further in section 375 (clause fourthly) of Criminal Amendment Act,2013 it is said that a married woman shall be redressed by criminal law if she mistakenly believes somebody as her husband.[8]

Unfortunately the statute is silent about the unmarried and widow in same situation. Criminal Amendment Act, 2013 is silent about the concept of marital rape and under section 376B sexual intercourse with separated wife is bailable offence only. One can argue that if rape law is changed in favour of women then there is chance of abuse of law. Then one can cite Sushil Kumar Sharma vs Union of India[9] "It is well settled that, mere possibility of abuse of a provision of law does not per se invalidate a legislation. It must be presumed unless the contrary is proved, that administration and application of a particular law would be done "not with an evil eye and unequal hand."

In State of Kerala vsKundunkaraGovindan[10] it was held that the word insert means place, fit thrust [11]. Therefore if the male organ is inserted or thrust between the thighs there is penetration to constitute unnatural offence. If the situation is so flexible for unnatural offence, then why not for rape?[12] Afterall rape is not about gravity of physical injury. It is about a humiliating psychological intervention which tends to diminish the status of a woman in the society. Thus even a fully clothed woman can be raped by injuring (As for example violent fingering) her reproductive organ even though there is no penetration or attempt to penetration.

**Dowry Death**-(Section 304B of Indian Penal Code):-Section 304B of Indian Penal Code punishes dowry death. Some ingredients to constitute the offence are (i) death of a woman is caused by any burns or bodily injury or occurs otherwise than normal circumstances,(ii)within 7 years of marriage,(III) soon before her death, she was subjected to cruelty or harassment by her husband or by any relative of her husband for or in connection with dowry.

Strangely, at first, woman must die to get a remedy under section 304B of Indian Penal Code.Second one cannot understand about the 7 years timeframe of healthy marriage. Legislature presumes that after 7 years there can be no demand of dowry."Soon before her death" this provision gives the accused a great chance of escape, because penal laws are interpreted strictly.

**Cruelty**- Section 498A of Indian Penal Code punishes the husband or relative of husband of a woman for subjecting her to cruelty. Strangely, under section 198A of Criminal Procedure Code complaint can be lodged by person related to her by blood, marriage or adoption. Legislature assume in every situation either these three classes of people or the aggrieved shall be in position to lodge the complaint. No stranger how much public spirited he or she may be, is not able to interfere.

**Kidnapping**- Section 361 of Indian Penal Code punishes the offence of kidnapping from lawful guardianship. Male below the age of 16 and female below age of 18 cannot be taken away from lawful guardianship. Legislature presume a girl of 17 years old is not mature enough to understand her own good. Thus she cannot marry her lover until she gets permission from the parents. There can be any possibility of kidnapping charge lodged by her parents and the man under the age of 18 is strong enough to deal with his own modesty. Strangely child marriage till date is not void, merely prohibited under Prohibition of Child Marriage Act, 2006.

**Procreation**- section 312-318 of Indian Penal Code relate to miscarriage, injuries to unborn children and exposure of infants and concealment of birth.All offences except section 312 ofIndian Penal Code are cognizable and non bailable. It reflects law framers perception of seriousness of gravity of the offences.These sections seems to be gender neutral and protective of women. But real fact in India is, male foeticide is rare and female foeticide is common. Thus female Infanticide Act, 1864 and Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 were required to be enacted to deal with this problem.

Impregnating a woman regardless of her wish or against the advice of the doctor is not an offence under Indian Penal Code neither it is a crime to deny the pregnant woman the required medical care and attention during child birth and after.

**Offences relating to marriage**- Section 497 of the Indian Penal Code punishes the offence of adultery and section 498 of the same Act creates an offence of enticing or taking away or detaining with criminal intent a married woman. However no person other than the husband of the married woman can file a complaint under section 198(2)of Criminal Procedure Code. Proviso of the section authorise any person in the care of the woman to lodge complaint with the leave of the Court but not herself. Section 198(1) of Criminal Procedure Code authorise near family relatives to lodge a complaint but not herself. She is equated with idiot or lunatic[13]. Section 498 of Indian Penal Code is bailable and non cognizable. Thus it reflects legislative attitude of the seriousness of the offence.

## CONCLUSION

Article 6 of the Universal Declaration of Human Rights[14] recognises personality before law. Unfortunately though UDHR[15] is a part of the Indian legal system still the 'personhood' to a woman in many cases is denied as discussed in various sections of the Indian Penal Code. Feminism is an alternative political movement which deconstruct male lore[16] and myth of the society and reconstruct the legal systemwith their viewpoints, life experiences. Thus necessary ameliorative amendments, repealing are to be initiated to free the Indian Penal Code from bias of the mainstream views.

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2. See (2003)1 SCC 217, at p 220.By DHARMADHIKAR,J "Fraility thy name is woman", that is how in one of his plays Shakespeare describes one of the female characters in his play. This description is more and more evidence particularly in rural Indian society where married women, who are unable to muster courage to fight against cruelty and harassment meted out to them by their spouses and family members, find no escape other than ending their own life.
3. SupremeCourtOfIndia.nic.in.Accessed on 22.8.2015.
4. (2006) 8 SCC 560.
5. (1994)6 SCC 29 at p 34 paragraph 8.
6. Supra Note 5.
7. AIR 1985 SC 582.
8. Section 375 of Criminal Amendment Act,2013.Fourthly- With her consent, when the man knows that he is not her husband and that her consent is given because she believes that he is another man to whom she is or believes herself to be lawfully married.
9. (2005)6 SCC 28.
10. 1969 CrLJ 818(Ker) cited at paragraph 20 of (2014)1 SCC
11. See section 375Clause(d) of Criminal Amendment Act,2013.
12. Already section 375 of Criminal Law Amendment Act, 2013 has incorporated part of unnatural offence. As for example clause(d) of section 375 Criminal Law Amendment Act provides that "applies his mouth to the vagina, anus, urethra of a woman or make her to do so with him or any other person.
13. Section 198(3) Criminal procedure Code.
14. Article 6 of the Universal Declaration of Human Rights provides that," Everyone has the right to recognition everywhere as a person before law."
15. See Suresh Kumar KoushalvsNaz Foundation (2014)1 SCC at p 37. Section 2 of Protection of Human Rights Act,1993 has domesticated Universal Declaration Of Human Rights.
16. Oxford Advanced Learner's Dictionary 6thEdition(2000) at p.466 states that" the belief and aim that women should have the same rights and opportunities as men; the struggle to achieve this aim". But Radical and Postmodern feminism tell us that women are different and they have typical aspirations. Constitution through Article 15(3) reflects this attitude by making scope for special provision for women. Unfortunately she is appended with class of children.

# CUSTOMER RELATIONSHIP MANAGEMENT STRATEGY OF BHARTI AIRTEL LIMITED IN COIMBATORE CITY

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## ABSTRACT

*CRM strategies of Bharti Airtel enable to achieve the customer satisfaction and maintain the strong relationship with their customer and become the largest mobile service operator in the industry with the customer of nearly 194.8 million. The main objective of the CRM is to identify the fissures and faults/deficiencies in the existing customer service and to improve the service without increasing cost of service. The overall goals are to find, attract, and win new clients, service and retain those the company already has, entice former clients to return, and reduce the costs of marketing and client service. For their customer convenient they have 9 ways to pay their bills. In each and every level Bharti Airtel try to give the best services as for the need of the customer and try to build the effective relationship with the customers. They are focus on different level of the customer; it is analyses from the data mining systems because this system is very useful for the classification of customer as well as information.*

## KEYWORDS

CRM, Bharti Airtel, customer satisfaction, customer service, customer loyalty.

## 1. INTRODUCTION AND CONCEPTUAL FRAME WORK

Customer relationship management is a strategy of every organization. They play an important role to make the customer relationship strategically and for the growth of the organization. Customer relationship management (CRM) is a widely implemented model for managing a company's interactions with customers, clients, and sales prospects. It involves using technology to organize, automate, and synchronize business processes—principally sales activities, but also those for marketing, customer service, and technical support. Customer relationship management describes a company-wide business strategy including customer-interface departments as well as other departments. Measuring and valuing customer relationships is critical to implementing this strategy. Customer service (also known as Client Service) is the provision of service to the customers before, during and after a purchase. A Customer Relationship Management system may be chosen because it is thought to provide the advantages like Quality and efficiency, Decrease in overall costs and Increase Profitability. Customer service is normally an integral part of a company's customer value proposition.

### SEGMENTATION ISSUES

Basic segmentation issues need to be addressed to determine if viable segment exist and can be identified; otherwise there may be more profitable avenues for the firm to pursue.

"Attracting and keeping the highest-value customers is the corner stone of a successful marketing program". Underlying this statement is the necessary condition that the market can be segmented and that identifiable segments vary from the customer value.

### BHARTI AIRTEL LIMITED NETWORK SERVICE

Bharti Airtel Limited is a leading global telecommunications company with operations in 19 countries across Asia and Africa. In rest of the geographies it offers mobile voice & high speed wireless internet. Bharti Airtel has been ranked among the six best performing technology companies in the world by BusinessWeek. Bharti Airtel had over 238 million customers across its operations at the end of October 2011. Bharti Airtel recognized for the delivery of best network services with customer focus at Telecom Centre of Excellence Awards 2011.New Delhi, December 11, 2011: Bharti Airtel, a leading global telecommunications company with operations in 19 countries across Asia and Africa has been awarded with "Telecom Centre of Excellence (TCOE) Award" for service provider with customer focus for best delivery of Network Services - for the year 2011. The evaluation criteria were primarily focused on Network Quality of service KPIs, Network Coverage, Product Innovation and Network Bench-marking processes based on network parameters and customer voice. The award is recognition of Airtel's commitment to offer best in class service experience to its customers.

The Quality of the Telecom services offered to subscribers directly affects the demand for such services and is therefore a key determinant of the overall health of the Indian Telecom Sector. Quality of Service and customer focus can also serve as an important differentiation platform for operators. Keeping this in mind, Bharti Airtel had formulated and implemented an unique state of the art program called 'Best Customer Network Experience' cutting across 23 circles to provide a superior customer experience by improving the poor performing pockets and the performance of the network elements. Bharti Airtel recently implemented Customer Experience Management System (CEM) to optimize and enrich user experience of its customers.

## 2. AIRTEL WITH CRM

CRM has created magic at Bharti Airtel. Before customer relation management only 40 percent of customer issues got resolved but after the proper implementation of customer relationship management 90 percent issues got resolved. The Three Step Program changed is for Bharti Airtel and made them what they are today. Technology evaluation and Gap analysis, Internal restructuring and Re- engineering and Pilot program and Feedback cycle.Major cost goals of CRM include: 1.Increase revenue growth through customer satisfaction, 2. Reduce costs of sales and distribution and 3.Minimize customer support costs.

## 3. REVIEW OF LITERATURE

Berry and Parsuraman (1991); Bitner (1995); Crosby and Stephens (1987); Crosby,et al. (1990); Gronroos (1995)the de-intermediation process and consequent prevalence of CRM is also due to the growth of the service economy. Since services are typically produced and delivered at the same institutions, it minimizes the role of the middlemen. A greater emotional bond between the service provider and the service users also develops the need for maintaining and enhancing the relationship.

Bickert, (1992)Another narrow, yet relevant, viewpoint is to consider CRM only as customer retention in which a variety of after marketing tactics is used for customer bonding or staying in touch after the sale is made

CRM is "Customer selectivity". As several research studies have shown not al customers are equally profitable for an individual company (Storbacka, 2000). The company therefore must be selective in tailors its program and marketing efforts by segmenting and selecting appropriate customers for individual marketing programs. In some cases, it could even lead to "outsourcing of some customers" so that a company better utilize its resources on those customers it can serve better and create mutual value. However, the objective of a company is not to really prune its customer base but to identify appropriate programs and methods that would be profitable and create value for the firm and the customer.

## 4. OBJECTIVES OF THE STUDY

1. To analysis the customer relationship management in AIRTEL.
2. To identify the fissures and faults/deficiencies in the existing customer service strategies.
3. Improve the service without increasing cost of service.
4. To improve the organizations ability to retain and acquire the customer.

## 5. RESEARCH METHODOLOGY

Since the population for the study is quite large and since the study is limited by the constraints of resources and time, complete enumeration of the population by census method was not possible. Random sampling technique was used for this study. The sample size comprises 300 respondents. The sample description includes customers of Airtel in both prepaid and postpaid sections. The youth segment was taken as the respondents because they are more prone to switch to different service providers and usually they are the trendsetters. Hence it is our strong belief if we could develop strategies to retain them; it's easier to retain the other segments too.

Data has been collected from various sources; there is a combination of both primary and secondary data that has been used in this research. To arrange and interpret the collected data the following statistical tools Chi-Square Analysis and ANOVA were used.

## 6. RESULTS AND DISCUSSIONS

**TABLE NO. 1: ANOVA FOR AGE AND VALUE ADDED SERVICES SCORE** (summation of variables under value added services)

| Particulars | | Value added services score | | |
|---|---|---|---|---|
| | | Mean | S.D | No. |
| Age | Below 20 yrs | 12.13 | 1.48 | 24 |
| | 20 to 30 yrs | 10.34 | 1.05 | 111 |
| | 30 to 40 yrs | 11.61 | 1.97 | 129 |
| | Above 40 yrs | 11.00 | .00 | 36 |
| | Total | 11.11 | 1.63 | 300 |

| ANOVA | | | | | |
|---|---|---|---|---|---|
| Value added services score | | | | | |
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Between Groups | 123.134 | 3 | 41.045 | 18.181 | .000 |
| Within Groups | 668.236 | 296 | 2.258 | | |
| Total | 791.370 | 299 | | | |

From the above ANOVA table analysis between Age and Value added services score, it is clear that the calculated F-value for (3,296) df at 5% level of significance is 18.181, whereas the tabulated F-value for (3,296) df at 5% level of significance is 2.70 which is less than the calculated value. Hence, the calculated value is significant at 5% level of significance.

**TABLE NO: 2 ANOVA FOR OCCUPATION AND VALUE ADDED SERVICES SCORE** (summation of variables under value added services)

| Particulars | | Value added services score | | |
|---|---|---|---|---|
| | | Mean | S.D | No. |
| Occupation | Students | 10.03 | .18 | 90 |
| | Business | 13.29 | 1.54 | 84 |
| | Employed | 10.35 | .48 | 111 |
| | Others | 11.00 | .00 | 15 |
| | Total | 11.11 | 1.63 | 300 |

| ANOVA | | | | | |
|---|---|---|---|---|---|
| Value added services score | | | | | |
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Between Groups | 566.030 | 3 | 188.677 | 247.840 | .000 |
| Within Groups | 225.340 | 296 | .761 | | |
| Total | 791.370 | 299 | | | |

From the above ANOVA table analysis between Occupation and Value added services score, it is clear that the calculated F-value for (3,296) df at 5% level of significance is 247.840, whereas the tabulated F-value for (3,296) df at 5% level of significance is 2.70 which is less than the calculated value. Hence, the calculated value is significant at 5% level of significance.

**TABLE NO: 3 ANOVA FOR SALARY AND VALUE ADDED SERVICES SCORE** (summation of variables under value added services)

| Particulars | | Value added services score | | |
|---|---|---|---|---|
| | | Mean | S.D | No. |
| Salary | Below Rs.20000 | 11.00 | .00 | 15 |
| | Rs.20001-Rs.30000 | 10.00 | .00 | 102 |
| | Rs.30001 to Rs.40000 | 12.86 | 1.46 | 111 |
| | >Rs.40000 | 10.00 | .00 | 72 |
| | Total | 11.11 | 1.63 | 300 |
| ANOVA | | | | |
| Value added services score | | | | |
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Between Groups | 556.397 | 3 | 185.466 | 233.635 | .000 |
| Within Groups | 234.973 | 296 | .794 | | |
| Total | 791.370 | 299 | | | |

From the above ANOVA table analysis between Salary and Value added services score, it is clear that the calculated F-value for (3,296) df at 5% level of significance is 233.635, whereas the tabulated F-value for (3,296) df at 5% level of significance is 2.70 which is less than the calculated value. Hence, the calculated value is significant at 5% level of significance.

**TABLE NO: 4 ANOVA FOR AGE AND AIRTEL SERVICE LEVEL SATISFACTION SCORE** (summation of variables under the satisfaction level of airtel services)

| Particulars | | Airtel service level satisfaction score | | |
|---|---|---|---|---|
| | | Mean | S.D | No. |
| Age | Below 20 yrs | 11.25 | 2.97 | 24 |
| | 20 to 30 yrs | 11.29 | 1.27 | 111 |
| | 30 to 40 yrs | 14.40 | .49 | 129 |
| | Above 40 yrs | 9.00 | .00 | 36 |
| | Total | 12.35 | 2.25 | 300 |
| ANOVA | | | | |
| Airtel service level satisfaction score | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 1101.936 | 3 | 367.312 | 263.693 | .000 |
| Within Groups | 412.314 | 296 | 1.393 | | |
| Total | 1514.250 | 299 | | | |

From the above ANOVA table analysis between Age and Airtel service level satisfaction score, it is clear that the calculated F-value for (3,296) df at 5% level of significance is 263.693, whereas the tabulated F-value for (3,296) df at 5% level of significance is 2.70 which is less than the calculated value. Hence, the calculated value is significant at 5% level of significance.

**TABLE NO: 5 ANOVA FOR OCCUPATION AND AIRTEL SERVICE LEVEL SATISFACTION SCORE** (summation of variables under the satisfaction level of airtel services)

| Particulars | | Airtel service level satisfaction score | | |
|---|---|---|---|---|
| | | Mean | S.D | No. |
| Occupation | Students | 10.93 | .36 | 90 |
| | Business | 14.61 | 1.05 | 84 |
| | Employed | 12.24 | 2.40 | 111 |
| | Others | 9.00 | .00 | 15 |
| | Total | 12.35 | 2.25 | 300 |

| ANOVA | | | | | |
|---|---|---|---|---|---|
| Airtel service level satisfaction score | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 778.182 | 3 | 259.394 | 104.312 | .000 |
| Within Groups | 736.068 | 296 | 2.487 | | |
| Total | 1514.250 | 299 | | | |

From the above ANOVA table analysis between Occupation and Airtel service level satisfaction score, it is clear that the calculated F-value for (3,296) df at 5% level of significance is 104.312, whereas the tabulated F-value for (3,296) df at 5% level of significance is 2.70 which is less than the calculated value. Hence, the calculated value is significant at 5% level of significance.

**TABLE NO: 6 ANOVA FOR OCCUPATION AND GENERAL SATISFACTION LEVEL SCORE** (summation of variables under the general satisfaction level of airtel services)

| Particulars | | General satisfaction level score | | |
|---|---|---|---|---|
| | | Mean | S.D | No. |
| Occupation | **Students** | 13.51 | .81 | 90 |
| | **Business** | 12.88 | .92 | 84 |
| | **Employed** | 11.94 | 1.15 | 111 |
| | **Others** | 13.20 | .86 | 15 |
| | **Total** | 12.74 | 1.18 | 300 |

| ANOVA | | | | | |
|---|---|---|---|---|---|
| General satisfaction level score | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. |
| **Between Groups** | 129.940 | 3 | 43.313 | 45.103 | .00 |
| **Within Groups** | 284.257 | 296 | .960 | | |
| **Total** | 414.197 | 299 | | | |

From the above ANOVA table analysis between Occupation and General satisfaction level score, it is clear that the calculated F-value for (3,296) df at 5% level of significance is 45.103, whereas the tabulated F-value for (3,296) df at 5% level of significance is 2.70 which is less than the calculated value. Hence, the calculated value is significant at 5% level of significance.

**TABLE NO. 7: CHI-SQUARE ANALYSIS FOR AGE AND VALUE ADDED SERVICES**

| Age | SMS Poor | | SMS Average | | MMS Average | | MMS Good | | GPRS Poor | | GPRS Good | | Reach me Average | | Reach me Very good | | Voice me Average | | Voice me Good | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. |
| Below 20 yrs | 9 | 3.0 | 15 | 5.0 | 15 | 5.0 | 9 | 3.0 | | | 24 | 8.0 | 15 | 5.0 | 9 | 3.0 | 15 | 5.0 | 9 | 3.0 | 24 |
| 20 to 30 yrs | 101 | 33.7 | 10 | 3.3 | 103 | 34.3 | 8 | 2.7 | 4 | 1.3 | 107 | 35.7 | 103 | 34.3 | 8 | 2.7 | 99 | 33.0 | 12 | 4.0 | 111 |
| 30 to 40 yrs | 52 | 17.3 | 77 | 25.7 | 77 | 25.7 | 52 | 17.3 | 77 | 25.7 | 52 | 17.3 | 77 | 25.7 | 52 | 17.3 | | | 129 | 43.0 | 129 |
| Above 40 yrs | | | 36 | 12.0 | 36 | 12.0 | | | | | 36 | 12.0 | 36 | 12.0 | | | 36 | 12.0 | | | 36 |
| TOTAL | 162 | 54.0 | 138 | 46.0 | 231 | 77.0 | 69 | 23.0 | 81 | 27.0 | 219 | 73.0 | 231 | 77.0 | 69 | 23.0 | 150 | 50.0 | 150 | 50.0 | 300 |

**TABLE NO. 8: CHI-SQUARE ANALYSES FOR PREFERRED SERVICES AND ABILITY TO GIVE VARIOUS RATE/PLANS/SCHEMES**

| Chi-Square Tests | | | |
|---|---|---|---|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 118.819[a] | 2 | .000 |
| Likelihood Ratio | 163.259 | 2 | .000 |
| Linear-by-Linear Association | 118.243 | 1 | .000 |
| N of Valid Cases | 300 | | |
| a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.64. | | | |

| | | Ability to give various rate/plans/schemes | | | | | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|
| | | Poor | | Average | | Good | | 7.00 | 8.00 |
| | | No. | % | No. | % | No. | % | No. | % |
| Preferred service | Post-paid | 42 | 14.0 | 84 | 28.0 | | | 126 | 42.0 |
| | Pre-paid | | | 93 | 31.0 | 81 | 27.0 | 174 | 58.0 |
| | TOTAL | 42 | 14.0 | 177 | 59.0 | 81 | 27.0 | 300 | 100.0 |

From the above chi-square table analysis between Age and SMS services offered by Airtel, it is clear that the calculated pearson chi-square value for 3 df at 5% level of significance is 115.769, whereas the tabulated chi-square value for 3 df at 5% level of significance is 7.8147 which is less than the calculated value. Hence, the calculated value is significant at 5% level of significance.

## 7. FINDINGS OF THE STUDY

Through ANOVA TEST we analyzed that there is a significant relation between age and customer satisfaction. From ANOVA test between occupation and value added service, the table value is greater than the found value so there is a significant relationship between occupation and value added service.
There is a significant relationship between age and value added service. Through chi square analysis we found that, there is significant relationship between preferred service and various schemes and plans in Airtel.

## 8. SUGGESTIONS OF THE STUDY

CRM is a really a worth full method which is adopted by AIRTEL company for their success in this telecommunication field. It's quite costly when compare with other competitor but still the company overcome all the obstacles and achieving the marketing share. Success of airtel telecommunication is based on the strategy adopted by company that is named as CRM. Still there is some deviation in this sector because of long procedures and difficulty of understanding. So for that airtel can take needed steps to overcome this problem which will helpful for the success of AIRTEL in the field of telecom sector.

## 9. CONCLUSION

CRM make everything in a comfortable manner by integrating various process and activity in the telecom sector. Customer relationship management is most important for the development of particular field, in that telecom sector will occupy the foremost place. CRM is a best strategy followed by Airtel Company which gives more worth to the success of this field.

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# VITALITY OF COMPETENT HR PRACTICES FOR SUSTAINABLE GROWTH POTENTIALITY IN SERVICE INDUSTRY

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## ABSTRACT

*Undoubtedly the service sector has emerged as the fastest growing sector in the Indian economy with rapid strides in the last few years, which is evident through its 60% contribution in the form of Gross Domestic Product (GDP). This tremendous growth brought along a substantial contribution to foreign investments, exports and most importantly improved the levels of employment. On the other hand, Human Resource Management has undergone a major transformation in both its form and function, especially in the last two decades. HRM today if practiced strategically is a source of gaining competitive advantage for organizations at international level. Further, contribution in the form of advancements in technology, globalization, changes in Indian Industrial policies, and stride of Internet has changed the way Human Resource is being managed and utilized in this hyper competitive ever dynamic business environment. The primary objective of this paper is to highlight the vitality of service industry and its contribution to India. The paper also tries to throw light on the need for changes in the HR practices to face global competition. Further, it builds a relationship between the competent HR practices and service organizations for sustainable growth in the industry. Finally few suggestions in the form of HR strategies have been discussed, which if adopted can help to face the ever challenging and dynamic competitive environment for a sustainable growth.*

## KEYWORDS
business environment, globalization, gross domestic product, hr strategies, human resource management, service sector.

## 1. INDIAN SERVICE INDUSTRY – PRESENT SCENARIO
Indian economy is classified into Primary (Agricultural), Secondary (Manufacturing) and Tertiary (Services) sectors respectively. Primary sector include goods produced by exploiting natural resources. Secondary sector comprises those goods which change their form by using natural resources by the process of manufacturing. Tertiary sector comprises of all those activities which do not produce or manufacture a tangible good, but assist or help customers in other forms. Thus services sector include tourism, hospitality, restaurants, transportation, communication, storage, counseling, consultation, education, social and also personal services.

According to an economic survey, India has the second fastest growing services sector with its compound annual growth rate just below China, Russia being at a distant third. The contribution of services sector is also evident in terms of employment growth. The figures went better year after year and the same pace is being maintained in its growth and contribution in all aspects generally and to GDP, particularly.

As per a survey, in India, the growth of services sector Gross Domestic Product (GDP) has been higher than that of overall GDP year by year. Business expands where there is greater demand and greater opportunity of economic benefits. Indian services sector proved to be the most applicable not only to domestic entrepreneurs, but also to international players. The whole country has witnessed a shift from primary and secondary activities to tertiary activities by the citizens of the country indicating that it is on the path of progress. Further, advancements in technology, especially in the fields of IT and communication, along with widespread hands of media have made things even more attractive in services sector.

### GOVERNMENT INITIATIVES
The Government of India has taken many initiatives from its side to strengthen emphasis on self-reliance in its economic development programmes over the years which has also enabled India to prosper in this perspective. This built a very big array of versatile professions. These bold initiatives and amendments in economic policies have opened opportunities for individual growth and overall development in economy. Entrepreneurs today in services sector posses required skills, experience and have expertise across a vast wide-ranging spectrum of disciplines, such as health care, tourism, education, communications, transportation, information technology, banking, finance, management, and among many others.

Drastic, courageous changes have been brought about in economic policies in the form of Foreign Direct Investments, changes in RBI regulations, joint collaborations with foreign establishments, and the so. Expansion of activities and application of strategies in rural marketing, Indian tourism and global spread of Information technology cannot be undermined.

According to a survey, India's share in world services exports, has been increasing faster than its share in world merchandise exports Further, it also mentioned that some services like telecom and software were big ticket items that gave India a greater share. If the same pace is maintained in these sectors and focus is also laid on other services which have linkages to manufacturing sectors, within no time, India can take the first position respectively. While this could be achieved through reforms in policy decision making, the Human Resource practices should also be tuned and moulded to speed up the pace of development in services sector.

## 2. APPLICATION OF HR PRACTICES IN GROWTH OF SERVICE INDUSTRY
### OVERVIEW
Human resource (HR) is a common term which covers a wide range of activities. These activities include hiring and firing employees, forming organizational charts and employee's communication management, settlement of employee disputes, creation of benefit programs, handling legal issues related to sexual harassment and safety, and setting policies and programs for performance measurement, compensation, training, recognition, promotion & demotion of employees. HR should not be considered as single activity and should include all works related to employees & employers.

Contemporary view of HR is more strategic than the conventional practices in today's changing world. Today's employees are playing dynamic role and acting as a changing agent for competitive advantage. As an impact of Globalization there are more opportunities for economic development, in addition to this market is facing many challenges. In this cut-throat competition companies are looking for competitive employees. So HR is playing a vital role in the success of organization

in terms of managing employees and controlling employee regulations in different countries and cultures, whereas technology has created a new range of opportunities for reorganizing HR management and other administrative HR responsibilities.

**CONVERTING HUMAN CAPITAL INTO INTELLECTUAL CAPITAL**

The diagram below significantly identifies the role of competent HR practices in transforming employees to contributors of successful organizations. An employee is like a raw vegetable with his own skill set, knowledge and experience. It is only through strategic application of HR practices that the rawness is cooked well, ready to consume. Timely planning and implementation of strategic HR practices turn Human capital to Intellectual capital.

**FIGURE 1: CONVERSION OF HUMAN CAPITAL TO INTELLECTUAL CAPITAL**
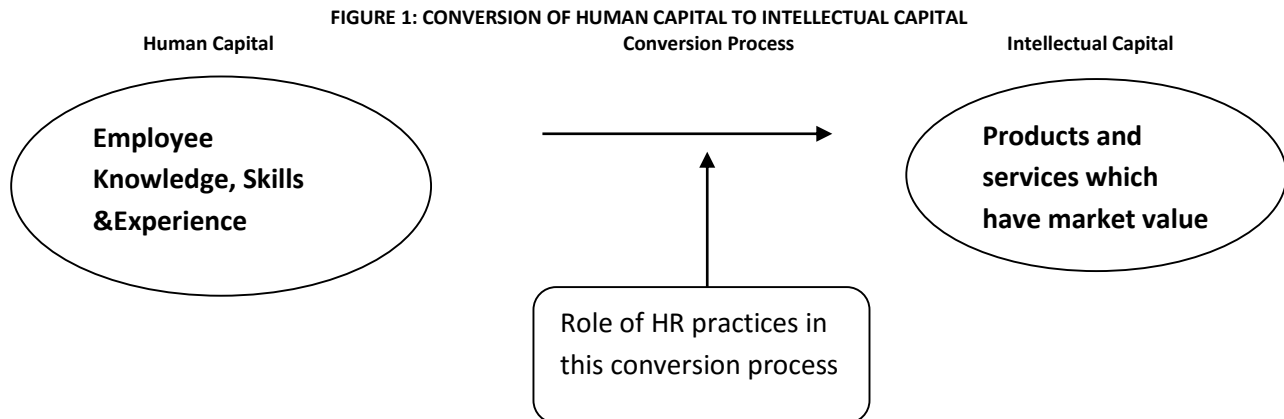


Source: Authors

**Contribution of HR with respect to specific areas towards organizational success – Present scenario**

In many specific areas ranging from strategic planning to company image Human resource is important to organizations. Employees' perception enhanced through the HR control by that organizational performance can be improved.HR takes active part in strategy formulation as strategic partner. HR professionals with expertise take active role in corporate planning which covers present and future gaps with appropriate tactics. All the time placing a right person in a right job is an ongoing problem for corporate due to talent gap. Hiring competitive employees, providing global training helps in preparing employee to compete with present cut-throat competition, Recognizing talented force, mapping of employee employer relations.

Organization can achieve better performance, satisfaction and morale levels in workforce with the help of employee relations specialists in HR help the organization achieve high performance, by creating ways to strengthen the employer-employee relationship. These specialists conduct employee opinion surveys to seek employee input regarding job satisfaction and ways the management can maintain healthy working relationships.

**Valued HR Practices**

Human Resource definitely plays the most imperative part in the functioning of an organization. An organization attempts to recruit, keep, and train the most talented and utmost quality staff members to survive in the market in long run. All these efforts may go in vein if the employees are not updated continuously through valued HR practices. The most important of these are:

- **Managing employee's talent to cope with future competition**

Attracting & retaining competitive employees is the biggest task in today's dynamic world. Filling talent gap with appropriate workforce always strengthens the performance of organization and gives tight competition. Productivity of organization, company growth and economic development are to a large extent reliant upon the effective utilization of human talents.

- **Training in Global Perspective**

Training in global perspective is very essential in the era of globalization to prepare employees to possess wide variety of skills. Getting awareness about international issues and affairs is vital because every business is globalized. Citizens become knowledgeable about the world beyond their national borders through global training.

- **Empowering employees**

Management has to give proper importance to employees 'in terms of involving them into framing suggestions. Through that employees will develop internal attachment towards work accountability. Best utilization of human resources, empowering them and providing them their due will help the organization to survive in the era of dynamic competition. The true goal of employee empowerment is possible with the practice of above functions.

- **Mindset transformation**

Since the future is uncertain, normally people will resist change. Definitely new challenges pose respective changes to the employees in organization. The companies have to change the mindset of employees in all the ways to cope up with changes by explaining positive impact.

- **Implementing Effective Manpower planning**

Planning for human resources in advance to meet future competition is common in present context. All the time framing network that makes the employees to cope up with future requirements is essential for every organization irrespective of their business. It is an arrangement of combining the supply of accessible people with opening or opportunities the organization expects over a given period of time.

- **Effective implementation of HR policy**

It is time to restructure and position the HR policies in place to create sustainability and profitability. A clear set of HR policies must be framed in according to organizational goals and vision. HR professionals will take a active part in formulation & implementation of HR policy.

- **Dynamic Training and Development system**

Dynamic & Growth-oriented organizations identify training as important phase of the managerial function in a rapidly changing environment. The objective of Training is not only increasing technical skills but also enhancing interpersonal skills to improve the people's effectiveness employed in an organization. Training is undoubtedly the most important part of organizational renewal as an ongoing process because the strength of any organization lies in the strength of its people.

- **Effective Performance assessment system**

No employee will stay in the organization without getting recognition from management in terms of position change and salary hike. Make the employees to know about where they are standing when compared with co-employees and getting rates for their skills is the objective of this system. Periodic performance appraisals must be conducted in order to make the employees serious towards their performance and attach these results with promotional activities.

- **Business leaders involvement in structured governance and development**

Involving business leaders in the planning processes and governance HR objectives can be better achieved. This sort of planning also helps to ensure business position and advance planning towards organizational goals.

- **"BEST " HR philosophies**

The most valuable philosophies focus on promoting modernization and alliance, or creating the best place to work, while the least valuable philosophies focus barely on efficiency or cost-cutting efforts.

- **Flexible HR organization design**

Adding the word flexible to each function is mandatory in today's changing world not only in theoretical point but also in practical perspective. Implementation of all HR functions as per the requirement of current environment is only suitable for growth and sustainability of the organization.

- **Customer centric**

Every day customer's needs are changing as the way the technology changes. Being as a service organization it is a highlighted point that planning and doing activities as per the requirement of customers facilitate smooth survival in the market for a long time. That is the reason why organizations are spending much amount on Research and Development.

## 3. NEED FOR EMERGENCE OF NEW HR PRACTICES

**Human resource practices today and tomorrow**

A massive transformation is seen in Human Resource practices that will even change career paths in unexpected and uncertain ways. Organizations today are supporting automating and outsourcing in many HR functions. This laid focus on HR professionals to demonstrate new skills and compete for new roles. Business leaders and academicians are commenting that HR job titles and functions will remain in flux for some time. Further, they feel that few specialist positions which were being patronized for decades together are being replaced by new ones such as HR business analyst.

Globalization along with its positive side has also brought about cut-throat competition, dynamism and innovation. It is in this context that HR practices are to be reframed and rejuvenated to face the challenges. To respond to the dynamic nature of business environment HR practices should imbibe within themselves high technological skills, flexibility and an overall comprehensive perspective of entire business operations.

**Greater focus on HR Now More Than Ever**

Irrespective of the type, nature and size and industry, service organizations today are facing immense business related challenges which are creating hurdles for their success. These new and ever-changing challenges are demanding new capabilities and competencies. The primary objective of HR personnel today is to accept the role of a leader in enabling organizations to meet these challenges. Few of the most important challenges which have paved way in bringing more weight age to HR practices today are:

**Globalization**

Gone are the days when service industries sold those services which according to the producers are more profitable. With the rapid expansion of global markets, managers today need to produce services which think at global perspective and satisfy local customers. This eventually demanded companies to adopt new ideas of action to increase global market share and be profitable. The greatest obstacles to be dealt at global level were different political situations, trade issues, fluctuating exchange rates, and unfamiliar cultures. In short, globalization requires that organizations increase their ability to learn and collaborate and to manage diversity, complexity, ambiguity and create more flexible HR practices.

**Technology**

Technology has made the world smaller and faster. Also the pace of technological advancement has raised enormously which is demanding more efforts by service industries to deal with the same. The HR managers today either need to be the first to bring innovative HR practices gaining first mover advantages or they need to be very quick learners and followers. The challenge for managers is to select that technology which makes sense and is profitable.

**Intellectual Capital**

Knowledge today has become the most important investment. This is even more true to service industries as they do not sell tangible goods but intangible ideas. The greatest challenge to any HR department as understood by everyone is to place the right person at the right place. This if done appropriately will be so profitable to the company that the intellect of its employees will create the required competitive advantage over its competitors which is what is the need of the hour. Thus it is mandatory for organizations to make sure that they have the capability to find, assimilate, develop, compensate, and retain such talented individuals.

**Change, Change, and More Change**

The only thing permanent in this world is change. Perhaps the greatest challenge any business concern faces is adapting to change as it is an activity which never ends. The requirements of HR managers in facing these changes should include ability to identify emerging trends and taking rapid decisions, continuous innovation, courage in accepting risks, facing first mover disadvantages and above all possessing positive attitude, In other words HR professional should be in a never ending state of transformation towards positive results.

Thus today, innovative HR practices are the only solutions to catch the speed of innovations to face globalized competition, to be the first to grab opportunities, to gain the trust of market place and finally create an un duplicable competitive advantage.

## 4. IMPLEMENTATION OF "NEXT PRACTICES" NOT "BEST PRACTICES"

"Companies achieving competitive differences will focus on next practices but not best practices".

In today's highly dynamic business environment, every manager has to deal with new and complex challenges, which do not have textbook solutions." In theory, there is no difference between theory and practice. In practice there is" – Yogi Berra.

Hence, the employability of many entrants into the business world, especially at the entry level, depends on the litmus test of transferring the theoretical knowledge into practice in the real world. As the hierarchy is extended, the complexity of problems and challenges become manifold. Thus, while making the transition from Campus to Corporate or even as they move jobs across companies, it is imperative for new managers and entry level graduates to develop skills and attitudes besides knowledge. Even in service industry just like other industries, sound knowledge of theory is critical in building a solid foundation and understanding of the subject besides its applications in the real world. Theory helps employees to understand the "what" and "why" aspects. But, the "how" is learnt with continuously updating oneself at-the-job.

The fact is that, in this hyper dynamic ever competitive business environment, organizations need to identify tactics to open doors for organizational enhancement. HR is one such key area which when practiced strategically will provide overwhelming results. Fundamental changes are to be made in the design and delivery of HR activities. This is because of continuous changes in the external and internal environments which directly influence the performance of HR.

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HR CHANGES REQUIRED IN SERVICE FIRMS

**FIGURE 2: HR ROLE IN SERVICE FIRMS**



ROLE OF HR

FOCUS AREAS BY SERVICE FIRM

CHALLENGES IN BUSINESS ENVIRONMENT
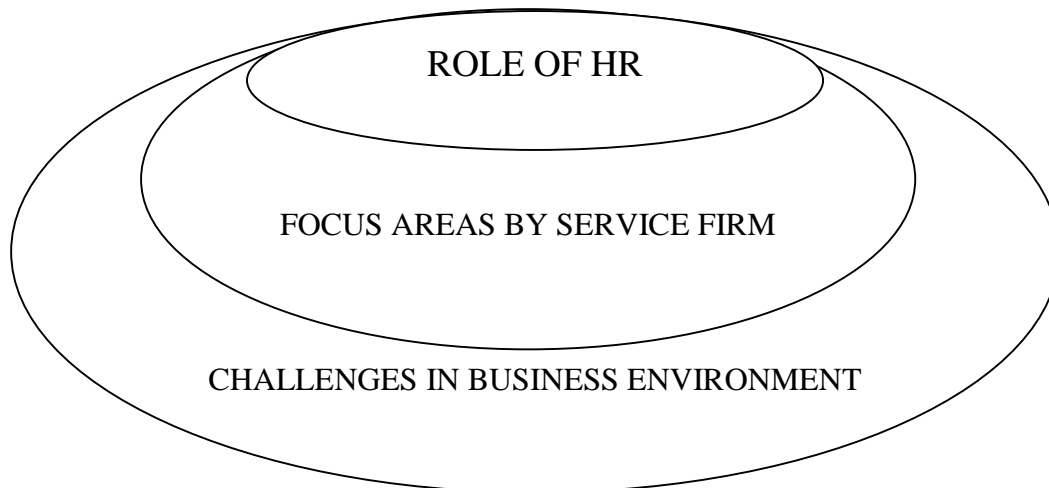
Source: Authors

As it is evident from the above figure, the business environment is very dynamic with continuous changes in technology, competition both at domestic & global level, changes in global trends, socio-cultural environment, business processes and other macro environmental factors. To keep pace with this very dynamic business environment, the service firms need to focus on managing change by attracting and retaining strategic talent. On the other hand they also need to focus on organizational capabilities, culture, workforce diversity and leadership development which collectively will enhance the overall value of the firm. The HR professionals hold a lion's share in facing the challenges and creating a better value for the company. Thus the emphasis is to be shifted from rule bound approach to more democratic approach.

## CONCLUSION

The biggest challenge for service industry is its characteristics itself, namely, intangibility, inseparability, perishability and variability. Apart from these evergreen challenges, the internal and external factors of the business environment act as obstacles to service organizations. Adding fuel to fire is hyper competition. Under these very unfavorable conditions too Indian service industry has shown a lot of improvement in many aspects and contributed immensely to the economy. But, if the same pace of improvement is to be maintained, the service industry should undoubtedly focus on its Human Resource Management. In order to mitigate with the above mentioned challenges Indian service Industry must cut their costs of services, focus on product development and innovation along with proper utilization of technological up gradation.

Therefore, Indian service industry must spread their wings towards global markets as some of them have already done it. It has to focus on new and apt HR practices to cope up with cut-throat competition. As with the economy, the Indian service industry is at crossroads with multiple opportunities and challenges before it. It is high time that the right choices and right strategies are to be adopted in order to ensure the future as it is a key pillar upon which the economic prosperity of the country rests. Service industry today became the lifeline of our economy and it is the collective responsibility to ensure that it should be strong and resilient so that the nation gets geared up to face all domestic and global challenges.

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# BIOMETRICS AND RFID BASED E-PASSPORT: BRINGING SECURITY TO THE WORLD

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## ABSTRACT

*The advent of Radio-Frequency Identification (RFID) and biometrics in E- PASSPORT has brought in a harbinger of a wave for next-generation travel documents. The use of biometrics and RFID based e passport for identification makes the lives easier by ensuring the world as a safer place to live in. The biometric passport hinders travelers from taking an illegal entry into any country, limiting the use of counterfeit documents by more precise identification of an individual. This paper analyses the various cryptographic features as face, fingerprint, palm print and iris used as effective security measures in e-passports. Palm print is more secured as compared to finger print since it has more features such as wrinkles, principle lines, texture etc. RIFD and Biometric based e-Passport assures confidentiality, authenticity and consistency as compared to other technologies but still are not fully protected. This paper provides impending issues regarding security and effectiveness that are still unaddressed such as Eavesdropping, Clandestine Scanning &Tracking, Cloning ,Cryptographic Weaknesses and Skimming etc.*

## KEYWORDS
biometrics, clandestine scanning, eaves dropping, e-passport, skimming.

## 1. INTRODUCTION
A Biometric & RFID based digital passport represents a major shift in technology that can be used to authenticate the citizenship of travelers A biometric based e-passport can be recognized by the logo.

**FIGURE 1.1: A BIOMETRIC BASED PASSPORT**



The RFID contain a microchip and radio frequency identification (RFID) antenna which stores a digitized image of the passport holder as well as the relevant biographical details such as name, date of birth, digital photograph of the holder and others biographic information printed on the passport. The critical information related to passport is printed both on the data page of the smart passport as well as stored in the chip. This chip is contactless which allowing secret information to be read without connecting wires. After assessment of various biometrics, the current effective security measures used for identification in e-passports are fingerprint, facial, iris and palm print recognition.

## 2. REVIEW OF LITERATURE
- Kolahan and Thapaliya (2011) discussed that E-passports contain entirely the private information, so it is essential to protect the data. For that Authenticity, confidentiality and data integrity are the some of the most crucial factors and are maintained by using cryptography.
- Kumar et al (2012) suggested that biometric passport though increased the robustness against identity theft but additional security measures are still needed.
- Bhatia (2013) focused on biometric system which determines the authentication by using the different biological features i.e. Fingerprint, retina-scan, iris scan, hand geometry, and face recognition which are physiological biometrics but it is essential to locate factors that reduce and affect system performance such as in fingerprint Dry/oily finger and in Iris-scan due to too much movement of head or eye etc.

## 3. OBJECTIVES
1. To Analyse the various cryptographic features used as effective security measures in e-passports.
2. To Determine various issues regarding security and effectiveness.

## 4. TECHNICAL BACKGROUND
### 4.1 RFID TECHNOLOGY
The governments of the world are currently changing and reforming their immigration and migration laws and regulations. The conventional methods of paper-only passports and visas have become too easy to forge, allowing criminals to travel between countries, and to reside and work in them illegally. So, to tackle one

of the methods being implemented in most countries at this time is the use of Radio Frequency Identification (RFID) memory chips embedded in passports. A RFID chip is a very small contactless microchip, just like a memory chip or memory which are smaller than a grain of rice. The chip communicates with the reader/scanner through an RFID antenna that is embedded in the cover page of the passport. It is an automatic identification wireless technology i.e. radio frequency waves to transfer data between the reader and a movable item to identify, categorize and track. The characteristics of RFID are: It Uniquely identify an individual item.

- Identify items without direct line-of-sight
- Identify many items (up to 1,000s) simultaneously
- Identify items within a vicinity of between a few centimeters to several meters

**FIGURE 1.2**
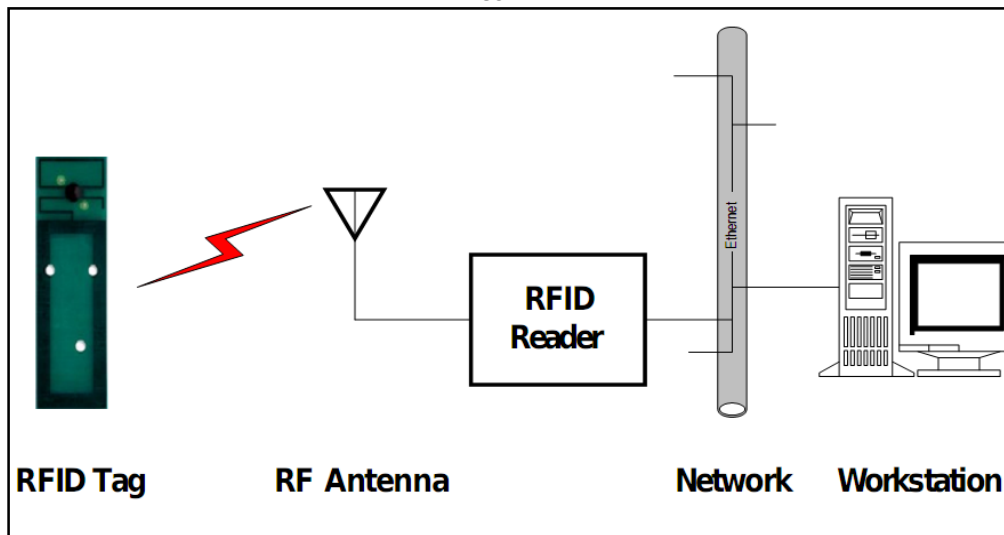


Systems that make use of RFID technology are composed of three key elements:

**4.1.1** **RFID TAG**: An RFID tag uses a silicon microchip to store a unique serial number and it is read-only (RO), write-once, read-many (WORM), or read-write (RW the chip may be read. Attached to the chip is the antenna, whose purpose is to absorb radio-frequency (RF) waves from the reader's signal to send and receive data. A RFID tag can be attached to anything that includes items, goods, vehicles, assets, livestock etc.

There are basically two types of RFID Tag's

- **PASSIVE RFID: TAGS**: Passive tags consist of three elements: an integrated circuit or chip, an antenna, and a substrate. The passive tags wait for an interrogating signal from an RFID reader and once the tag comes in range of the interrogation zone, the RFID tag's antenna draws energy from the electromagnetic waves. The tag's microchip once it becomes powered, it transmits a signal. The change in the electromagnetic wave is detected by the reader's antenna which interprets the information. For the proper processing of work, the antennas in both the tag and reader must be at least within several meters of each other; however, the read range depends on the transmit frequency, equipment settings, and other environmental factors. The major performance factors include the antenna's size and antenna shape. The larger the size of antenna, the more energy it can collect and then send back out. Larger antennas have higher read ranges but not as high as active tags. In Antenna shapes, the Low- and high-frequency antennas are usually coils because these frequencies are predominantly magnetic in nature. On the other hand Ultrahigh-frequency (UHF) antennas, look similar to old-fashioned TV antennas because ultrahigh frequencies are solely electric in nature.

The **PASSIVE RFID TAGS** operate at three distinct frequencies:

a) Low Frequency (LF) -125 -134 kHz
b) High Frequency (HF) -13.56 MHz
c) Ultra High Frequency (UHF) -856 MHz to 960 MHz's

As frequency increases, the radio wave's ability to penetrate liquids and metals decreases, and, generally, read range increases as frequency increases. With advancements in technology the UHF RFID tags can operate around water and on-metal surfaces with minimal interference. Substrate, the third component of the passive RFID Tag consists of Mylar or plastic film. The antenna and the chip both are attached to the substrate that holds all of the tag's pieces together. The passive RFID tag does not include an onboard source of power instead it receives its power from the energizing electromagnetic field of an RFID reader (or interrogator). The energy coupled from the electromagnetic field undergoes rectification and voltage multiplication in order allows to be used to power the passive tag's microelectronics. Passive tags are smaller and inexpensive.

- **ACTIVE RFID TAGS**: Active RFID tag's consists of two major Components a microchip and an antenna. The chips in RFID tags as compared to chips in passive tags are larger in size and have greater capabilities. They have onboard built-in power supply (long life battery) allows the tag to transmit data to a reader on its own, without the need to draw power from the reader itself like passive tags do. Active tags can be read from distances of 100 feet or more, whereas passive tags can only be read from up to about 20 feet. Whether we use active or passive tags in our RFID system depend primarily on two factors the application and our budget. The barcode technology will soon become obsolete as RFID proliferates through organizations, making them more efficient, reliable and well equipped for accuracy.

**FIG. 1.3: A COMPARISON OF ACTIVE VS. PASSIVE RFID TAG**

| | Active RFID | Passive RFID |
|---|---|---|
| Tag Power Source | Internal to tag | Energy transferred from the reader via RF |
| Tag Battery | Yes | No |
| Availability of Tag Power | Continuous | Only within field of reader |
| Required Signal Strength from Reader to Tag | Very Low | Very High (must power the tag) |
| Available Signal Strength from Tag to Reader | High | Very Low |

| | Active RFID | Passive RFID |
|---|---|---|
| Communication Range | Long range (100m or more) | Short or very short range (3m or less) |
| Sensor Capability | Ability to continuously monitor and record sensor input; data/time stamp for sensor events | Ability to read and transfer sensor values only when tag is powered by reader; no date/time stamp |
| Data Storage | Large read/write data storage (128KB) with sophisticated data search and access capabilities available | Small read/write data storage (e.g. 128 bytes) |

**4.1.2.** An RFID tag reader, or transceiver, that reads and writes tag data.

**4.1.3.** A back-end database, that stores records associated with tag contents.

**4.2 THE RFID MECHANISM OF THE E-PASSPORT**

Each tag contains a unique identity code. An RFID reader emits a low-level radio frequency magnetic field that energises the tag. The tag responds to the reader's query and announces its presence via radio waves, transmitting its unique identification data. This data is decoded by the reader and passed to the local application system via middleware. The middleware acts as an interface between the reader and the RFID application system. The system will then search and match the identity code with the information stored in the host database or backend system. In this way, accessibility or authorization for further processing can be granted or refused, depending on results received by the reader and processed by the database. Although RFID chips used in e-passport promises protection they still have lots of technical flaws are they are vulnerable to skimming and eavesdropping.

**4.3 BIOMETRICS IN BRIEF**

The airline industry sector is considered as one of the most globally threatened, and that is why new methods and tools are constantly sought in order to enhance security. These methods contain the latest technology, including contactless smart cards (RFID), with encrypted biometric information. Biometrics refers to measurable biological or behavioral aspects of a person and can be used for automated recognition. They are powerful identifiers since the are unique and it is not possible to be shared or duplicated. Biometrics can be used either as for identification or for authentication/verification. In case of identification, a computer system compares a person's biometric characteristic eg fingerprint, with all biometric samples stored in database. If it matches with one of them then person is identified. This type of match is called one-to-many match. In case of authentication, the person is scanned and is compared with one to a previously stored sample. This type of match is called one-to-one match in contrast to identification process which is one-to-many. Biometrics-based technologies include identification based on physiological characteristics complying with ICAO standards that consists of a mandatory facial images, fingerprints, hand geometry,palm, retina, irises etc.

**4.3.1 PHYSICAL BIOMETRIC TECHNIQUES**

**A) FINGERPRINT IDENTIFICATION**

Fingerprints is one of the reliable measures of biometrics used to identify an individual and verify their identity. Fingerprints are made of a series of ridges and furrows on the surface of the finger and have a core around which patterns like swirls, loops, whorls, or arches are curved to ensure that each print is unique. An arch is a unique pattern in which the ridges enter from one side of the finger and then rise in the center forming an arc, and finally exit the other side of the finger The loop on the other side is a pattern where the ridges enter from one side of a finger, and then form a curve, and tend to exit from the same side they enter in. In the whorl the ridges form a circularly pattern around a central point on the finger. It has been proven that fingerprints of even monozygotic twins are different. That means the identities of twins can be distinguished by simply matching the corresponding fingerprint with its stored digital representation. With digital scanning, a one presses their finger against a small optical surface where fingerprint information is taken from the digital scan and sent it to a database for both verification and identification comparison. The future of fingerprinting is very bright, as you will continue to see widespread usage at ATMs for withdrawing and depositing money and at grocery stores for fingerprint scan checkout and billing to a registered user's credit card or debit account are some of examples of how fingerprint will be used.

**B) HAND GEOMETRY**

The hand geometry is a biometric technique which reads a person's hand and/or fingers for access. Hand geometry is just like fingerprinting, which is generally completed in 5 second process. It offers many advantages such as ease of use, small data collection, resistant to attempt to fool a system, difficult technology to emulate a fake hand, and provides for the elimination of buddy punching in workforce management solutions.

There are however several challenges to the technology.

- The first challenge is high proprietary hardware costs and size, the aging of the hands and fingers of individuals poses a challenge.
- The inability of the machines to cater hands with injuries is a second challenge; the inaccuracy of the technology s a third challenge,
- The final challenge deals with the biometrics inability to recognize a fake hand. The future of hand scanning appears to be static. From a cost standpoint, it is quiet expensive than fingerprint technology and just as effective.

**C) FACIAL RECOGNITION:** Facial recognition analyze the several characteristics of a person's face . The process works as follows: The person faces a digital video camera, usually standing about two feet from it, where the overall facial structure, including distances between eyes, width of the nose, mouth, and jaw edges are measured. These measurements are saved in a database and used for comparison in future when a user stands before the camera again. The several advantages of facial recognition are easy integration into existing access control or time and attendance systems; verification and/or identification being accomplished in a short span time period. Face recognition system is a system, which turns your face to computer code so that it can be compared with thousands of faces• In order for face recognition system to work it has to know what a basic face looks like. Face recognition system is based on ability to first recognize faces and then measure the various features of each face. If you look into mirror you can see that your face has certain distinguishable landmarks sometimes called as nodal points. There

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are about 80 nodal points on human face like 1. Distance between eyes 2. Width of nose 3. Depth of eye sockets 4. Cheek bones 5. Jaw line 6. Chin etc. These nodal points are used to create numerical code, a string of numbers that represents the face in database (called face print). Only 14-22 nodal points are needed to complete the recognition process. The parameters measured are translated into digital codes called the fingerprint and face print which is used to represent the face in the database.

- **Face Recognition Types: There** are two types of Face recognition -**2D System and 3-D system.**

**a)** The Basic facial recognition used two dimension (2D) paradigm picture to compare it with the image sorted in the data base, but these programs did not succeed only if the person is looking just to the camera. So anyone who is suspect will be warned that he/she will see a camera in place, and here lies the problem where this fails by depending on the 2D system. Besides, the additional changes in the environment surrounding the person, such as light will produce images the computer cannot have in the corresponding memory, also the changes in the same person due to age, accidents, surgeries etc can cause a system failure in face recognition.

**b)** 3D System for face recognition is based on the concept where the special cameras will capture images of three-dimensional views of the suspected person, and using the special main features of each face that generally does not changed significantly with time, such as eye hole, the basic distance between the eyes, width and shape of the nose etc. These features are the strongest source of information as these measurements are not subject to lighting or surrounding environmental, for example: These 3d system does not suffer from lighting conditions even if the place was dark and even if the person is not in the face of camera.

**D) IRIS SCAN:** Iris recognition is one of the richest source of biometric data since it is a protected organ whose random texture is stable throughout the life and hence can be used as an identity document offering high degree of identity assurance. It is based on the distinct colored ring surrounding the eye of biometric identification that uses mathematical pattern-recognition techniques on video images of the irises of an individual's eyes. It involves a user, which stands around 2 feet away, looking into a device where their iris is scanned and compared. The comparison is conducted at more than 200 points and checked for similar rings, furrows and freckles of the eye.

The main advantage of iris scanning involves the extreme accuracy of the technology. Since Irises is unique of every individual and not only differ between identical twins, but also between the left and right eye. It involves non-invasive technology; an ease of use since irises can never be stolen, unlike keys, access cards, and password systems.

The main challenges of Iris are:

- It involves its high cost
- The bad readings due to poor lighting, surface positioning if behind a curved, wet, or reflecting surface;
- The possibility of obscured irises due to eyelashes or drooping eyelids.

The future of iris scanning seems to be very bright as the ease of use and accuracy of the technology will open the new windows for iris scanning in correction facilities, county jails, airports, banks, colleges and police stations around the country. It is also possible that in the near future everyday people will use iris scanner a daily basis for entering the office and logging onto corporate networks.

**E) RETINAL SCANNING**

Retinal scanning devices are one of the most accurate physical biometric since there is no known other way to replicate a retina. Similar to iris scanning, it simply scans the layer of blood vessels at the back of the eye. It involves using a low-intensity light source and an optical coupler that reads the patterns of a person's retina. A new and primarily new technology that is used for high-risk security areas. In Retinal scanning the user looks through a small opening in the device that has a small green light. The user must keep their head still and eye focused on the light for several seconds during which time the device will verify the user identity. This process takes around 10 to 15 seconds only.

Besides being the most accurate biometric technique available, retinal scanning provides for several additional advantages.

The main advantages are the capability of providing viewing assistance to those who are visually impaired; Providing greater degree of accuracy, and the technology being seen as a great long term cost alternative to some other biometric techniques.

The several challenges are:

- They include the invasive screening process and user discomfort. Such as it requires a user to stand within inches of a device to get an accurate reading.
- It requires a user to remove glasses and requires a user to place their eye close to the retinal scanning device.
- It requires a user to focus on a certain point for a specific period of time.

The future of retinal scanning seems to be bright. However, it needs to be more refined, non-intrusive, and cost effective for acceptance.

**F) PALM PRINT**

Palm print is inner part of an individual's hand. Since many years the palm line patterns have been used for predicting the person's future. Palm print is also one of the reliable modality since it has unique features as principal lines, orientation, singular points etc. The other features of palm are geometric features, delta point's features, ridges and creases. Principal lines are namely heart line, head line and life line. Palm print contains three principal lines which divides palm into three regions: Interdigital, Hypothenar and Thenar. An Interdigital region of the palm lies above the Heart line. The Thenar lies below the Life line. And Hypothenar is between Heart and Life line. From palm print principal lines, minutiae, ridges features can be extracted for identification.

Advantages of palm print

- It is is hardly affected by persons age.
- It contains more reliable information and can use low resolution devices.
- It is a rapidly developed method of biometrics.
- Face Identification

## 5. PRIVACY AND SECURITY ISSUES

With the development of RIFD system, Security in e-passport system has become a critical issue. Contactless and RFID chips were used without connecting wires which is vulnerable to be exposed at a distance. There is a greater chances of attacks in communication network, chip or at backend system. E-passport guarantees confidentiality and authenticity of information based on some cryptographic tools. As compared to others, biometric system provides better aspect for user authentication but it is not fully protected. In current years, some drawbacks are evolving related to data privacy issues. There is a possibility of several attacks at hardware and software levels like Eavesdropping, Reverse Engineering, Clandestine Scanning and Tracking, Cloning, Biometric Data-Leakage, Cryptographic Weaknesses and Skimming.

**5.1 EAVESDROPPING**

Eavesdropping refers to the unauthorized monitoring of a private communication, such as a phone call, emails, messages, videoconference, fax transmission and other internet services. The majority of network communications occur in an unsecured format, which allows an attacker to secretly listens the communication link and intercepts the information by using unauthorized device during the communication between chip and legitimate reader. This kind of attack is hard to acknowledge because there is no emission of powered signals. It has been observed that up to at least of two meters of area attacker can eavesdrop on the communication network of RFID cards and when an attacker is eavesdropping on your communications, it is referred to as sniffing or snooping. The ability of an eavesdropper to monitor and interpret ate the network is generally the biggest security problem that an administrators face in an organization. Without strong encryption services that are based on cryptography, your important data can be stolen by others through the network.

**FIGURE 1.4: EAVESDOPPING**
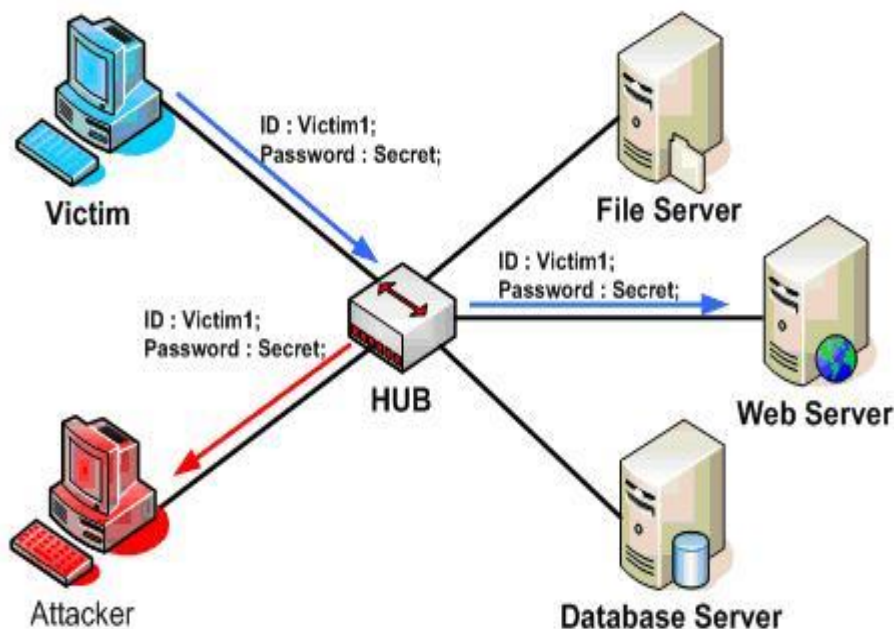


### 5.2 REVERSE ENGINEERING

Reverse engineering is also called as back engineering. It is the process of extracting design information from man-made and re-producing anything based on the extracted information. Biometric chip uses a unique id as a private key that is hardcoded in chip manufacturing process so are very difficult to reverse engineer but if the attacker has the technical knowledge than they can reverse engineer and has access to equipment which is not rarely found in commercial market. Potential reverse engineering of biometric template is an important issues need to be addressed that could lead to a reconstruction of the images of physical characteristics. Although it is considered to be impossible but research is carrying on to reduce the set of potentially matching images of the physical characteristic using the template.

### 5.3 CLANDESTINE SCANNING AND TRACKING

Clandestine scanning is an unauthorized way of reading the electronic data of an identity card without the consent of the card holder. Private information like as address, name, date, marital status, date of birth, and nationality can be leakage easily by anyone. Clandestine tracking has an ability to track an individual and it can easily reveal the location of the person. Tracking is possible if the data on the chip cannot be read. We also show that the ICAO Active Authentication feature enables tracking when used with RSA or Rabin-Williams signatures. Clandestine tracking is more harmful as compared to clandestine scanning because the attacker can keep track record of an individual globally.

### 5.4 CLONING

Cloning attack is one of the attack pattern of acquiring the data from an authorized identity card where typically the attacker makes the fake accounts of the real users by thieving and copying their profiles, and sends friend requests to the friends and relatives of the cloned victim and it is difficult for an individual to detect these fake identities due to the same identical names and profile information of the user and making an unauthorized copy of the captured sample in a new chip and also for cloning threats, the active authentication is used as the counter measure but it can be bypassed by amending the EF.COM file of the passport chip.

### 5.5 BIOMETRIC DATA-LEAKAGE

Biometric data are constant and replacement is actually impossible if the biometric data are compromised. Just because of this features, it is used in e-passports to enhance privacy and security concerns. Data-hiding is one of the technique used for security of the data. In order to protect biometric data from misuse and attacks, the approaches which were widely used is watermarking-based multimodal biometric. In this, iris template is watermarked in the face image which makes the face image visible for verification and the watermarked iris for cross-authentication and biometric data security. Existing and proposed deployments of e-passports will always facilitate automation, and perhaps, a weakening of human oversight. This helps in making secrecy of biometric data.

### 5.6 SKIMMING

A skimming is the act of obtaining encoded data without the consent of individual by using electronic storage device. The data from e-passport can be retrieved by beaming power at the passport at most a few feet and also the Digital signatures required on e-passport data by ICAO regulations. such signatures allow the reader to verify that the secret data came from the correct passport-issuing authority.Digital signatures do not bind the important data to a passport or chip, so there is no defense against passport cloning.

## 6. SCOPE FOR FUTURE RESULTS

Future E-passport incorporate more biometric features into one device to ensure the quality of an automatic processing of personal identities to build more secure biometric passports. Proposed features for a future use are primarily based on an iris recognition (use of the iris recognition has been already prepared in current passports, however the real application is still not common), veins of fingers recognition, body shape recognition, analysis of other electrical and magnetic fields, created by man's body or of its reactions to such fields, analysis of face and head vibrations during speaking. and combinations of these features with time-proven fingerprints. Moreover, scanning of veins of a finger during a fingerprint scanning process should also provide liveness detection at the same time—that is a very important aspect in a fake fingerprint detection

## 7. CONCLUSIONS

The work represents an account for the presence on e-passport using unique biometrics recognition towards their improved identification. The application of various cryptographic features such as facial, fingerprint, palm print and iris recognition in passports highly requires accuracy rates; secure data storage, and reliable generation of biometric data. An RFID chip will be embedded into the passport from which Border guards will be able to compare the face of the person standing in front of them with the image of the individual stored into the RFID chip. This image must match with the image printed into the passport page. Biometric are one of the promising identification measures because absolute identification could eliminate mismatched computer records and stolen identities. The state of differences in privacy laws between different countries is a huge barrier for global implementation of biometric passports. The use of biometrics in e-passport protects the data from being stolen. The inclusion of biometric identification information into machine readable passports though increased robustness against identity theft if additional security measures are implemented so that the limitations of the biometric technologies are compensated.

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# PERCEPTUAL DIFFERENCES BETWEEN THE USERS AND NON USERS OF INTERNET BANKING

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## ABSTRACT

*The purpose of this paper is to explore the perceptual differences between the users and non users of internet banking which exerts great influence on the adoption of the same. The sample for this survey was drawn from three groups of bank customers residing in three districts of Kerala state. The analysis of the data clearly proves that there is a considerable difference in the perception of users and non users of internet banking. Strong positive perception leads to the adoption of internet banking. Non users prefer branch banking than internet banking. This study suggests that by customer education, bank managers can remove some disbelieves that non users have with regard to internet banking. These measures could help in rapid migration of customers to Internet banking, resulting in considerable savings in operating costs for banks.*

## KEYWORDS

internet Banking, bank coustomer, Kerala.

## 1. INTRODUCTION

The banking sector is one of the leading users of information technology worldwide. Introduction of information technology has transformed banking system almost beyond belief in the last decade and a half. Most of all, customers have benefited, as have the banks themselves. There have been very significant gains in the efficiency of banks leading to greater potential for higher profitability and consequent benefit to the economy as a whole.

With the advancement of technology and increased competition, banks are in the race of becoming the best in the country. With an eye upon customer satisfaction policy, they are providing best of the best services with the minimum hazards. It may also be observed that the recent past has witnessed new concepts such as 'Anywhere Banking' and 'Any Time Banking' being adopted by Indian banks, which are but offshoots of technology implementation by banks. With the introduction of Automatic Teller Machine (ATM)s customers can even go to any networked branch or networked ATMs, and carry out many banking transactions. With e-banking, many banking activities are carried out from within the customer's home. Such innovations have had a positive impact on customer service- besides the benefit that is derived by banks in terms of reduced costs of operation.

Information technology has also resulted in a major attitudinal change revolutionizing the concept relating to treatment of customers of banks; with the end of geographical distances, banks need to treat the customer as a customer of the bank and not as a customer of any particular branch. This is now possible because of the usage of IT on a large scale whereby centralized data base information are possible in a bank with decentralized access. Another option to achieve this objective is to have clustered solutions in a bank with data of customers residing in these systems. Banks need to constantly look for innovative services which offer customers the convenience of transacting from anywhere, at any time, and using delivery channels that are suitable for them. These are frontiers which would add value to the services offered to customers and at the same time act as a means for increasing the profits for banks too.

Internet banking is a recent phenomenon in Kerala. The spread of internet banking culture depends on the facilities offered by banks. Greater facilities can always attract more customers. In this matter it can always be seen that private banks are ahead of public sector banks. ICICI bank introduced internet banking in Kerala in the year 1997. Federal bank started offering internet banking services in the year 2000 through Fednet. It was the first Kerala based bank to offer internet banking services in the state. In Cochin the pioneers in offering internet banking services are the ICICI and the Federal bank. Among the PSBs, SBI and State Bank of Travancore (SBT) are the leading bankers. SBI provides online banking services through Online SBI. It has started functioning in the year 2004. As compared to new generation and Kerala based banks, nationalized banks have few online banking customers.

## 2. REVIEW OF LITERATURE

Past research has identified the perceptual differences between the adopters and non adopters of internet banking. Akinci, Aksoy and Atilgan (2004) who examined internet banking adoption in Turkey found that while internet banking adopters are more technology oriented and convenience-minded individuals, non-adopters are more traditional channel oriented, and hesitant customers, lacking confidence in internet banking services relative to the services given through branches.

Lee and Schuamann (2005) observed significant differences between current adopters and persistent non-adopters of internet banking in terms of perceived service, attributes, perceived risk, and compatibility. Current adopters of internet banking appear to perceive convenience and quick service as important service attributes, compared to persistent non-adopters. Persistent non-adopters, however, perceive better rates and lower service to be more important than do current adopters. Persistent non-adopters are also more likely to perceive risks than current adopters, because they rate security and size of bank to be more important than do current adopters.

In a study about customer acceptance of Internet banking in Estonia, Eriksson, Kerem, and Nilsson (2005) suggested that internet banking use increases insofar as customers perceive it as useful. The perceived usefulness is central because it determines whether the perceived ease of use of internet banking will lead to the increased use of internet banking. Put differently, a well-designed and easy to use internet bank may not be used if it is not perceived as useful.

Gerrard, Cunningham and Devlin (2006) identified various factors which explain why certain consumers are not using internet banking. The two most frequently mentioned factors were perceptions about the risks associated with internet banking and the lack of perceived need. Ndubisi and Sinti (2006) show that four attitudinal factors have strong influences on adoption namely importance to banking needs, compatibility, complexity, and trialability, whereas risks has a weak influence. Importance of the internet to banking needs significantly predicts internet banking adoption.

The Internet and Mobile Association of India (IAMAI) found that about 23% of the online users in India preferred Internet banking as the banking channel to carry out their transactions, second only to the ATM, which is preferred by 53%.

According to Malhotra and Singh (2007) majority of customers are now showing greater interest in the new ways available to manage their accounts through accepting the internet technology in banking. Customers were thrilled with the speed and convenience of the internet banking services comprised 60 percent of male and 40 percent of females who are relatively young, educated and serving in Government offices or the private industrial houses.

De Young, Lang and Nolle, (2007) stated that brick-and-mortar banks used the Internet channel as a complement to, rather than a substitute for, physical branches. Internet banking offers ease of use and access to the customers. Many people know how to use Internet and have the opportunity to access either from their workplace or from their home.

Ozdemir, Trott and Hoecht (2008) observed that there were significant differences between adopters and non-adopters of the service in terms of their perceptual, experience and consumer related characteristics. Internet banking adopters perceived internet banking use as less risky, more user-friendly and more useful compared to internet banking non-adopters. Internet banking non-adopters who intend to use the service in the future (i.e. later adopters) perceived internet banking use as less risky and more useful compared to non-adopters who do not intend to use the service (i.e. laggards). Internet banking adopters were also found to have more experience with mobile internet, and have higher income and longer working hours.

Another study conducted in the Indian context by Sofri and Harshid (2009) which identified that the acceptance of internet banking is being explained by factors like education, banking literacy, computer literacy, internet facilities, cost factor and banking facilities.

This review gives evidence of the perceptual difference between the adopters and non adopters of internet banking in different parts of the world. It is also essential to conduct a similar study in Kerala also. Hence in this study an attempt has been made identify whether there is any difference in the perception of users and non users of internet banking.

## 3. SIGNIFICANCE OF THE STUDY
The pace of change in banking sector is getting faster day by day. One of the most important change is the introduction of internet banking in banking sector. In order to make this change sustainable and contribute to the growth process of the nation, we have to understand the perception of people toward this change. A detailed study is highly imperative to identify the perceptual differences between the adopters and non adopters of internet banking which exerts great influence on the adoption of the same.

## 4. SCOPE OF THE STUDY
The scope of the study is confined to an indepth analysis of the selected household bank customers belonging to three districts; Kozhikode, Ernakulum and Pathanamthitta of Kerala state. Even though a variety of multiple e-banking delivery channels are operating in the state, the scope of the study is confined to internet banking only.

## 5. RESEARCH PROBLEM
Internet banking has brought about various changes in the way in which banking services are delivered to the customers. The modern banking has become wholly customer-driven and technology-driven. During the last decade, internet banking has been dramatically transforming the banking activities in the Kerala state. It extends greater convenience and multiple options for customers.

Internet banking services are still in their infancy while traditional banking services are more mature. It seems that only a small subset of consumers has adopted internet banking in the state. Non-adopters still comprise the majority of the bank customers. Perceptual factors play a significant role in the adoption of internet banking. So there is a need to investigate the perceptual differences between adopters and non adopters of internet banking.

## 6. OBJECTIVES OF THE STUDY
❖    To analyze the significant differences between users' and non-users' perception of technology used in banking.
❖    To investigate the perceptual differences between users and non users of internet banking.

## 7. HYPOTHESES
- There is no difference between users' and non users' general perception of technology oriented banking.
- There is no difference between users' and non users' perception of internet banking.

## 8. RESEARCH METHODOLOGY
This study is designed as a descriptive one based on both secondary and primary data.
### SECONDARY DATA
Secondary data necessary for the study has been gathered from the published sources such as newspapers, magazines, research journals and e-journals.
### PRIMARY DATA
Primary data was collected from 360 sample customers of selected banks operating in Kerala state. Customer perception was gathered through a detailed survey, using structured and pre-tested questionnaire. A good deal of information was also collected through direct personal interviews made with the top authorities of the prominent banks in Kerala. Discussions were held with scholars and experts in the field of banking to collect relevant information.
### SAMPLE DESIGN
Multi stage Sampling Technique was used in this study. In the first stage of sampling, the entire state is divided into three geographical regions such as Northern, Central and Southern regions. Three districts, Kozhikode district from Northern region, Ernakulum from Central region and Pathanamthitta from Southern region were selected randomly. In the second stage, banks in each district were divided into three groups such as Nationalized banks, Kerala based Scheduled banks and New generation banks. From each group, one bank was selected using simple random sampling technique applying lottery method. Accordingly, from Kozhikode district, State Bank of India, Federal bank and ICICI bank were selected. From Ernakulam, Canara bank, South Indian Bank (SIB) and Axis bank were chosen. Syndicate bank, Catholic Syrian bank (CSB) and HDFC bank were selected from Pathanamthitta district. In the last stage, 20 customers each were chosen from among the two bank branches of each banks using convenience sampling technique.

## 9. ANALYSIS AND INTERPRETATION
### USAGE OF INTERNET BANKING
Primary data shows that 26% of the360 respondents are using internet banking.
### USERS' AND NON-USERS' PERCEPTION OF TECHNOLOGY IN BANKING
Here, internet bank users' and non users' general perception of technology used in banking is identified. For this purpose, the respondents are asked to rate 12 five point Lickert scale statements ranging from strongly agree (5) to strongly disagree (1). Since the last four are negative statements, points are allotted in the reverse order. Mean values of each statement along with standard deviation are presented in Table 1.

It can be noted that internet banking users have strong positive perception of technology enabled banking services and this is clearly reflected in their approach to internet banking.

Next we consider the perception of non users of internet banking towards technology used in banking where we can see that they are not against of technology used in banking but they do not support complete replacement of people with machines in discharging banking transactions. This support the fact that most of the non users of internet banking have adopted ATMs, some are using credit cards and mobile banking. Hence we cannot say that they are against of banking technology.

### TESTING OF HYPOTHESIS 1
In order to check whether the differences found in the mean values of users' and non users' perception of technology enabled banking services is statistically significant, t-test is applied at 5% level of significance.

The results of the analysis reveal that except in the case of both group's opinion that 'banks should provide proper awareness regarding new technology enabled services', there is a significant difference between the general perception of users' and non users' with regard to technology used in banking.

### USERS' AND NON-USERS' PERCEPTION OF QUALITY OF INTERNET BANKING FACILITY OFFERED BY THEIR BANKS
Further, the users' and non user's perception of quality of internet banking is thoroughly analyzed. For this purpose, the respondents are asked to rate 18 five point Lickert scale statements. Mean values of users' and non users' perception of internet banking are incorporated in Table 3.

Mean values of internet banking users clearly shows that they are comfortable with internet banking. They are of the opinion that as compared to branch banking, internet banking is more convenient since it is quick to use than visiting the bank branch personally. They also feel that internet banking is very much needed for conducting their banking activities. But regarding the security aspect, they opined that they are concerned about of the security of internet banking and also the

consequences of making any mistake. They also admit that branch banking is safer than internet banking. But at the same time, they are not ready to stay away from internet banking due to the fear of losing money.

The aggregate mean value of user's perception of internet banking is 3.7553 which indicate that even though they have some disagreements with regard to certain aspects of internet banking, overall it seems that the users have positive perception towards internet banking which is clearly reflected in their adoption and usage of the same.

On the other hand, non users are not at all interested in internet banking. They strongly feel that branch banking is more convenient than internet banking even though majority of them opined that branch banking is little bit time consuming. They are also very much concerned about the security of internet banking and consequences of making mistakes. They also agree that they do not use internet banking due to the fear of losing money. They strongly believe that branch banking is much safer than internet banking. Due to these factors, they do not feel the need to use internet banking. Non users prefer to go to branch banking and like to deal face to face with banking personnel for doing their banking transactions.

**TESTING OF HYPOTHESIS 2**

In order to check whether the differences found in the mean values of users' and non users' perception about the quality of internet banking is statistically significant, t-test is applied at 5% level of significance and the results are presented in Table 4.

The results of the analysis show that the differences found in the mean values explaining the perceptual differences between users and non users of internet banking is statistically significant.

## 10. CONCLUSION

This study clearly explored the perceptual differences of users and non users of internet banking. The findings of this study clearly support the earlier research findings which proved that strong positive perception leads to the adoption and usage of a product or service. This study gives important implications for banking industry also. Banks should ensure safety and confidentiality while delivering services through internet banking. By customer education, bank managers can remove some disbelieves that non users have with regard to internet banking. So the challenge to all banks will be to expand the internet banking user base and slowly increase the range of services to the customers.

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## APPENDIX

**TABLE 1: INTERNET BANKING USERS' AND NON-USERS' PERCEPTION OF TECHNOLOGY USED IN BANKING**

| Variable | Users | | Non-users | |
|---|---|---|---|---|
| | Mean | Std. Dev | Mean | Std. Dev |
| Since innovations and technology exists, we better use them | 4.4835 | 0.5025 | 4.1227 | 0.7096 |
| Technology eases once life | 4.5055 | 0.5452 | 4.0706 | 0.6956 |
| I like to use new methods to conduct banking transactions like ATM, internet/mobile banking etc | 4.4396 | 0.5418 | 3.8996 | 0.8558 |
| I prefer technological convenience | 4.3516 | 0.5652 | 3.8104 | 0.8042 |
| I prefer machines rather than people in doing my banking | 4.1429 | 0.7389 | 3.4721 | 1.0911 |
| The employees who I have contact with have the knowledge to answer my questions | 3.9111 | 0.8023 | 3.4684 | 0.9868 |
| Banks should provide proper awareness regarding new technology enabled services | 4.4725 | 0.6026 | 4.4275 | 0.5917 |
| I find technology enabled services are complicated to use | 4.0989 | 0.5386 | 3.5279 | 0.8832 |
| I am not a very active user of banking services | 4.2527 | 0.7241 | 3.0335 | 1.2559 |
| I am satisfied with existing mode of banking | 4.1209 | 0.7429 | 2.7063 | 1.1194 |
| I always prefer to have someone to explain me how to use ATMs and internet banking | 4.3077 | 0.7556 | 3.5130 | 1.1832 |
| Aggregate | **4.2783** | **.6417** | **3.6411** | **.9251** |

**TABLE 2: RESULT OF t-TEST**

| Variable | DF | t value | P value |
|---|---|---|---|
| Since innovations and technology exists, we better use them | 358 | 5.29 | 0.000 |
| Technology eases once life | 358 | 6.11 | 0.000 |
| I like to use new methods to conduct banking transactions like ATM, internet/mobile banking etc | 358 | 7.00 | 0.000 |
| I prefer technological convenience | 358 | 7.04 | 0.000 |
| I prefer machines rather than people in doing my banking | 358 | 6.57 | 0.000 |
| The employees who I have contact with have the knowledge to answer my questions | 358 | 4.27 | 0.000 |
| Banks should provide proper awareness regarding new technology enabled services | 358 | -0.62 | 0.533 |
| I find technology enabled services are complicated to use | 358 | 7.32 | 0.000 |
| I am not a very active user of banking services | 358 | 11.31 | 0.000 |
| I am satisfied with existing mode of banking | 358 | 13.66 | 0.000 |
| I always prefer to have someone to explain me how to use ATMs and internet banking | 358 | 7.42 | 0.000 |

**TABLE 3: USERS' AND NON-USERS' PERCEPTION OF QUALITY OF INTERNET BANKING FACILITY**

| Variables | Users | | Non-Users | |
|---|---|---|---|---|
| | Mean | Std. Dev | Mean | Std.Dev |
| I am comfortable with internet banking | 4.0769 | 0.7921 | 2.4684 | 0.6937 |
| A feel branch banking is more convenient than internet banking | 3.8242 | 0.8640 | 2.6468 | 0.7367 |
| It is easy to learn internet banking | 4.0989 | 0.6507 | 2.8625 | 0.6800 |
| I do not have the facility ( computer/internet connections) to use internet banking | 4.2418 | 0.4794 | 2.7658 | 1.0189 |
| Internet banking is quick to use than visiting the bank branch personally | 4.3407 | 0.6186 | 3.6468 | 1.0392 |
| Branch banking is very time consuming | 4.1758 | 0.7542 | 3.5242 | 1.0705 |
| I am concerned about the security of internet banking. | 3.407 | 1.229 | 2.8513 | 1.0038 |
| In using these, I am concerned about the consequences of making a mistake | 3.264 | 1.191 | 2.8290 | 0.9661 |
| I think branch banking is much safer than internet banking | 3.396 | 1.163 | 2.7323 | 0.9034 |
| I do not use internet banking due to the fear of losing my money | 4.0220 | 0.7450 | 2.8253 | 0.9320 |
| I do not feel the need to use internet banking | 4.2418 | 0.6886 | 2.5167 | 1.0459 |
| I prefer going to bank branch rather than doing my banking at home | 3.418 | 1.184 | 2.3197 | 0.9745 |
| I prefer to deal face to face with banking personnel in doing my transactions | 3.385 | 1.143 | 2.5502 | 1.0555 |
| Transactions done at bank branches are costly | 3.308 | 1.029 | 2.8773 | 0.8441 |
| Internet banking transactions are cheap | 3.637 | 1.017 | 2.9777 | 0.3555 |
| Charges on various internet banking transactions are unknown | 2.484 | 1.079 | 2.9108 | 0.4045 |
| I am knowledgeable of all the benefits of internet banking | 4.0440 | 0.5560 | 2.2119 | 0.9715 |
| I do not know what needed to be done to become an internet banking user | 4.2308 | 0.4961 | 2.1301 | 0.8648 |
| **Aggregate** | **3.7553** | **.8711** | **2.7582** | **0.8645** |

**TABLE 4: RESULTS OF T-TEST: PERCEPTION OF QUALITY OF INTERNET BANKING**

| Variable | DF | t value | P value |
|---|---|---|---|
| I am comfortable with internet banking | 358 | 17.26 | 0.000 |
| A feel branch banking is more convenient than internet banking | 358 | 11.65 | 0.000 |
| It is easy to learn internet banking | 358 | 15.49 | 0.000 |
| I do not have the facility ( computer/internet connections) to use internet banking | 358 | 18.47 | 0.000 |
| Technology enabled services are quick to use than visiting the bank branch personally | 358 | 7.65 | 0.000 |
| Branch banking is very time consuming | 358 | 6.36 | 0.000 |
| I am concerned about the security of technology enabled banking services | 358 | 3.89 | 0.000 |
| In using these, I am concerned about the consequences of making a mistake | 358 | 3.15 | 0.002 |
| I think branch banking is much safer than internet banking | 358 | 4.96 | 0.000 |
| I do not use internet banking due to the fear of losing my money | 358 | 12.39 | 0.000 |
| I do not feel the need to use internet banking | 358 | 17.91 | 0.000 |
| I prefer going to bank branch rather than doing my banking at home | 358 | 7.98 | 0.000 |
| I prefer to deal face to face with banking personnel in doing my transactions | 358 | 6.14 | 0.000 |
| Transactions done at bank branches are costly | 358 | 3.60 | 0.000 |
| Internet banking transactions are cheap | **358** | 6.07 | 0.000 |
| Charges on various internet banking transactions are unknown | 358 | 3.69 | 0.000 |
| I am knowledgeable of all the benefits of internet banking | **358** | 16.46 | 0.000 |
| I do not know what needed to be done to become an internet banking user | **358** | 28.36 | 0.000 |

# STRESS OF RETAIL SECTOR EMPLOYEES: A STUDY

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**ABSTRACT**

*The level of stress is the maximum among the retail sector employees. So this topic is chosen and the study is conducted on stress among the retail sector employees. The main theme of this study is to understand the stress caused among the employees of the retail sector. The main purpose is to study the various prospects and challenges of the retail industry, understanding it and providing solutions to overcome the problems. It is a great learning experience. During the past decade, the retail sector had under gone rapid and striking changes like policy changes due to globalization and liberalization, increased competition due to the entrance of more private (corporate) sector banks, downsizing, introduction of new technologies, etc. Due to these changes, the employees in the retail sector are experiencing a high level of stress. The advent of technological revolution in all walks of life coupled with globalization, privatization policies has drastically changed conventional patterns in all sectors. Although a lot of studies have been conducted on the psychosocial side of the new policy regime in many sectors, there are only few studies as far as the retail sector is concerned, while the same sector has been drastically influenced by the new policies. In this juncture, the present study is to address specific problems of employees related to occupational stress. This throws light in to the pathogenesis of various problems related to occupational stress among employees. The study has basically concentrated on secondary data. It has tried to find out the causes and effect of stress in retail stores for different work culture in different retail houses and how it has affected the employees. Even the study has examined the stress reliever in different houses and tried to suggest a feasible and optimum solution to waive the stress level of employees.*

## KEYWORDS
retail sector, stress management.

## 1.    INTRODUCTION

**R**etailing is such a kind of distribution channel in sales where consumer directly buys products. Retailers can have product from two sources : a) an organisation buys products from other firms or b) manufacturers produce finished goods of their own and sell directly to consumers while running their own retail outlets in a corporate channel arrangement. The retail industry in India is highly scattered and not in proper organized form. On early days of retailing in India it was mostly done in family-owned small stores with limited merchandise, which is popularly known as kirana or mom-and-pop stores. Nilgiri and Akbarallys were some of the traditional retail chains in India that was having the concept of western retail supermarkets. Government also ventured with the setting up of public distribution system (PDS) outlets to sell subsidised food and started the Khadi Gram Udyog to sell clothes made of cotton fabric. At the same time, high streets like Linking Road and Fashion Street emerged in Mumbai. With the inception of liberalisation in early 1990s, many Indian players like Shoppers Stop, Pantaloon Retail India Ltd (PRIL), Spencer Retail ventured into the organised retail sector and have grown by many folds since then. These were the pioneers of the organised Indian retail formats. With the concept of foreign direct investment in single-brand retail and cash–and-carry formats, a new era started in the retail sector. Many single-brand retailers like Louis Vuitton and Tommy Hilfiger took advantage of this opportunity. The cash-and-carry format has encouraged the entry route for global multichannel retailing giants like Metro, Wal-Mart and Tesco.

The concentration of casual workforce in Wholesale and Retail sector is 4.1%of the total casual workforce. Today the burning topic in society is stress. It is more alarming in Retail Sector. Most of the employee engagement in India is in retail sector. The level of stress is the maximum among the retail sector employees. So this topic has been chosen and the study has been conducted relying on Secondary Data. The main purpose of this study was to understand the stress caused among the employees of the retail sector, and also tried to find out some suggestive measure for healing the stress of the employees of this sector. It was a great learning experience. Today workplace stress is becoming a major issue and a matter of concern for the employees and the organizations. It has become a part of life for the employees, as life today has become so complex at home as well as outside that it is impossible to avoid stress. **Selye [1936]** defines stress as "a dynamic activity wherein an individual is confronted with an opportunity, constraint or demand". Organizational stress arises due to lack of person- environment fit. When Organizational stress is mismanaged; it affects the human potential in the organization. It actually paves to inferior quality of output, low productivity, ill health as well as wellbeing and morale of employees.

**FIG. 1**
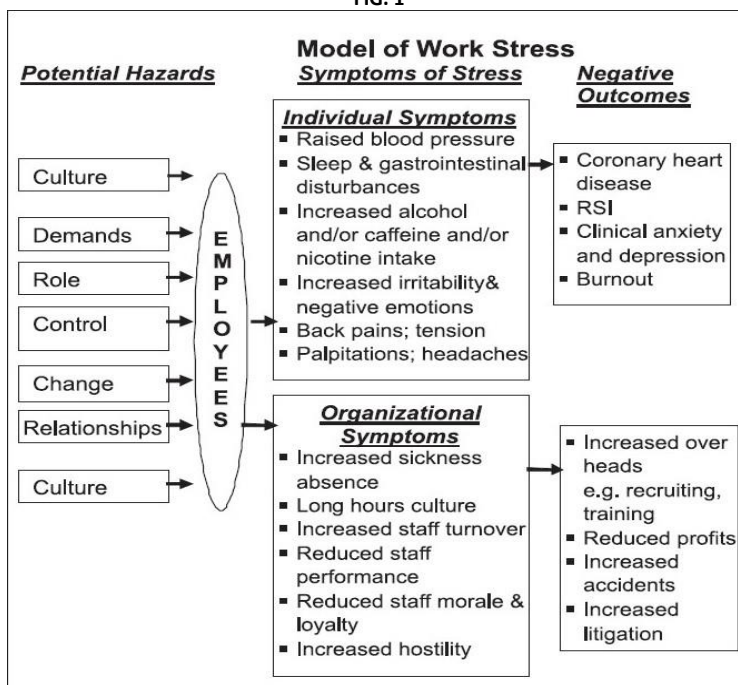
Stress has become a natural outcome of daily life in our society. Nobody can escape stress. Researchers on stress make it clear that, to enter in to the complex area of stress, especially in to the area of occupational stress, is very difficult. Stress is an unavoidable consequence of modern living. With the growth of industries, pressure in the urban areas, quantitative growth in population and various problems in day to day life are some of the reasons for increase in stress. Stress is a condition of strain that has a direct bearing on emotions, thought process and physical conditions of a person. Steers [1981] indicate that, "Occupational stress has become an important topic for study of organizational behavior for several reasons."

- Stress has harmful psychological and physiological effects on employees.
- Stress is a major cause of employee turnover and absenteeism.
- Stress experienced by one employee can affect the safety of other employees.
- By controlling dysfunctional stress, individual and organization can be managed more effectively.

Worldwide there is an upsurge in Retail Market and India is also not an exception to that. Current population of India in 2013 is 1,270,272,105 (1.27 billion). The population in the age-group of 15-34 increased from 353 million in 2001 to 430 million in 2011. Current predictions suggest a steady increase in the youth population to 464 million by 2021 and finally a decline to 458 million by 2026. By 2020, India is set to become the world's youngest country with 64 per cent of its population in the working age group. (**Girija Shivakumar, THE HINDU, NEW DELHI, April 17, 2013 Updated: April 17, 2013 19:07 IST India is set to become the youngest country by 2020**) Over the past few months, the retail sector has grabbed headlines with talks of 100% FDI in single brand retail, which is currently capped at 51%. While the outcome is still undecided, the opening up of India's retail will create a stronger, organised industry that will help in generating employment. Today, only a small part of retail in India is organised. Despite this, it is estimated that the sector in India is worth more than $400 billion, with domestic and international players planning to expand across the country. Industry leaders predict that the next phase of growth will emerge from rural markets. There are projections of the workforce doubling by 2015, from the current five lakhs in both organised and unorganised sector.(**Ashok Reddy, MD, TeamLease Services**)

The retail sector has been changing rapidly due to evil effect of Globalization and Downsizing, introduction of new technologies, etc. Due to these changes and also due to the concept of Hire and fire, downsizing or with the advent of modern technologies the employees in the retail sector are experiencing a high level of stress. The privatization policies has drastically changed conventional patterns in all sectors. The retail sector is of not an exception to that. The 1990s saw radical policy changes with regarding to fiscal deficit and structural changes in India so as to prepare her to cope with the new economic world order. Globalization and privatization led policies compelled the retail sector to reform and adjust, to have a competitive edge to cope with multinationals led environment. The implications of the above said transformations have affected the social, economical and psychological domains of the employees and their relations. Earlier literature shows that more than 60% of the employees have one or more problem directly or indirectly related to these drastic changes. All the factors discussed above are prospective attributes to cause occupational stress and related disorders among the employees. Although a lot of studies have been conducted on the psychosocial side of the new policy regime in many sectors, there are only few studies, as far as the retail sector is concerned, while the same sector has been drastically influenced by the new policies. In this juncture, the present study is undertaken to address specific problems of employees related to occupational stress. This throws light in to the pathogenesis of various problems related to occupational stress among employees.

## 2.    BACKGROUND OF THE STUDY

So many people are engaged with different research works, lots of work has been done on stress even but stress among retail sector employees is really a new area of study. On scarcity of literature on the above subject the study is relying on secondary data whatever been published till date.

**General causes of stress:**

**Tytherleigh, Webb, Cooper and Ricketts (2005)**

- Organizational Stress
- Job/Job load/Recognition/Politics/Relationship
- Extra-Organizational Stress
- Family
- Society
- Friends

**Work-related stressors as follows:**

**a.    Overload**

This is the extent to which individuals feel that the demands of their workload and the associated time pressures are a source of pressure, for example:

- unrealistic deadlines and expectations, often as a result of super achievement by the most talented
- technology overload
- unmanageable workloads
- under recruitment of staff for work already timetabled

**b.    Control**

The experience of pressure is strongly linked to perceptions of control. Lack of influence and consultation in the way in which work is organized and performed can be a potential source of pressure, for example:

- lack of control over aspects of the job
- lack of involvement in decision making
- account not taken of staff ideas/suggestions about the job
- lack of influence over performance targets
- lack of time

**c.    Work relationships**

Many jobs demand regular contact with other people at work. Poor or unsupportive relationships with colleagues and/or supervisors can be a potential source of pressure. In addition, pressure can occur if individuals feel isolated or unfairly treated.

Poor work relationships can be a result of:

- aggressive management style
- lack of support from others
- isolation at work
- aversive behaviour, e.g. bullying and harassment
- lack of understanding and leadership
- manager forever finding fault
- others not pulling their weight
- others take credit for personal achievements
- poor relationships with colleagues

**d.    Job security**

This is the extent to which lack of job security and job changes are a source of pressure, for example:

- job insecurity
- lack of job permanence, e.g. temporary/fixed term contracts

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- future job change
- fear of skill redundancy

**e. Work-life balance**

The demands of work have the potential to spill over and affect personal and home life and so put a strain on relationships outside work, for example:

- long hours: being expected to or having to work additional hours at home to the detriment of personal, partner and family relationships
- over-demanding and inflexible work schedules
- unsocial hours
- excessive travel time
- work interfering with home/personal life

**f. Resources and communication**

To perform a job effectively, individuals need to feel that they have appropriate training, equipment and resources. They also need to feel that they are adequately informed and that they are valued. Stress may result from lack of:

- information about what is going on in the organization
- feedback on performance
- adequate training to do the job
- equipment/resources to do the job

**g. Pays and benefits**

The financial rewards associated with a job are important in terms of lifestyle. They are also often perceived to be an indication of an individual's worth and value to the organization. Although financial reward may not be a prime motivator, it could become a factor if there are other negative aspects of the job.

**h. Aspects of the job**

These are potential sources of stress that relate to the fundamental nature of the job itself. Factors such as the physical working conditions, type of tasks and the amount of satisfaction derived from the job.

- job is unlikely to change in the next 5–10 years
- poor physical working conditions
- fear of physical violence
- work performance closely monitored
- organisation changes for change's sake
- dull and repetitive work
- dealing with difficult customers/clients
- lack of enjoyment of job

## 3. OBJECTIVES

The research paper consists of the following objectives:

1. To study the stressful environment of the retail sector employees in India.
2. To analyze the effects of stress on employees in retail sector.
3. To identify the different methods to reduce work stress.
4. To study work environment in retail industry.

## 4. LITERATURE REVIEW

**Ivancevich and Matteson (1950)** indicated that, "Lack of group cohesiveness may explain various physiological and behavioral outcomes in an employ desiring such sticks together." Workplace interpersonal conflicts and negative interpersonal relations are prevalent sources of stress and are existed with negative mood depression, and symptoms of ill health. If the individual manager cannot cope with the increased responsibilities it may lead to several physical and psychological disorders among them.

**Brook (1973)** reported that qualitative changes in the job create adjust mental problem among employees. The interpersonal relationships within the department and between the departments create qualitative difficulties within the organization to a great extent.

**Cobb (1975)** had the opinion that, "The responsibility load creates severe stress among workers and managers."

**Miles and Perreault (1976)** identified four different types of role conflict: 1. Intra-sender role conflict 2. Inter sender role conflict. 3. Person- role conflict; 4. Role over load.

**Katz and Kahn ( 1978) and Whetten (1978)** suggested that job related stress is associated with individual, interpersonal, and structural variables.

**Caplan et al. (1979)** observed that presence of supportive peer groups and supportive relationships with super visors are negatively correlated with R.C.

**Karasek (1979)** stated Industrial Psychologists discovered that how much latitude employees have at work - their control over job-related decisions - affects their health, their morale and their ability to handle their workload.

**Marshall (1979)** suggested that despite of executives' important positions in organizations, their attitudes have not received much research attention. To remedy this deficiency, the authors tested a hypothesized model of executive attitudes involving job satisfaction, life satisfaction, job stress, and work–family conflict.

**Ivancevich (1980)** studied that age can be explained in the terms, that the individuals matured personality disposition related to the attainment of developmental tasks specific to each developmental tasks specific to each developmental phase and its influence on individual's perception of the situations as stressful or otherwise. The study was planned to investigate the effect of age on occupational stress and job satisfaction among managers of different age groups.

**Douglas (1980)** defined stress as any action or situation that places special physical or psychological demand upon a person.

According to **Jick and Payne (1980**) a job stressed individual is likely to have greater job dissatisfaction, increased absenteeism, and increased frequency of drinking and smoking, increase in negative psychological symptoms and reduced aspirations and self esteem.

**Lucas (1985)** in his paper examined what motivates employees in the retail industry, and examines their level of job satisfaction, using Herzberg's hygiene factors and motivators. In this study, convenience sampling was used to select sales personnel from women's clothing stores in Bandar Sunway shopping mall in the state of Selangor. The results show that hygiene factors were the dominant motivators of sales personnel job satisfaction. Working conditions were the most significant in motivating sales personnel.

**Green and Walkey (1988), Chermiss (1980) and Freudenberger (1989, 1990)** studied on burnout found that, it is related to exhaustion and work over load factors in various organizations Stress on the job is costly for employers, reflected in lower productivity, reduced motivation and job skills, and increased and accidents. The purpose present study is an attempt to investigate and to compare the level of stress experienced by the employees of the nationalized banks in Chennai. The study aims to ascertain the level of stress and to analyze the various attributes which influence organizational stress on bank employees.

**Fleet (1990)** said that stress is caused when a person is subjected to unusual situations, demands, extreme expectations or pressures that are difficult to handle.

**Brief et al. (1990)** explained that there is evidence that role incumbents with high levels of role ambiguity also respond to their situation with anxiety, depression, physical symptoms, a sense of futility or lower self esteem, lower levels of job involvement and organizational commitment and perceptions of lower performance on the part of the organization, of supervisors, and of themselves.

**Quick et al. (1992)** suggested that occupational stress is an increasingly important occupational health problem and a significant cause of economic loss. Occupational stress may produce both overt psychological and physiologic disabilities. However it may also cause subtle manifestation of morbidity that can affect personal well-being and productivity.

**Kutz and Kahn (1998) and Whetten (1999)** suggested that the use of role concepts in occupational stress is associated with individual, interpersonal and structural variables.

**Walters (1997)** in his paper focused on the social production of stress, depression and tiredness among women. The authors used multiple linear regression procedures to explore the links between these health problems and aspects of the social and material conditions of women's lives. Some of the findings contradict the usual patterning of health problems.

**Jex (1998)** in his article examined the effects of working conditions in part-time and casual work on worker stress and the consequences for their workplaces. Data were collected through interviews with occupational health and safety representatives, and focus groups and interviews with workers in retail trade. Results show that job insecurity, short- and split-shifts, unpredictability of hours, low wages and benefits in part-time and casual jobs in retail sector, and the need to juggle multiple jobs to earn a living wage contribute to stress and workplace problems of absenteeism, high turnover and workplace conflicts. Gendered work environments and work-personal life conflicts also contribute to stress affecting the workplace. Equitable treatment of part-time and casual workers, treating workers with respect and dignity, and creating a gender-neutral, safe and healthy work environment can help decrease stress, and in turn, can lead to positive workplace outcomes for retail workers.

**Zackos (1998)** showed that the purpose of the article was improving safety for teens working in the retail trade sector, opportunities and obstacles.

**Finn (1999)** told that because of increasing concern over whether they are really satisfying their customers, more retail and service firms were using mystery shoppers (sometimes also referred to as secret, phantom, or anonymous consumer shoppers) to monitor their frontline operations, to assess their customer service, and to benchmark their competitors' performance. But virtually nothing is known about the psychometric quality of the data collected in mystery shopping studies, and how it compares with that of customer survey data.

**Connor (1999)** in his research showed that occupational stress affects organizations through high levels of absenteeism and turnover, and in some cases, through the willingness of employees to engage in conflict with co-workers and supervisors.

**Broadbridge (2000)** explained that causes and effects of occupational stress have received research attention for several decades, with increasing focus during the 1990s as organizations and individual workers attempt to adapt to economic change. Stress arising from either the work or home domain can have a variety of outcomes in the workplace, and similarly can impact in many ways on relationships and activities at home. This paper reported the first phase of a research study to identify the impact on work and home life of changes in retailing, a sector of the economy which has experienced significant change over the past few years. A qualitative methodology was adopted, using group discussions to allow staff to identify the specific changes in retailing most important for themselves, and then to explore how these changes related to satisfactions and dissatisfactions at work, and their impact on general aspects of home life. The results suggest that the 'spillover' relationship between work and home stress seems to be the most useful in describing the impact of change. This suggested that additional role demands at work brought about by change have an impact on relationships and social life outside work. However, some individuals described instances of 'compensation' between work and home, and independence between the two domains. This suggested that the issue of stress in the home/work interface is complex and that the demands in each domain may be positively or negatively related depending on characteristics of the demands themselves, or may vary according to individual characteristics of the people in the study.

**Ailawadi (2001)** in his article was having the objective to determine whether national brand promotions and store brands attract the same value-conscious consumers, which would aggravate channel conflict between manufacturers and retailers. The authors identified psychographic and demographic traits that potentially drive usage of store brands and national brand promotions.

**Chella (2002)** told that with growing consumerism, unprecedented awareness, and a youth-hefty customer base, India is perceived as 'Most Promising Land' for the Global and domestic retailers. According to AT Kearney's 2007 Global Retail Development Index (GRDI), for the third consecutive year, India remains the top retail investment destination among the 30 emerging markets across the world.

**Lewchuk (2003)** suggested that many temporary agency workers receive poorer pay and employment conditions than workers performing similar tasks under traditional, direct hire arrangements. This is due to a number of factors, especially the failure in practice of employment regulation developed for standard employee—employer employment arrangements to be fully applicable in such indirect employment arrangements. This paper examined agency workers' employment rights both against the standards of the International Labour Organization's core labour rights, and in relation to occupational health and safety performance. The analysis demonstrated how a third party, the host employer, can influence the employment conditions of agency employees, yet bear limited responsibility for whether they satisfy minimum standards. These remained duties of the agency employer. The paper identified a need to reconsider the legal responsibility of hosts and agency employers towards agency workers. Sharing responsibilities between hosts and agency employers may improve the likelihood of closing the gap between agency and direct hire workers' employment conditions.

**Williams (2003)** in his study aimed to find out the sources of workplace stress.

**Roberts (2003)** identified that retail workers would like to get a better balance, but fear that their career would suffer. The objective of this research was to determine the relationship between personality traits and job satisfaction of Retail Store Managers.

**Ailawadi (2004)** realized that brands are one of a firm's most valuable intangible assets, branding has emerged as a top management priority in the last decade. Given its highly competitive nature, branding can be especially important in the retailing industry to influence customer perceptions and drive store choice and loyalty.

**Zeytinoglu (2004)** in his study first examined working conditions in part-time and casual jobs in retail trade, followed by a review of the gendered work environment literature, and the physical work environment factors in the retail trade that affect workers' stress and workplace outcomes. We include factors that contribute to stress, which are unique to part-time and casual work, such as unpredictability of work hours and schedules, job insecurity and low wages and benefits. Workplace factors that are common to all workers in retail trade include industry restructuring and hazardous work conditions, which impact worker stress and organizational outcomes.

**Gelade (2005)** in his research has shown that organizational subunits where employee perceptions are favorable enjoy superior business performance. The service profit chain model of business performance has identified customer satisfaction as a critical intervening variable in this relationship. This paper examined the relationships between organizational climate, employee attitudes, customer satisfaction, and sales performance in the retail-banking sector. The role of customer satisfaction as a mediator between employee attitudes and sales performance is examined in a large sample of bank branches, spanning multiple organizations. Mediation effects are found, which border on significance when the sample size is large, but the effects seem to be too small to be of practical importance. It is argued that alternative formulations of the service profit chain model may provide more powerful explanations of the link between employee attitudes and business performance.

**Keiningham (2006)** identified that some organizations consider approaches such as reduction or delay in payment of salaries to their salespersons, doubling of sales targets, retrenchment etc. as the solutions to the problems faced in the current economic situation. These approaches seem to give short-term relief but can prove to be harmful in long-term because salespersons regard these unexpected changes as critical sales events. Literature shows that salespersons are more committed and perform better when they are satisfied with their jobs. Based on extant literature, we argue that organizations should therefore, pay greater attention to their salesperson's job satisfaction in such economic scenario and attempt to address the impact of CSEs on salesperson's job performance and job satisfaction.

As per the report of **McKinsey Global Institute (2007)**, India is becoming the world's 12th Trillion dollar economy, and further it predicts that India is well on its way to become the world's fifth-largest consumer market by 2025. Currently, India is ranked as the 12th largest consumer market in the world. The Indian retail market is professed as potential goldmine and is attracting a large number of giant international and domestic players in anticipation of explosive growth.

**Abraham (2007)** mentioned that in India, sudden and unprecedented growth in organized retailing poses a challenge to human resources development. Therefore, it would be useful to look at the dimension of human resource practices in retail industry, emerging requirements and challenges and measures to improve work atmosphere in Indian scenario.

**Chakraborthy (2007**) identified that studies have initiated their efforts on analyzing HR challenges in Indian retail; there are gaping holes in the existing research: in particular the factors leading to the type of HR policy carried out in the Indian retail sector is largely neglected. The focus of this paper is on examining the various factors affecting human resources in Indian retail sector and accordingly suggesting measures for HR policy.

**Anselmasson (2007)** claimed that there are three general attitude based dimensions for CSR positioning - human responsibility, product responsibility, and environmental responsibility. Human responsibility means that the company deals with suppliers who adhere to principles of natural and good breeding and farming of animals, and also maintains fair and positive working conditions and work-place environments for their own employees. The dimension of environmental responsibility means that a company is perceived to produce environmental-friendly, ecological, and non-harmful products. It implies that a clear regiment of environmental policies exists and that product packaging is recyclable.

**Broadbridge (2007)** in his study aimed to explore some issues regarding the career development of men and women retail managers and provide an overview of the main issues these present for retailers in the future. This paper assesses the incidence and contribution that mentoring has to the career development of retail managers. Previous research has identified the benefits that mentoring relationships have for the protégé, the mentor and the organization, although none have compared the experiences and attitudes towards mentoring within the retail environment.

**India Retail Report (2007)** explained that with the Indian retail boom, specially food and grocery retail many players are entering with different retail formats. As a result, competition is becoming very tough. Keeping in mind that the Indian consumer is price sensitive, each player is trying to attract more customers through different sales promotional activities. But the exact picture of the impact of sales promotion on consumer behaviour is yet unclear to the retailer. This paper tries to find out the effect of retail sales promotions on consumers buying behavior. The data collected from 100 adult shoppers in large supermarkets namely Big Bazaar in Pune city area to assess the effect of sales promotion. It is observed from the analysis that retail sales promotion plays a limited role on consumer buying behaviour. Only a small percentage of the customers are attracted to such sales promotion and wait for it. Store loyalty may not play a role in sales promotion. Retail sales promotion has to depend on other factors to positively impact buying behaviour. Hope retailers will consider this study while planning their strategy. This would also open new insights for academicians.

**Broadbridge (2008)** used a case study of retailing, this paper examines the continued under-representation of women in senior management positions. Via a questionnaire survey, it reveals that those factors retail managers (men and women) they attribute to the disproportionate number of women in senior positions. The findings revealed that the main factors were associated with women's 'other' role: the family. Thus, lack of child care facilities and high family commitments were regarded as especially problematic and the organization of retailing with its long anti-social hours and lack of flexi-time at managerial levels contributed to these problems. Other factors were also regarded as important including company cultures that uphold patriarchal social systems. The paper demonstrates how women's primary position in the home and domestic domain and men's primary position in the economic domain have shaped the way retail organizations are organized and the roles that men and women are traditionally expected to adopt within them.

**Arnold (2009)** identified that the landscape for all retailers changed due to the financial crisis. This change is likely to have durable consequences on the retail sector. According to the study, retail did not suffer rigorously in total; however, it is also not likely to grow rapidly during the recovery. Changes are likely to happen within the sector: consumer preferences shift to more

Value-oriented spending and cut back on non discretionary items.

**Yahiya (2009)** aimed to find out in his study the causes of occupational stress within the organization and the implication on job satisfaction and intention to leave and absenteeism.

**Ahlert (2010)** explored that retailers have been showing much concern about on-line shopping, as it shrinks distances and timescale, lowers distribution and transaction costs, provides more information to buyers and sellers, and enlarges customer choice and reach.

## 5. RESEARCH METHODOLOGY

The study has been conducted on the basis of secondary data those were collected from research publications, standard journal and periodicals.

## 6. DATA ANALYSIS AND FINDINGS

As support the data are mainly collected from secondary sources so cases have been cited to support the statement and findings of earlier publications.

- The retail sector in India can be split up into two, the organized and the unorganized. The organized sector whose size has tripled by 2010 can be further split up into departmental stores, supermarkets, shopping malls.
- In terms of value the size of the retail sector in India is $300 billion. The organized sector contributes about 4.6% to the total trade.
- The retail sector in India contributes 10% to the Gross Domestic Product and 8% to the employment of the country.
- In terms of growth the FMCG retail sector is the fastest growing unit and the retail relating to household care, confectionery etc, have lagged behind.
- On line retailing is still to leave a mark on the customers due to lacunae that we have already mentioned.
- Hypermarket is emerging as the most favorable format for the time being in India.

The above finding is related to position of Retail in Indian Market. In following paragraph we can show position of retail Employees:

- Clearly, retail employees affect retail performance.
- Organizational theory shows disproportionately little interest in retail employees.
- The key aspects of a retail employee's work environment, or 'climate,' and how these perceptions influence work-related outcomes.
- A causal modeling approach tests relationships among front-line service providers.
- Results suggest that employee perceptions of co-worker involvement and supervisory support can reduce stress and increase job satisfaction.
- Other results indicate a positive relationship between role conflict and job performance, a positive relationship between job performance and job satisfaction, and that job performance mediates effects of role stress on satisfaction.

## 7. CASES IN SUPPORT OF FINDINGS

**CASE 1 :** Retail employees have to balance the expectations of management and customers. Role-related stressors i.e. role conflict and role ambiguity have been found adding more strain to the stressful internal environment (e.g., long hours with high performance expectations) faced by retail employees. Role stress is defined as a persisting state of mental tension resulting in to negative psychological, psycho-social, and behavioral outcomes [Todd Arnold et.al, Role Stressors and Retail Performance: The Role of Perceived Competitive Climate, Journal of Retailing 85 (2, 2009) 194 –205)]

**CASE 2** : An aggressive management culture has have prevailed in retailing. However, some retail organizations are becoming more people centered and they expect managers to work in totally di ff erent environment [Adelina Broadbridge, Retail managers: their work stressors and coping strategies, Journal of Retailing and Consumer Services 9 (2002) 173– 183)]

**CASE 3:** Majority of the employees said they were not satisfied with their compensation, when compared to the hard work they put in. [Management and Social Sciences Research ISSN: 2319-4421Volume 2, No. 6, June 2013i-Xplore International Research Journal Consortiumwww.irjcjournals.org31. A Study on Stress Level of Sales Employees in Garment Retail Stores of Ahmedabad City Noopur Surti Asst. Professor, Venus International College of Technology, Gandhinagar Riddhi Ambavale, Research Scholar (Marketing), Gujarat Technological University]

**CASE 4:** [WORK STRESS: A STUDY ON RETAIL SECTOR EMPLOYEES OF JAIPUR Dr. Anukrati Sharma Associate Professor,Faculty of Commerce and Management,University of Kota, Kota, Rajasthan, India] In a study with a sample size of 100 employees in which 50 from Big Bazar, 30 from Reliance and 20 from More Retail were taken, the research paper reflects that the maximum number of employees is in the age group of between 21-30 years, who are working in the retail sector. Other than this most of the male genders are working in retail outlets. The research also elaborates that 98 employees out of 100 are in stressful condition and the reason of their stress is excessive workload at the workplace. The most important factor behind facing stress is the work life imbalance between

the employees. The study reveals that by changing the work environment, and techniques such as motivation, could be helpful in reducing their stress levels. Research findings show that the most stressful type of work is that which includes excessive demands and pressures that are not matched with employee's knowledge and abilities.

## 8. SUGGESTIONS FOR REDUCING THE STRESS LEVEL

➢ **HOW TO COPE WITH THE STRESS OF WORKING IN RETAIL?**

Different kinds of stress busters for retail sector employees are important to the problem. They are implying different measures to help them let go of the stress in their everyday work. Sometimes they provide or organize the fortnightly clinic workshops with psychologists' to lend a hand to alleviate the stress. They do yoga, sports and indoor meets are being conducted to beat the workload in a fun and exciting way. Other retail company provides training to their employees to stay away from stressful environment for their own good. This training can make an adverse effect on the health and personal life of the agent. This also relates to team building, other company held their yearly research and recreation to their employees in this way they boost their agent confidence and relationships in dealing with their co -workers.

Other stress busters includes the deep breathing, spending 3 to 5 minutes of deep inhaling and breathing will feel relaxed, relieved and refreshed, secondly the eye effect, blinking and moving the eyes up and down allows eyes to flex and relaxed. Thirdly the flex and fix, moving muscles every now and then can help the body relaxed and many other simple remedy on how to beat the stress in the workplace.

➢ **HOW TO DEAL WITH STRESS? (REMEDIAL MEASURES)**

**SELF AND ORGANIZATIONAL HELP FOR TREATING STRESS**

o **Exercise** : exercise has been proven to have a beneficial effect on a person's mental and physical state. For many people exercise is an extremely effective stress buster.
o **Division of labor** : try to delegate your responsibilities at work, or share them. If you make yourself indispensable the likelihood of your feeling highly stressed is significantly greater.
o **Assertiveness** : don't say yes to everything. If you can't do something well, or if something is not your responsibility, try to seek ways of not agreeing to do them.
o **Alcohol and drugs** : alcohol and drugs will not help you manage your stress better. Either stop consuming them completely, or cut down.
o **Caffeine** : if your consumption of coffee and other drinks which contain caffeine is high, cut down.
o **Biofeedback:** It is the use of instrumentation to mirror psychophysiological processes of which the individual is not normally aware and which may be brought under voluntary control.
o **Diaphragmatic breathing**: Deep breathing that expands the belly rather than the chest.
o **Body scanning** ; it is identifying that part of the body which is relaxed when we are tensed.
o **Massage** : It is the way to relax the muscle of a tense body but acupressure massage (shiatsu), pressing down on the points of the body where knots or bands of muscle tension frequently occurs –appears to be more popular form.
o **Yoga and stretching:** Yoga is to bind, attach, yoke, to direct one's attention or communion with god. Stretching is asanas.
o **Repetitive Prayer**: It is relaxing as it focuses attention away from stressors.
o **Quieting Reflex**: It comprises of the following steps :
   ▪ Think about the fear or anxiety.
   ▪ Smile inside.
   ▪ Tell it to self : " I can keep a calm body in an alert mind."
   ▪ Inhale a quiet, easy breath.
   ▪ Let the jaw go loose as we exhale, keep the upper and lower teeth slightly apart.
   ▪ Imagine heaviness and warmth from head to toes.
o **Mindfulness**: It is focusing attention on present moment
o **Music and Relaxation**: Music has relaxing effect
o **Tai Chi**: Slow, smooth, dancelike movements along with meditation and control of breathing.
o **Pets** : Pets rereduce stress.

## 9. CONCLUSIONS

Today in a world of stress certain steps can be adopted to reduce stress and make the work more interesting by new innovative ideas. In my opinion retail sector employees should be provided with Yoga and Meditation, Music and Art classes. Counseling should be done so that the advice given by the therapist or the expert to the employees reduces the tension and stress related to work. Indoor and outdoor games should be organized for the employees. The employees should be taken to Picnics and make them visit different places so that they can enjoy themselves forgetting the work pressure and stress. The employees should enjoy the work they do. No kind of pressure should be given to the employees by their Boss; otherwise their performance will be weak. The work environment should be clean and healthy. The employees should feel free and happy about the work they do.

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# IMPROVING ASSESSMENT IN HIGHER EDUCATION THROUGH STUDENT INVOLVEMENT

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## ABSTRACT

Assessment in higher education is commonly held to contribute to feedback to students on their learning and the certification of their achievement. This paper argues that this short term focus must be balanced against a longer term emphasis for learning-oriented assessment to foster future learning after graduation. The paper proposes that students need to become assessors within the context of participation in practice, that is, the kinds of highly contextualized learning faced in life and work. To develop the skills and competencies required in professional organisations, students have to reflect on their own behaviour. Many current assessment practices in higher education do not answer this need. The recent interest in new assessment forms, such as self-, peer-, and co-assessment, can be seen as a means to tackle this problem. The present paper argues for student involvement in assessment in higher education and proposes that self-, peer- and co-assessment can be effective tools in developing competencies needed as a professional as implementation of these forms of assessments accelerates the developments of a curriculum based on competencies (knowledge as a tool) rather than knowledge (as a goal) and leads towards the integration of instruction and assessment in higher education. As such, this development of a learning environment contributes to the education of responsible and reflective professionals.

## KEYWORDS

higher education, student involvement.

## INTRODUCTION

It is widely recognised that the main goal of professional higher education is to help students to develop into 'reflective practitioners' who are able to reflect critically upon their own professional practice. Students in modern organizations should be able to analyse information, to improve their problem-solving skills and communication, and to reflect on their own role in the learning process. The need for lifelong learning in modern society will increase as it becomes more recognised that the acquisition of knowledge and skills cannot be restricted to the phase of initial education; rather, it has to be a process continuing throughout one's entire working life. Traditional testing methods do not fit such goals as lifelong learning, reflective thinking, being critical, evaluating oneself and problem solving.

Alternatives in assessment have received much attention in the last decade and several forms of more authentic assessment have been introduced in higher education. The skills of self-, peerand co-assessment are important in the development of autonomous, responsible and reflective individuals. Assessment procedures not only should serve as a tool for crediting students with recognised certificates, but also should be used to monitor progress and, if needed, to direct students to remedial learning activities. Research showed that the nature of assessment tasks influences the approaches to learning which students adopt. The existing assessment approaches can have effects contrary to those desired. Eisner (in Boud, 1995) identified the features of the new assessment in education:

- Assessment tasks need to reflect the tasks that students will encounter in the world outside schools, not merely those limited to the schools themselves.
- Assessment tasks should not be restricted to the solutions that students formulate, but also reveal how students go about solving a problem.
- Assessment tasks should reflect the values of the intellectual community from which tasks are derived.
- Assessment tasks need not be limited to a solo performance.
- Assessment tasks should have more than one acceptable solution to a problem and more than one acceptable answer to a question.
- Assessment tasks should have curricular relevance, but not be limited to the curriculum as taught.
- Assessment tasks should permit the student to select a form of representation that he or she chooses to display what has been learned.

The view that the assessment of students' achievements is something which happens at the end of a process of learning is no longer widespread. Assessment is now represented as a tool for learning. The present article focuses on one new dimension of assessment innovation, namely, the changing place and function of the assessor. Alternative assessment also questions if the assessor must be the teacher, and whether self and peers can be introduced as assessors in different settings. This paper focuses on forms of self-, peer-, and co-assessment from the points of view of their applicability in higher education, their effects, challenges involved and suggestive measures to address these challenges.

## SELF ASSESSMENT

Self-assessment refers to the involvement of learners in making judgements about their own learning, particularly about their achievements and the outcomes of their learning. Self-assessment is not a new technique, but a way of increasing the role of students as active participants in their own learning and is mostly used for formative assessment in order to foster reflection on one's own learning processes and results.

### SELF ASSESSMENT IN PRACTICE

1) Listing of abilities with definitions and directions to indicate those areas that you feel are your best or strongest.
2) Applying a Likert Scale to a group of designated abilities. (For example, "in comparison to others of the same age, my art ability is excellent, above average, average, below average, or poor".)
3) Another approach is, for each ability, providing different examples of the ability's applications so that individuals rate their performance level from high to low, and subsequently these are summed to obtain a total score.
4) Designing a variety of activities that foster self-assessment. For example, writing letters to the teachers, keeping a daily learning log, preparing a portfolio etc.

## PEER ASSESSMENT

Falchikov (1995) defines peer assessment as the process whereby groups of individuals rate their peers. This exercise might entail previous discussion or agreement over criteria. It could involve the use of rating instruments or checklists, which have been designed by others, before the peer assessment exercise, or be designed by the user group to meet their particular needs.

Peer assessment is not only a grading procedure, but also part of a learning process in which skills are developed. Peer assessment can be seen as a part of the self-assessment process and serves to inform self-assessment. The contribution of other students can be a very useful input into the self-assessment process. Students have an opportunity to observe their peers throughout the learning process and often have more detailed knowledge of the work of others than do their teachers.

### PEER ASSESSMENT IN PRACTICE

1) By giving feedback of a qualitative nature.
2) By giving marking or grading.
3) Peer ranking involves each group member ranking all of the others from best to worst on one or more factors.

4) Peer rating involves each group member rating each other group member on a given set of performance or personal characteristics, using any one of several kinds of rating scales.
5) Peer nomination involves each group member being the highest in the group on a particular characteristic or dimension of performance.

## CO-ASSESSMENT

Co-assessment, the participation of the students with the staff in the assessment process, is a way of providing an opportunity for students to assess themselves while allowing the staff to maintain the necessary control over the final assessments (Hall, 1995). Synonyms for co-assessment are 'collaborative assessment' and 'cooperative assessment'.

Co-assessment can be used for summative purposes, while self- and peer-assessment are used in a formative way. Somervell (1993) sees collaborative assessment as a teaching and learning process in which the student and instructor meet to clarify objectives and standards. In this case, the student is not necessarily responsible for the assessment, but the student collaborates in the process of determining what will be assessed and perhaps by whom. Pain, Bull and Brna (1996) argue that the term 'collaborative assessment' can be applied to an assessor and an assessee working together to form a mutual understanding of the student's knowledge. It is a true collaboration in so far as both parties work on the shared goal of providing a mutually agreed assessment of the student's knowledge. This entails both parties negotiating details of the assessment and discussing any misunderstandings that exist. This is consistent with the less confrontational approach to assessment that we seek to adopt while stressing the need to develop an ongoing relationship between the assessor and assessee.

### CO-ASSESSMENT IN PRACTICE
1) Co-Assessment is generally used in combination with self- and peer- assessment.
2) Teachers and students can together set the criteria in terms of their relative importance and prepare a marking schedule.
3) Students can be asked to rate themselves on teacher specified criteria.

## EFFECTS
1) Students become more aware of the quality of their own work. They can predict their own mark and, while they are doing this, they reflect on their behavior (reflective practitioner).
2) It helps students to identify their strengths and weaknesses, to document their progress, identify effective learning strategies and materials, become aware of the learning contexts that work best for them and establish goals for future independent thinking.
3) It encourages students to feel responsible for their own learning.
4) It fosters skills and abilities like problem solving, self assessment abilities etc.
5) It encourages involvement, establishes a reference, promotes excellence, provides increased feedback, fosters attendance, builds confidence and teaches responsibility.
6) It makes assessment more objective and fair.
7) It signals to students that their experiences are valued and their judgements are respected.
8) It reduces the teacher's workload.
9) It helps students to become motivated and improve their own learning as it focuses students' attention on the meta-cognitive aspects of their learning and teaches them to be more effective at monitoring their own progress.
10) It assists student-teachers in making role changes from being students to being teachers; to provide insights into the assessment process which may be of use to them in assessing their own students; and to provide a skill development step towards self-assessment.
11) It makes students think more deeply, see how others tackle problems, pick up points and learn to criticize constructively.

## CHALLENGES INVOLVED
1) Many teachers are apprehensive in handing over the assessment to the students.
2) It is a time consuming process.
3) Most difficult aspect is to determine the criteria in consensus with students.
4) Negative attitudes within learners toward assessment.
5) Dominance of summative assessment and a lack of emphasis on formative assessment.
6) Major challenge is of perception. The idea that teachers do the teaching and marking is hard to change.
7) Students are prone to produce improper ratings in self assessment if there is no extensive training in it.
8) Peer assessment can involve: friendship marking(resulting in over marking); collusive marking(resulting in a lack of differentiation within groups); decibel marking(where individuals dominate groups and the highest marks); and parasite marking(where students fail to contribute but benefit from group members) if there is no extensive training in it.
9) Dominance of external evaluation, assessment of product and norm-referenced testing.

## SUGGESTIVE MEASURES
1) It is important to give the students an active role in the development of assessment criteria and therefore students should be given systematic and comprehensive training in how to establish criteria in the assessment process.
2) Students should be given extensive training in self assessment and peer assessment skills.
3) Problems involved in peer assessment can be prevented by combining peer assessment with self assessment or co-assessment. Self and peer assessment are combined when students are assessing peers but the self is also included as a member of the group and must be assessed. This combination fosters reflection on one's own learning process and one's learning activities compared to the other members in the group or class.
4) Problem of evaluation of group work can also be resolved by combining peer assessment with self assessment.
5) Final grade to be the average of the marks the student receive from self assessment, peer assessment and from the lecturers.
6) Most important is to publicise a new discourse that positions assessment not as an act of subjugation to others, but as one of asserting control over one's own learning. Most important in this is the need for a view that considers teaching, learning and assessment as a whole and rejects treating assessment as separate from the processes of learning.
7) Emphasis on criterion-referenced testing, internal evaluation, assessment of process and a shift in emphasis from purely summative to formative and summative assessment.

## CONCLUSION

Self-, peer- and co-assessments can be very effective when used in combination. Self- and peer-assessment can be used for summative purposes as part of the co-assessment by giving the teacher the power to make the final decision about a process or a product. In this way, the traditional assessment, in which the teacher makes an autonomous decision, is not comparable with co-assessment. The combination of self-, peer- and co assessment makes teachers and students work together in a constructive way and, as a result, they come to higher levels of understanding by negotiation. When students become teachers, this role-changing provides them with insights into the assessment process. It can be concluded that the use of self-, peer- and collaborative assessment is important to remove the student/teacher barrier, to develop enterprising competencies in students, and leads to greater motivation and 'deeper' learning. This is the main reason why these forms of assessment need to be integrated into curricula in higher education. Involvement in learning, including assessment, is vital to effective learning.

Curricula nowadays are becoming more competency-based. This redesign of the curriculum requires a redesign of the assessment in order to create a learning environment that fosters learning. Self-, peer- and co-assessment can discourage passive, reproductive forms of learning. By integrating these forms of assessment into the curriculum, students are likely to develop into competent persons and lifelong learners who reflect continuously on their behaviour and learning process. These alternative forms of assessment should be a part of a process of change towards a student centred learning environment. This change requires a shift in emphasis from the norm-referenced to the criterion-referenced testing, from purely summative to formative and summative assessment, from external to internal evaluation, and from the assessment of product to the assessment of process as well. In order to be successful, the following supporting factors seem to be necessary: pedagogical change; a shared value system between students and teachers; and an organisation-wide evaluation ethic.

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# RELIABILITY ANALYSIS OF INVESTMENT BEHAVIOR OF INDIVIDUAL INVESTORS AMONG DIFFERENT RELIGIOUS GROUPS IN NCR

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## ABSTRACT

*Investment is employment of funds with the endeavor of earning income or capital appreciation. The motivation of an investor to invest is complex and depends upon a number of factors such as age, income, gender, occupation, lifestyle, marital status and religion. An attempt has been made under present study to calculate internal consistency research instrument which contains factors influencing individual's investment behavior. A structured questionnaire is filled by 40 individual investors of NCR. Questionnaire contains 45 variables including 7 demographic variables and 38 other variables. Cronbach alpha came up with a faster and comparable method to calculate a questionnaire's reliability. The focus of this research paper is application of Cronbach' Alpha as statistical tools for multi-variant items related to factors influencing individual's investment behavior and measure the reliability of the variables. This study is empirical in nature and the questions are formed on likert scale responses except demographic questions. Results are based upon data gathered through field work. The instrument found to be reliable with Cronbach alpha value more than 7.*

## KEYWORDS
individual investment behavior, internal consistency, multi-item Scale, reliability statistics, religion.

## JEL CLASSIFICATION
M19

## INTRODUCTION
**R**eligion, being an important constituent of culture, is seen as playing an important role in determining how people behave in certain situations. Religion affects the economy, the political structure, the legal environment, and social behaviors of people around the world. Religion forms the basis of many of the institutions in government and society that play key roles in our everyday lives. There are some studies which are not directly related to the impact of religiosity on investment decisions but are otherwise committed to impact of demographic factors on investment behavior such as impact of demographic characteristics gender, age, education, wealth, marital status, occupation, economic features, income group, and parental influence on the investment behavior. There are studies on ethical behavior and religiosity in the field of sociology. Researches related to religion involves the studies that analyze the impact of religion on economic and demographic outcomes including the consumer behavior, choice of marital partner, union formation and dissolution, fertility, female time allocation, education, wages, and wealth. According to *Sadler (1970)* religion affects the way in which people behave, at such it is perceived that it may affect an individual's perception and behavior *(Rusnah, 2005)*. Religion affects the way in which people behave *(Sadler, 1970)*, and it is perceived that it may affect an individual's perception. It was further argued that religiousness or religiosity would influence decision made by an individual *(Rusnah Muhamad, S. Susila Devi)*. Thus, we can hypothesize that religious affiliation may also affect investment decisions of an individual.

Religion affects the social and cultural environments in which customers reside and carry out their behaviors are very seldom overlooked. A limited number of studies can be found on the role of religion within the retirement savings context (Renneboog & Spaenjers, 2011). Therefore, there is a need to identify whether religion influences the investment choice decision within the retirement savings context, particularly in an emerging economy.

## RESEARCH METHODOLOGY
The Research methodology conducted under the present study is the combination of primary and secondary data collected through questionnaire from selected 40 respondents of Delhi/ NCR. The present research study is empirical in nature leading to different multi-variant concluding observations related to factors influencing individual's investment behavior and measure the internal consistency and reliability of their investments. The purpose of this Research study is to calculate Cronbach's Alpha Reliability co-efficient for variables related to age, gender, occupation, income, religion and marital status of individuals and their relation to needs/ objectives of investments, financial obligations, and investment avenues, sources of information used and their savings, donations, payment / receiving interest. Likert's Multi-item Scale is more reliable and appropriate to show the result of standard of impact of religious affiliation on investment behavior and measure the constructs. An attempt to quantify constructs is not directly quantifiable but many times they use multiple item scales and summated ratings to quantify the constructs of interest. The Likert's Scale invention can trait the assessment of attitudes of investors.

## LIMITATIONS OF THE STUDY
The following are the specific limitations:
1. Individuals and households having annual income less than Rs. 5, 00,000 are not included in the sample to study.
2. Only four religions i.e. Hinduism, Islam, Sikhism and Christianity are included in study.
3. The sample size is limited to 40 respondents only.
4. Only investor's view point has been studied.
5. Unwillingness of the people to provide the complete information about them can affect the reliability of the responses.
6. The lack of knowledge of investors about financial investments can be one of the limitations.

## LIKERT MULTI SCALE TECHNIQUES
A set of items, floating of around an equal number of favorable statements relating to the attitude object, is given to a group of subjects. Investors were asked to reply to each statement in terms of their own degree of agreement or disagreement. Typically they are instructed to select one of five responses- strongly agree, agree, neither agree nor disagree, or strongly disagree. The specific responses to the items were shared so that individuals with most favorable attitude will have the highest scores while individuals with the unfavorable attitudes will have the lowest scores.

Specter (1992) acknowledged four points that make a scale summated rating scale
1. A scale must contain multiple items, which will be combined for summation.
2. The measurement should be something that varies quantitatively rather than qualitatively.
3. Each item has no right answer, which makes the summated rating scale different from a multiple choice test.
4. Each item in a scale is a statement and respondents are asked to give rating about each statement.

TABLE 1: MULTI-ITEMS STATEMENT TO MEASURE THE RELATIONSHIP OF RELIGION AND DEMOGRAPHIC FACTORS WITH INVESTMENT BEHAVIOR OF INDIVIDUAL

| Observation | Frequency/ Percentage | Strongly Disagree | Disagree | Neither Agree nor disagree | Agree | Strongly Agree | Total |
|---|---|---|---|---|---|---|---|
| Investment objective is safety of money. | Frequency | 0 | 5 | 8 | 11 | 11 | 40 |
| | Percentage | 0 | 14.3 | 22.9 | 31.4 | 31.4 | 100 |
| Investment objective is to earn interest. | Frequency | 2 | 8 | 10 | 9 | 6 | 40 |
| | Percentage | 5.7 | 22.9 | 28.6 | 25.7 | 17.1 | 100 |
| Investment objective is to save tax. | Frequency | 1 | 4 | 14 | 9 | 7 | 40 |
| | Percentage | 2.9 | 11.4 | 40 | 25.7 | 20 | 100 |
| Investment objective is to secure future. | Frequency | 0 | 0 | 2 | 8 | 25 | 40 |
| | Percentage | 0 | 0 | 5.7 | 22.9 | 71.4 | 100 |
| Investment objective is to safeguard life after retirement. | Frequency | 0 | 0 | 2 | 17 | 16 | 40 |
| | Percentage | 0 | 0 | 5.7 | 48.6 | 45.7 | 100 |
| Investment objective is to meet expenses for children's education. | Frequency | 0 | 0 | 2 | 12 | 21 | 40 |
| | Percentage | 0 | 0 | 5.7 | 34.3 | 60 | 100 |
| Investment objective is to meet expenses for children's marriage. | Frequency | 0 | 0 | 10 | 13 | 12 | 40 |
| | Percentage | 0 | 0 | 28.6 | 37.1 | 34.4 | 100 |
| Investment objective is to meet sudden health expenses. | Frequency | 0 | 1 | 7 | 19 | 8 | 40 |
| | Percentage | 0 | 2.85 | 20 | 54.3 | 22.85 | 100 |
| Investment objective is to meet expenses of vacation plans. | Frequency | 1 | 6 | 15 | 11 | 2 | 40 |
| | Percentage | 2.9 | 17.1 | 42.9 | 31.4 | 5.7 | 100 |
| Investment objective is to buy a house. | Frequency | 0 | 5 | 7 | 10 | 13 | 40 |
| | Percentage | 0 | 14.3 | 20 | 28.6 | 37.1 | 100 |
| Investment objective is to start own business. | Frequency | 0 | 6 | 12 | 7 | 10 | 40 |
| | Percentage | 0 | 17.1 | 34.3 | 20 | 28.6 | 100 |
| Investment decisions are based on information provided by friends and relatives. | Frequency | 2 | 2 | 14 | 15 | 2 | 40 |
| | Percentage | 5.7 | 5.7 | 40 | 42.9 | 5.7 | 100 |
| Investment decisions are based on information provided by brokers / financial advisors. | Frequency | 3 | 8 | 14 | 10 | 0 | 40 |
| | Percentage | 8.6 | 22.9 | 40 | 28.5 | 0 | 100 |
| Investment decisions are based on information provided by electronic media. | Frequency | 0 | 4 | 10 | 17 | 4 | 40 |
| | Percentage | 0 | 11.4 | 28.6 | 48.6 | 11.4 | 100 |
| Investment decisions are based on information provided by print media. | Frequency | 1 | 2 | 9 | 18 | 5 | 40 |
| | Percentage | 2.9 | 5.7 | 25.7 | 51.4 | 14.3 | 100 |
| Frequency to invest money in Saving Bank Account. | Frequency | 1 | 1 | 9 | 10 | 14 | 40 |
| | Percentage | 2.9 | 2.9 | 25.7 | 28.6 | 40 | 100 |
| Frequency to invest money in recurring deposits. | Frequency | 11 | 4 | 8 | 11 | 1 | 40 |
| | Percentage | 31.4 | 11.4 | 22.9 | 31.4 | 2.9 | 100 |
| Frequency to invest money in fixed deposit. | Frequency | 4 | 3 | 10 | 10 | 8 | 40 |
| | Percentage | 11.4 | 8.6 | 28.6 | 28.6 | 22.9 | 100 |
| Frequency to invest money in Government securities. | Frequency | 14 | 6 | 10 | 3 | 2 | 40 |
| | Percentage | 40 | 17.1 | 28.6 | 8.6 | 5.7 | 100 |
| Frequency to invest money in insurance schemes. | Frequency | 3 | 5 | 16 | 9 | 2 | 40 |
| | Percentage | 8.6 | 14.3 | 45.7 | 25.7 | 5.7 | 100 |
| Frequency to invest money in shares. | Frequency | 17 | 7 | 6 | 4 | 1 | 40 |
| | Percentage | 48.6 | 20 | 17.1 | 11.4 | 2.9 | 100 |
| Frequency to invest money in mutual funds. | Frequency | 16 | 3 | 8 | 4 | 4 | 40 |
| | Percentage | 45.7 | 8.6 | 22.9 | 11.4 | 11.4 | 100 |
| Frequency to invest money in gold. | Frequency | 3 | 8 | 9 | 9 | 6 | 40 |
| | Percentage | 8.6 | 22.9 | 25.7 | 25.7 | 17.1 | 100 |
| Frequency to invest money in bonds. | Frequency | 22 | 6 | 3 | 4 | 00 | 40 |
| | Percentage | 62.9 | 17.1 | 8.6 | 11.4 | 00 | 100 |
| Frequency to invest money in real estate. | Frequency | 6 | 5 | 9 | 7 | 8 | 40 |
| | Percentage | 17.1 | 14.3 | 25.7 | 20 | 22.9 | 100 |

**TABLE 1 CONTINUED**

| Observation | Frequency/ Percentage | Yes | No | Neutral | Total |
|---|---|---|---|---|---|
| Fulfill financial obligations through savings. | Frequency | 28 | 00 | 07 | 40 |
| | Percentage | 80 | 00 | 20 | 100 |
| Fulfill financial obligations through loan. | Frequency | 05 | 14 | 16 | 40 |
| | Percentage | 14.3 | 40 | 45.7 | 100 |
| Fulfill financial obligations through savings and loan both. | Frequency | 14 | 6 | 15 | 40 |
| | Percentage | 40 | 17.1 | 42.9 | 100 |
| Encouragement of savings in my religion. | Frequency | 11 | 13 | 11 | 40 |
| | Percentage | 31.4 | 37.1 | 31.4 | 100 |
| Encouragement of taking debt in my religion. | Frequency | 7 | 20 | 8 | 40 |
| | Percentage | 20 | 57.1 | 22.9 | 100 |
| Prohibition of receiving/paying interest in my religion. | Frequency | 7 | 19 | 8 | 40 |
| | Percentage | 20 | 54.3 | 22.9 | 100 |
| Encouragement of donating in monetary terms in my religion. | Frequency | 20 | 9 | 6 | 40 |
| | Percentage | 56.1 | 25.7 | 17.1 | 100 |
| Encouragement of donating in non- monetary terms in my religion. | Frequency | 22 | 8 | 5 | 40 |
| | Percentage | 62.9 | 22.9 | 14.3 | 100 |
| Encouragement of taking insurance in my religion. | Frequency | 9 | 16 | 10 | 40 |
| | Percentage | 25.7 | 45.7 | 28.6 | 100 |
| Presence of risk taking attitude in investor. | Frequency | 18 | 3 | 14 | 40 |
| | Percentage | 51.4 | 8.6 | 40 | 100 |

Source: Compiled from the field survey

**OBSERVATIONS & FINDINGS**

It is observed from the above table that

1. Safety of money is one of the investment objectives of individuals where 62.8% respondents have agreed that their investment objective is safety of money and 14.3% respondents were disagree to this objective.
2. 42.8% respondents have agreed that they invest to earn interest income. 28.6% disagree to it and again 28.6% of respondents are neither agree nor disagree.
3. 45.7% of the respondents have accepted that they make investments to get deductions in income tax. 40% of the respondents can't say about it.
4. More than 90% respondents invest money to secure their future.
5. More than 94% respondents invest money for retirement planning.
6. More than 94% respondents make investments to meet expenses for their children's education.
7. More than 71% respondents agreed that they make investments to meet expenses for their children's marriage.
8. Around 77% respondents invest money to meet health expenses.
9. More than 37% respondents make investments to make expenses on planning vacations, 20% respondents disagreed to it.
10. More than 65% respondents agreed that they make investments to buy house.
11. Around 50% of respondents invest money to arrange capital for starting their own business.
12. Before making investments, investors gather information about return, risk, investment period etc. about different investment options available in the financial market. Around 48% respondents agreed that they get such investment information from their friends/relatives.
13. 28.5% respondents agreed that they get information before investing from financial brokers/ advisors while 31.5% respondents disagreed to it.
14. 60% respondents get investments related information from electronic media like T.V., radio.
15. 65.7% respondents get information before investing from print media like newspapers, magazines.
16. 40% investors frequently put their money in saving bank account. Around 30% of the investors put their money in recurring deposits, fixed deposits and government securities.
17. Around 30% of the investors never put their money in recurring deposit, around 50% never did in shares, 45.7% never did in mutual funds, 63% never did in bonds and 40% never did in government securities.
18. Near to 45% investors sometimes invest in insurance schemes.
19. Investors moderately invest in gold/ other precious metals and in real estate, not so frequently.
20. 80% of the respondents fulfill their financial responsibilities through savings, 40% prefer the combination of savings and loan.
21. Around 30% of the respondents say that their religion encourages them to save money; more than 57% of the respondents say that their religions do not encourage them to take loan.
22. Religion of 54.3% respondents prohibits receiving / paying interest.
23. Religion of 56.1% respondents encourage them to donate in monetary terms while in 70% of the cases, religion encourages donating in non- monetary terms.
24. Around 50% say that their religion do not encourage to take insurance cover.
25. 51.4% of the respondents are ready to take risk while investing.

Overall, it was observed that safety of money, earning interest income and tax saving are few objectives of investment among individual investors while they strongly believed that they invest money for retirement planning and security of future. Most respondents strongly believed that they invest to meet expenses for education of their children. They also agreed that children's marriage and sudden health expenses are also their financial responsibility. It was also indicated that individual investors in Delhi/ NCR search information about investments majorly from media. The frequently preferred investment options by the investors are saving bank account and fixed deposits. The other investment options where investors sometimes invest are insurance, recurring deposit, government securities, gold and real estate. Investors more believe in savings to meet financial responsibilities and contingencies than that of via taking loan. Their Religion also preaches to prefer savings over loan. Religion of most investors prohibits receiving/ paying interest on money. It also preaches to donate to the needy ones. Donations/ help is preferred in non monetary terms than that of the monetary donations.

**ANALYSIS AND INTERPRETATIONS**

Cronbach's Alpha is the average value of the reliability co-efficient where one could obtain for all possible combinations of items. It is calculated for internal consistency reliability.  Investors were asked to responds to the statement using a five point Likert Scale ranging from 1 Strongly Disagree to 5 Strongly disagree. A Multi-item scale was also developed and investor's attitude is measured towards their objectives of investment and financial obligations.

**TABLE 2: SHOWING THE MEAN AND STANDARD DEVIATION OF ITEMS**

| Serial No. | Items | Mean | Standard Deviation | No. of Investors |
|---|---|---|---|---|
| 1 | Investment objective is safety of money. | 3.80 | 1.05 | 40 |
| 2 | Investment objective is to earn interest. | 3.26 | 1.17 | 40 |
| 3 | Investment objective is to save tax. | 3.49 | 1.04 | 40 |
| 4 | Investment objective is to secure future. | 4.66 | .59 | 40 |
| 5 | Investment objective is to safeguard life after retirement. | 4.40 | .604 | 40 |
| 6 | Investment objective is to meet expenses for children's education. | 4.54 | .611 | 40 |
| 7 | Investment objective is to meet expenses for children's marriage. | 4.06 | .802 | 40 |
| 8 | Investment objective is to meet sudden health expenses. | 3.97 | .747 | 40 |
| 9 | Investment objective is to meet expenses of vacation plans. | 3.20 | .901 | 40 |
| 10 | Investment objective is to buy a house. | 3.89 | 1.078 | 40 |
| 11 | Investment objective is to start own business. | 3.60 | 1.090 | 40 |
| 12 | Investment decisions are based on information provided by friends and relatives. | 3.37 | .910 | 40 |
| 13 | Investment decisions are based on information provided by brokers / financial advisors. | 2.89 | .932 | 40 |
| 14 | Investment decisions are based on information provided by electronic media. | 3.60 | .847 | 40 |
| 15 | Investment decisions are based on information provided by print media. | 3.69 | .900 | 40 |
| 16 | Frequency to invest money in Saving Bank Account. | 4.00 | 1.029 | 40 |
| 17 | Frequency to invest money in recurring deposits. | 2.63 | 1.308 | 40 |
| 18 | Frequency to invest money in fixed deposit. | 3.43 | 1.267 | 40 |
| 19 | Frequency to invest money in Government securities. | 2.23 | 1.239 | 40 |
| 20 | Frequency to invest money in insurance schemes. | 3.06 | .998 | 40 |
| 21 | Frequency to invest money in shares. | 2.00 | 1.188 | 40 |
| 22 | Frequency to invest money in mutual funds. | 2.34 | 1.454 | 40 |
| 23 | Frequency to invest money in gold. | 3.20 | 1.232 | 40 |
| 24 | Frequency to invest money in bonds. | 1.69 | 1.051 | 40 |
| 25 | Frequency to invest money in real estate. | 3.17 | 1.403 | 40 |
| 26 | Fulfill financial obligations through savings. | 2.80 | .406 | 40 |
| 27 | Fulfill financial obligations through taking loan. | 1.74 | .701 | 40 |
| 28 | Fulfill financial obligations through savings and loan both. | 2.23 | .731 | 40 |
| 29 | Encouragement of savings in my religion. | 1.97 | .891 | 40 |
| 30 | Encouragement of taking debt in my religion. | 1.63 | .808 | 40 |
| 31 | Prohibition of receiving/paying interest in my religion. | 1.71 | .893 | 40 |
| 32 | Encouragement of donating in monetary terms in my religion. | 2.43 | 1.065 | 40 |
| 33 | Encouragement of donating in on- monetary terms in my religion. | 2.49 | .981 | 40 |
| 34 | Encouragement of taking insurance in my religion. | 1.80 | .833 | 40 |
| 35 | Presence of risk taking attitude in investor. | 2.57 | .884 | 40 |

Source: Compiled from field survey

**TABLE 3: ITEM-TOTAL RELIABILITY STATISTICS**

| Observation | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| Investment objective is safety of money. | 101.71 | 125.092 | .125 | .757 |
| Investment objective is to earn interest. | 102.26 | 115.197 | .500 | .736 |
| Investment objective is to save tax. | 102.03 | 121.440 | .289 | .749 |
| Investment objective is to secure future. | 100.86 | 124.714 | .309 | .750 |
| Investment objective is to safeguard life after retirement. | 101.11 | 123.398 | .401 | .747 |
| Investment objective is to meet expenses for children's education. | 100.97 | 126.087 | .195 | .753 |
| Investment objective is to meet expenses for children's marriage. | 101.46 | 121.844 | .376 | .746 |
| Investment objective is to meet sudden health expenses. | 101.54 | 124.197 | .263 | .751 |
| Investment objective is to meet expenses of vacation plans. | 102.31 | 126.163 | .107 | .757 |
| Investment objective is to buy a house. | 101.63 | 118.946 | .384 | .744 |
| Investment objective is to start own business. | 101.91 | 114.551 | .574 | .733 |
| Investment decisions are based on information provided by friends and relatives. | 102.14 | 126.303 | .098 | .758 |
| Investment decisions are based on information provided by brokers / financial advisors. | 102.63 | 122.652 | .272 | .750 |
| Investment decisions are based on information provided by electronic media. | 101.91 | 125.316 | .164 | .754 |
| Investment decisions are based on information provided by print media. | 101.83 | 127.970 | .018 | .761 |
| Frequency to invest money in Saving Bank Account. | 101.51 | 124.845 | .141 | .756 |
| Frequency to invest money in recurring deposits. | 102.89 | 117.281 | .358 | .744 |
| Frequency to invest money in fixed deposit. | 102.09 | 117.257 | .375 | .743 |
| Frequency to invest money in Government securities. | 103.29 | 124.975 | .095 | .760 |
| Frequency to invest money in insurance schemes. | 102.46 | 127.020 | .050 | .760 |
| Frequency to invest money in shares. | 103.51 | 116.963 | .419 | .741 |
| Frequency to invest money in mutual funds. | 103.17 | 112.146 | .483 | .735 |
| Frequency to invest money in gold. | 102.31 | 120.692 | .256 | .751 |
| Frequency to invest money in bonds. | 103.83 | 116.970 | .487 | .738 |
| Frequency to invest money in real estate. | 102.34 | 119.761 | .241 | .752 |
| Fulfill financial obligations through savings. | 102.71 | 124.798 | .461 | .749 |
| Fulfill financial obligations through taking loan. | 103.77 | 124.652 | .255 | .751 |
| Fulfill financial obligations through savings and loan both. | 103.29 | 127.034 | .095 | .757 |
| Encouragement of savings in my religion. | 103.54 | 124.079 | .215 | .752 |
| Encouragement of taking debt in my religion. | 103.89 | 131.928 | -.185 | .768 |
| Prohibition of receiving/paying interest in my religion. | 103.80 | 131.576 | -.158 | .768 |
| Encouragement of donating in monetary terms in my religion. | 103.09 | 120.434 | .324 | .747 |
| Encouragement of donating in on- monetary terms in my religion. | 103.03 | 122.793 | .248 | .751 |
| Encouragement of taking insurance in my religion. | 103.71 | 126.269 | .116 | .756 |
| Presence of risk taking attitude in investor. | 102.94 | 120.526 | .403 | .744 |

Source: Compiled from field survey

Table No.3 showing the item-analysis output from SPSS for the multi-item scale of investor's attitude is measured towards their objectives of investment and financial obligations. A descriptive type of the sections and related items are as shown below:

1. Statistics for Scale: These are the summery statistics for the items comprising the scale.
2. Item Means: There are summery statistics for the 15 individual item means.
3. Item Variances: There are summery statistics for the 15 individual item means.
4. Item –Total Statistics: In this section individual attention is necessary-
a. Scale mean if mean Deleted: Excluding the individual item listed, all other items are summed for all individual and mean of the summated items.
b. Scale Variance if item deleted: Excluding the individual item listed, all other scale items observed for all individual and the variances of the summated items.
c. Corrected Item-total Correlation: This is the correlation of the item designated with the summated score for all other items.
d. Squared Multiple Correlation: It predicted multiple correlation coefficient squared obtained by regressing the identified individual item on all the remaining items.
e. Squared Multiple Correlation if item deleted: It predicted the multiple correlation coefficient squared if item deleted obtained by regressing the identified individual item on all the remaining items.
f. Alpha if item deleted: This column represents the Scales Cronbach's alpha reliability co-efficient for internal consistency if the individual item is removed from the scale. This value is then compared to the Alpha coefficient value. Thus, the Cronbach's alpha co-efficient of internal consistency is most frequently used.
g. Standardized Item Alpha: The Cronbach's alpha co-efficient of internal consistency when all scale items have been standardized. This co-efficient is used only when the individual scale items are not scaled the same.

Cronbach's Alpha is the average value of the reliability co-efficient where one could obtain for all possible combinations of items. It is calculated for internal consistency reliability. A very high correlation between the variables shows that scores are reliable. Cronbach's Alpha reliability co-efficient normally ranges between 0 and 1 however; there are actually no lower limit to the co-efficient. The closer Cronbach's Alpha co-efficient is to 1.00 the greater the internal consistency of the items in the scale. Cronbach's Alpha is calculated by following formula:

Cronbcah's Alpha = rk / [1 + (k − 1) r]

Where   k   = number of items considered

r   = the mean of the inter-item correlations.

The simplest method to test the internal consistency of a questionnaire is dividing the scores a participant received on a questionnaire in two sets with an equal amount of scores and calculating the correlation between these two sets (Field, 2009). A high correlation signals a high internal consistency. Unfortunately, since the correlation coefficient can differ depending on the place at which you split the dataset, you need to split the dataset as often as the number of variables in your dataset, calculate a correlation coefficient for all the different combinations of sets and determine the questionnaire's reliability based on the average of all these coefficients. Cronbach came up with a faster and comparable method to calculate a questionnaire's reliability: $\alpha = (N^2 M(Cov))/(\sum s^2 + \sum Cov)$ Assumption behind this equation is that the unique variance within variables ($s^2$) should be rather small in comparison with the covariance between scale items (Cov) in order to have an internal consistent measure (Cortina, 1993).

**George & Mallory (2003)** provides the following techniques:

a. If Cronbcah's Alpha > 0.90        = Excellent
b. If Cronbcah's Alpha 0.80 - 0.89      = Good
c. If Cronbcah's Alpha 0.70 - 0.79      = Acceptable
d. If Cronbcah's Alpha 0.60 - 0.69      = Questionable
e. If Cronbcah's Alpha 0.50 - 0.59      = Poor
f. If Cronbcah's Alpha < 0.50        = Unacceptable

**TABLE 5: RELIABILITY STATISTICS**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .756 | .759 | 40 |

It should be noted that while a high value for Cronbach's Alpha indicates a good internal consistency of the items in the scale. The Cronbach's Alpha of individual's investment behavior is 0.756 and Cronbach's Alpha based on standardized item is 0.759 which are acceptable and reliable to internal items consistency.

## CONCLUSION

It should be noted that while a high value for Cronbach's Alpha indicates a good internal consistency of the items in the scale. The Cronbach's Alpha of individual's investment behavior is 0.756 and Cronbach's Alpha based on standardized item is 0.759 which are acceptable and reliable to internal items consistency. Data for individual investors towards investment are acceptable and reliable to customers. Overall it was found that individual investors in Delhi/ NCR consider important factors before investing. Their investment objectives, investment options where they invest and their source of information are reliable. Religion also plays an important role in decision of investors towards savings, loan, interest income, insurance, donations. Likert's Multi-item scale technique is more imperative to calculate and report Cronbach's alpha co-efficient for internal consistency reliability for any scales. The questionnaire for the doctoral research study "Influence of Religious affiliation on Individual's Investment Behavior" is reliable and acceptable. Collected data is 75.6% reliable as Cronbach alpha value is .756. If the study will be repeated, 75.6% results emerge. 35 items in questionnaire are standardized and positively correlated with each other. The analysis of the data then must use these summated scales therefore Cronbach's alpha always used for multivariant items.

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# A STUDY ON DISSATISFIED CONSUMERS OF SMARTPHONE OVER ONLINE PURCHASE IN MADURAI DISTRICT

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## ABSTRACT

*Recent research has shown an interest in investigating the factors which influence the customer's online shopping decision and the consumers' dissatisfaction over it. The objective of this study is to provide an overview of dissatisfied consumers of smart phones over online purchase. The study was conducted in Madurai district, in Tamilnadu. This article helps to know the reason for the dissatisfaction of the consumer. Similarly this paper has brought out some facts about the reasons why consumers are enduring dissatisfaction, many a time consumers are not reporting their dissatisfaction and not lodging complaints, instead of that they start to move on. The products, poor services, warranty and time factor are the reasons due to which consumers are enduring dissatisfaction. From this study I have gained lot of practical exposure about consumer buying behaviour towards mobile phones.*

## KEYWORDS

online shopping, consumer motivations, communication process, buying behaviour, consumers' dissatisfaction.

## INTRODUCTION

Consumer buying is not mere transfer of item from seller to buyer. Consumer wants buying to become a happy affair. They would like to see, touch and feel the commodities that they buy. Understanding this psychology, today many organizations have started moving towards providing a happy affair to their customers.

The study of consumer behaviour is important for both marketing management and social welfare perspective and consumer complaints constitute an important feedback mechanism for marketing management to monitor consumer satisfaction with their products and services where as non complaint by dissatisfied consumers block off this feedback may decide not to buy the product again or warn family and friends to avoid the product, which can be costly to the marketer. Without knowledge of the sources of dissatisfaction, management will be unable to change its procedures. In other words, for any given purchase, consumers may be satisfied or dissatisfied to varying degrees in connection with each of the separate activities of acquiring the product, using or consuming its benefits, and disposing of it. Oliver (1980) according to this paradigm, consumers are believed to form expectations about a product prior to purchasing the product.

Besides several study on consumer dissatisfaction and complaining behaviour the topic is still very much relevant in marketing discipline today and encouraging the marketing professors to explore further. Fornell and Werner felt (1987) argued that the study of consumer dissatisfaction is fundamental to a sound defensive marketing strategy therefore the objectives of studies for research in this paper is to identify the factors that causing consumer dissatisfaction and the reasons why consumers are enduring dissatisfaction.

## OBJECTIVES OF STUDIES

### PRIMARY OBJECTIVE
- To know the consumer buying behavior towards mobile phones in Madurai district.

### SECONDARY OBJECTIVE
- To find out the factors that influences the consumers to buy mobile phones.

## SCOPE OF THE STUDY
- The present study is conducted in Madurai district and it is decided to consider dissatisfied consumers on purchase of smart phones over online purchase
- This study helps to know the factors which influencing the customer to purchase Mobile Phones
- This research study also helps to know the reason for the dissatisfaction of the consumer

## LIMITATIONS OF THE STUDY
- This study was carried out only among the consumers purchasing mobile phones over online in Madurai city.
- The sample was taken on the basis of convenience; therefore the shortcomings of the convenience sampling may also be present in this study.

## RESEARCH METHODOLOGY

The primary methods of data collection that is questionnaire technique was used to collect the data required. Number of Respondents includes both male and female. Convenience sampling method has been adopted under the non-probability sampling technique and about 100 samples have been collected for the study.

### RESEARCH DESIGN
"A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure"

### DESCRIPTIVE RESEARCH
Descriptive research is designed to describe something, such as demographical characteristics of consumers who use the products. It deals with determining frequency with which something occurs or how two variables vary together. This study is also guided by and initial hypothesis.

### SAMPLING METHOD
Convenience sampling was adopted in the research work under non-probability sample method.

## REVIEW OF LITERATURE

Westbrook (1977) consumer dissatisfaction indicates the degree of unfavorability of an individual's experiences associated with his or her behaviour.

Summers and Granbois (1977) define that consumer dissatisfaction is a function of the comparative levels of consumers' expectations and their actual performance with goods and services is a potentially powerful source of explanation for several kinds of variability in actual dissatisfaction.

Random House Dictionary defined dissatisfaction as resulting from "contemplating what falls short of one's wishes or expectations" (Gilly, 1979). Theory that developed to explain the concept of consumer satisfaction/Dissatisfaction (CS/D) includes (1) economic theory (2) cognitive theory (3) affective theory and communications-effect theory.

Fornell and Didow (1980) consumer satisfaction/Dissatisfaction (CS/D) is one measure of economic system performance and consumer complaints are indicators of low or declining performance. Majority of dissatisfied consumers do not voice their complaints and several conceptual models of the consumer dissatisfaction/complaining process have been proposed

Sirgy (1980) economic theory attempted to explain CS/D in terms of "consumer surplus". It is assumed that consumer surplus of goods or value of a specific good would lead to satisfaction and consumer shortage would lead to its dissatisfaction. Cognitive theory, on the other hand, explains CS/D in terms of discrepancies between ideal and actual product performance.

Affective theory explains CS/D in terms of subjectively felt needs, aspirations, and experiences which may not be a reflection of the narrowing or widening discrepancies between ideal and actual product performance but simply due to personality change and/or other trend factors. The communication effect theory postulates that any observed changes to CS/D may be simply the result of a communication or message effect.

Day (1983) has defined CS/D as an emotional response manifested in feelings and is conceptually distinct from cognitive responses, brand effect and behavioral responses.

Oliver and DeSarbo (1988) explain satisfaction that it can be thought of as a feeling of "delight" and dissatisfaction a feeling of "disappointment". In general researchers agree that the concept of consumer satisfaction/dissatisfaction refers to an emotional response to an evaluation of a product, store or service consumption experience.

The relationship between expectations and experience also seems relevant for another aspect of consumer dissatisfaction which received much research attention. Although the character of the process underlying this behavior is still not properly understood, a number of previous studies have documented wide differences in the incidence of such behaviour over product classes and consumer categories, and the intensity of the complaining response itself seems highly variable.

Dick, Hausknecht and Willkie (1995) consumer may not seek redress from the marketer or some third party agency but may content themselves with "warning" friends and acquaintances about the trouble they have experienced. Some consumer may not even go that far, but rather decide that they will personally avoid the brand (or product class, etc. depending on where they attribute the locus of the feelings). This can have especially troublesome effects if the dissatisfaction feeling has resulted from failure at the end of the product's useful life and the main focus of the research was on product use experience, CS/D, complaining, disposition and warranties.

Taylor and Burns (1999) define consumer satisfaction/dissatisfaction is a function of the consumer's expectations about the product performance, the product's delivered performance, and some form of comparison between the pre-purchase expectations and the post-purchase performance. Under the basic expectancy-disconwebsiteation model, when perceived product performance exceeds the consumer's expectations (positive disconwebsiteation) leads to satisfaction, when perceived product performance falls below expectations (negative disconweb siteation) leads to dissatisfaction.

Zeelenberg and Pieter's (2004) analyzed the consumer dissatisfaction and its related behaviors by using a specific emotion approach i.e. valence-based approach and specific emotion approach. According to them customer dissatisfaction is not only a function of disappointment (i.e. the amount of negative disconwebsiteation), but also of regret (i.e. the performance of forgone alternatives).

Disappointment is felt when actual service delivery violates prior held expectations, whereas regret is typically felt following a bad choice of service provider (i.e. when it turns out that a forgone provider would have delivered a better service). Regret is likely to result in a focus on no attained goals and promote goal persistence; disappointment may result in goal abandonment.

Fitzpatrick, Friend and Costly (2008) study on dissatisfaction and distrust by analyzing the nasty stories of the customer experienced in shopping is an eye opening study in consumer dissatisfaction. Their study in consumer dissatisfaction was different from the earlier study done in seventies and eighties.

(Beh & Loo, 2013; Day and Landon, 1977; Landon, 1977; Fornell, 1976) Landon's model is an attempt to integrate previous research on complaint behaviour and it postulates that dissatisfaction, importance, benefit from complaining and personality are the basic determinants of complaining behaviour.

Fornell's model of the consumer post-purchase evaluation specifies a functional relationship between perceived performance and prior expectations that is affected by both consumer and market variables.

Their research finding emphasize that there is a need to understand much more about the complexity and intensity of emotions that occur in consumer experiences and how they contribute to dissatisfaction. Consumers feel distrust as an intense emotional, physiological, psychological, sociological and moral phenomenon. Distrust can lead to intense emotion, which contribute largely to dissatisfaction and their study on dissatisfaction was different from the earlier study in seventies and eighties.

## FACTORS INFLUENCING ONLINE SHOPPING DECISION

- **MOTIVATIONS THAT LEAD CONSUMERS' TO BUY ONLINE**

There are many reasons why people shop online. For examples, consumers can buy anything at anytime without going to the store; they can find the same product at a lower price by comparing different websites at the same time; they sometime want to avoid pressure when having a face-to-face interaction with salespeople; they can avoid in store traffic jam, etc. These factors can be summarized into four categories—convenience, information, available products and services, and cost and time efficiency.

- **CONVENIENCE**

Empirical research shows that convenient of the internet is one of the impacts on consumers' willingness to buy online. Online shopping is available for consumers around the clock comparing to traditional store as it is open 24 hours a day, 7 days a week (Hofacker, 2001; Wang et al., 2005). Research shows that customers chose to shop online because they could shop after-hours, avoid crowds and wailing lines, especially in holiday shopping (The Tech Faq, 2008).

Consumers are not only look for products, but also for online services. Some companies have online customer services available 24 hours. Therefore, even after business hours, consumers can ask questions; get necessary support or assistance, which has provided convenience to consumers

Some consumers use online channels just to escape from face-to-face interaction with salesperson because they pressure or uncomfortable when dealing with salespeople and do not want to be manipulated and controlled in the marketplace. This is especially true for those consumers who may have had negative experience with the salesperson, or they just want to be free and make decision by themselves without salespersons' presence.

- **INFORMATION**

The internet has made the data accessing easier. Given consumers rarely have a chance to touch and feel product and service online before they make decision, online sellers normally provide more product information that consumers can use when making a purchase. Consumers put the weight on the information that meets their information needs. In addition to get information from its website, consumers can also benefit from products' reviews by other consumers. They can read those reviews before they make a decision.

- **COST AND TIME EFFICIENCY**

As online shopping consumers are often offered a better deal, they can get the same product in lower price than buying it in the store. Since online stores offer consumers with variety of products and services, it gives consumers more chances to compare price from different websites and find the products with lower prices than buying from local retailing stores. Some websites, E-bay for example, offer consumers auction or best offer option, so they can make a good deal for their product. It also makes shopping a real game of chance and treasure hunt and makes shopping a fun and entertainment. Again, since online shopping can be

anywhere and anytime, it make consumers' life easier because they do not have to stuck in the traffic, look for parking spot, wait in checkout lines or be in crowd in store. As such, consumers often find shop from the website that is offering convenience can reduce their psychological costs.

**CUSTOMER LOYALTY HAS DIRECT POSITIVE ASSOCIATION WITH CONSUMERS' COMPLAINING BEHAVIOR**

**RESEARCH MODEL**
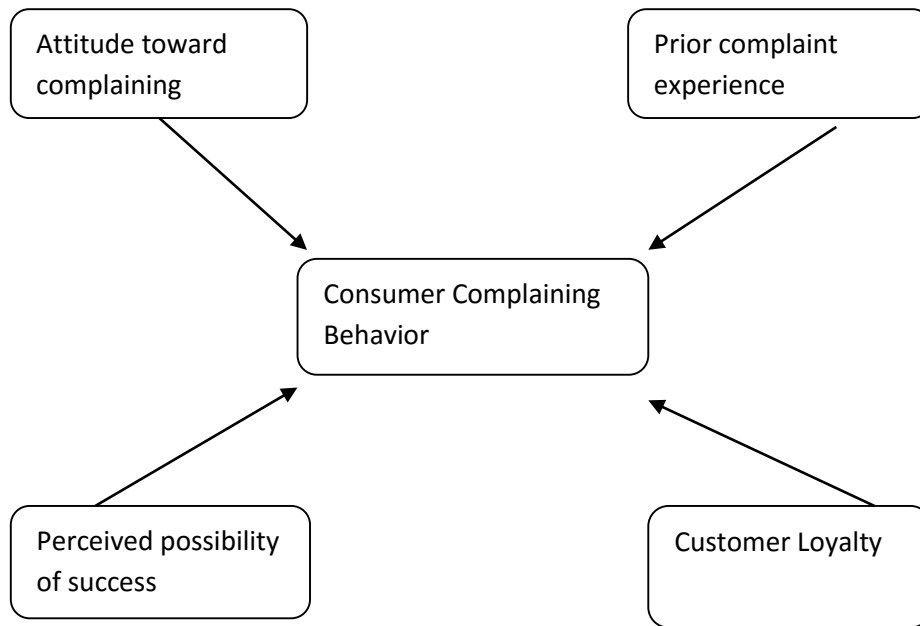


**FACTORS INFLUENCING DISSATISFACTION**

| FACTORS | DESCRIPTION |
|---|---|
| Faulty Description | Inbuilt features do not match the actual description mentioned in the website. Ex: RAM, ROM, Camera pixels etc., |
| Missing of Accessories | Ex: Ear phones, Chargers, Data cables, user manuals etc.., |
| Change in the product | Change in Models, OS Versions, etc., |
| Lack of Service centres | Some of the brands does not have their service centers in their accessible places |

**PRIVATE RESPONSE**

A customer who is willing to complain and do not have courage to complain publically or don't have an option to whom he can complain he will opt to respond privately. For this he has two possible options:

**1. Warn friends and families** (Private response): The consumer will say negative words about the service provider in his circle of friends and family. According to a study of TARP by Goodman (1999) that people are more likely to share bad service experience as compared to good service experience.

**2. Boycott the seller** (Switching): Dissatisfied consumers will not buy from the same service provider again. There are many reasons due to which a customer will not switch even after dissatisfaction. Studies on the issue reveals that major factors that affect switching behavior are switching cost, interpersonal relationship, availability and attractiveness of alternatives, service recovery and inertia (White & Yanamandram, 2007).

a.    Switching cost is the expected cost of switching from one supplier to another (Heide & Weiss, 1995). This cost includes monetary losses, time losses and psychological losses (Dick & Basu, 1994).

b.    Interpersonal relationship is the relationship between the front line employees of the organization and consumers. The studies states that the stronger the relationship between the employees/service provider lesser the chances of switching (White & Yanamandram, 2007).

c.    Attractiveness of the alternatives in the service sector is the expected performance of the other service providers compared to the existing service provider (Jones, 1998).

d.    Service recovery refers to the efforts taken by the service provider in order to fix the problem in order to retain the consumers. (Bell, 1994, Kelley & Davis, 1994)

e.    Inertia i.e. the consumers are sometimes lazy and not willing to accept any change due to which there are high chances that they will not switch on small incidents (Zeelenberg & Pieters, 2004).

**PUBLIC RESPONSE**

Sometimes consumers despite of complaining about the website in social circle or boycotting the website they prefer to publically respond to the problem. For this they have following three options:

**1. Directly ask for readdress from company** (Voice response): The consumer directly contacts to the service provider and asks for compensation. A study Goodman (1999) the president of TARP revealed that 50% of dissatisfied customer's complaint to the front line employees where as only 11-5% of the dissatisfied consumers complains to the head quarter or managers.

**2. Third-party response:** The customer will take any legal action against the service provider (Solomon, 2003). Schibrowsky & Lapidus (1994) and Cornwell, Bligh, & Babakus (1991) in their study stated that the dissatisfied consumers complain to the service provider and if they found that their problems are not heard or resolved there are chances that they would complain to third party such as consumer agencies.

**3**. **Legal actions**: The worst option taken by consumers is going to courts for the problem resolution.

**SUGGESTIONS**

•    To explore the market, online companies have to concentrate more on satisfying customers by delivering the right product.

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- The product should have the exact facilities that were mentioned in the description in the website.
- The product should be delivered without any changes (i.e colours, material, style)
- The company should do the needful action immediately for the dissatisfied consumers.

## CONCLUSION

"People are frustrated that there are too many automated response menus, there aren't enough customer-care agents, they waste a lot of time dealing with the problem, and they have to contact the company an average of four times to get resolution,"

The reasons why consumers are not reporting their dissatisfaction is because consumers are enduring dissatisfaction due to cost of services and warranty. If there is dissatisfaction and consumers are not complaining then it is not a good sign for the online sellers.

It is clear that websites' commitments to consumer care and consumer expectations are the real causes for consumer dissatisfaction. Websites needs to address consumer dissatisfaction properly and timely in an appropriate manner. If website fails to redress the consumers' dissatisfaction it might affect the customer loyalty and may create negative word of mouth publicity.

The result of this study indicates that the product compatibility, inconvenience and services, websites' commitment and quality, websites' attention to consumer care and consumer expectations are major cause for consumer dissatisfaction.

Finally, good experiences with returning items leads to repeat customers and recommendations for the retailer. Good returns experiences are marked by ease for the consumer, while the bad experiences highlight hassles and the extra cost required.

Therefore the study is concluded that if the consumer is not lodging complaints against the website products or services it should not assume that consumer is satisfied. Initially it may appear that everything is alright from websites' perspective but from consumer's side new problem may originate because of enduring dissatisfaction. Consumer enduring of dissatisfaction may impact the website marketing strategy on consumer behavior significantly.

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# BANIYA OR LOCALBANYA: A STUDY ON INDIAN 'GROCERY AND STAPLES' BUYING BEHAVIOUR

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*IBS*
*MUMBAI*

## ABSTRACT

*Around a decade ago it was envisaged that the shopping mall culture in India would take away the customers from the local baniyas /convenient stores due to the entry of players like Bigbazaar, Hypercity, Dmart, Reliance Fresh etc. Even after a decade of existence it seems like a farfetched dream. The market gurus have again made a boastful prediction of another wave in Indian Food and Grocery Business, Online Grocery Shopping. This paper is focused on understanding the customer buying behavior of groceries and staples. The outcome of the study highlights few key parameters which are not catered by the hypermarkets. If the online grocery players are successful in addressing these parameters, it won't be a surprise if these boastful predictions become the reality of tomorrow.*

## KEYWORDS

customer buying behavior, online grocery stores, indian retail market.

## INTRODUCTION

roceries, staples and vegetables are the recession resistant product categories. One can avoid getting entertained by the Bhaijaans, Queens and Manjhis of the world, but there's no way one can live without toothpaste, soap and, well most important - staples and vegetables. Caught in the city's fast pace, dreary commuting and long working hours, many consumers don't have the time to buy groceries or would like to avoid the chore.

The retail market in India is expected to touch the mark of $700 Bn (approximately INR 43 lakh crore) by 2017 (Arora, 2015). Curently of the $600 Bn Indian retail industry the organised retail constitutes only 8%. The food and grocery constitute to 2.3% of the modern organised retail market (KPMG, 2014). Food and grocery constitute to 69% of the total retail market in India. Adding the above figures up one can see that the organised food and grocery market within the country is approximately equal to $2 Bn or approximately 6500 crores. This figure is less than 1 % of the total food and grocery market in India!

## MARKET STATISTICS

Retail consultancy Technopak estimates online grocery business to grow at a rate of 25-30 per cent y-o-y basis in major cities of India

- India is the 6th largest grocery market in the world
- Less than 8% of grocery stores are organized corporations. The vast majority are "mom & pop" type shops that are similar to convenience stores in the US and are referred to as "kiranas"
- The online grocery market is growing at 25-30% annually in metropolitan areas and large cities
- Margins are below 10%
- 43% of the country's roads are not suitable for vehicles. Paired with checkpoints, and duty collection points that slow down traffic, infrastructure is an obstacle

Around a decade ago it was envisaged that the shopping mall culture in India would take away the customers from the local baniyas /convenient stores due to the entry of players like Bigbazaar, Hypercity, Dmart, Reliance Fresh etc. Even after a decade of existence it seems like a farfetched dream. The market gurus have again made a boastful prediction of another wave in Indian Food and Grocery Business, *Online Grocery Shopping*. This paper is focused on understanding the customer buying behavior of groceries and staples. The outcome of the study highlights few key parameters which are not catered by the hypermarkets. If the online grocery players are successful in addressing these parameters, it won't be a surprise if these boastful predictions become the reality of tomorrow.

## LITERATURE REVIEW

### INDIAN GROCERY MARKET

India has seen advent of organized retail sector in the last decade or so. Yet the total percentage of the organised retail in India has not yet touched the two figured percentage mark. The organised food and grocery market in India is less than 1% of the total food and grocery market and it predominantly operates in the urban India. Approximately 30% of the population of india resides in urban centers (Bank, 2014). The question is why 30% of the urban Indians are contributing to just 1% of the organised food and grocery market ? One of the key outcomes of this paper addresses the various reasons for this dawdling growth rate.

India's home-grown supermarkets account for only 2% of food and grocery sales and are struggling to make a profit. Revenues have not kept pace with rising rents. The bet made by the giant chains was that, as India becomes richer, its consumers would abandon kerbside stalls and kiranas (small family-owned shops) for air-conditioned stores with wide aisles and broad ranges. Most shoppers in India buy dairy products, vegetables and fruit either daily or every two to three days, and the traditional trade has a lock on these frequent purchases, according to research by the Boston Consulting Group (BCG). Its hold weakens a bit (and the appeal of supermarkets correspondingly tightens) on rich consumers and for less regular purchases: packaged foods; soaps, detergents and other groceries; and staples, such as rice and grains.

But in general even affluent consumers prefer traditional stores, because they are closer to home, are usually open longer and offer credit to familiar customers. Many will deliver free of charge. The retail gurus thought that *"give consumers a roomful of choice and he will change his habits",* sadly the Indian consumers have plumed in for convenience over variety (Economist, 2014).

### DIGITIZATION OF GROCERY MARKETS

Technology is influencing our lives, our work, where and how we shop, dine, travel, conduct meetings, if and whenever we sleep. It's a double edged sword. On one side it makes life convinient and smooth for people whereas on the other side it also makes us freakishly addicted and dependent on it.

E-commerce market in india is expected to touch $60-70 billion by 2020. The internet users are expected to increase from 200 million in 2014 to 600 million in 2020 owing to the smart phones proliferation, greater investments in network infrastructure, expanded reach in tier II and tier III cities and lower cost of connectivity. (BCG, 2015)

Digitization of grocery shopping is one of the seven trends and provocative predictions for the year 2015 (Driscoll, 2015).

The digitally challenged Online US grocery market is less than 2% of the entire organised grocery market whereas the online UK grocery market has grown from 1.1 percent to 5.1 percent from 2003 to 2013 (Driscoll, 2015). Click and collect grocer models is a big business in UK market. This model has also been tried in Australia by Orana Mall Store (Cini, 2012).

This research tries to see how Indian consumers are reacting to the next wave in the Indian retail market, i.e. online grocery market.

### VARIOUS PLAYERS IN THE INDIAN FOOD AND GROCERY MARKET

With less than 1% of the grocery market in India being organized, it is currently dominated by the hypermarket, supermarkets and convenience markets like FoodBazzar, Hypercity, and Dmart etc.

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With a large customer base and increasing penetration of Internet connectivity (partly through smart phones) and growing popularity of online shopping, some entrepreneurs have seen the potential in creating e-stores for groceries. If you understand the retail market, a bit of creative thinking and excellent customer service can help you build a great business.

As a result players like BigBasket, LocalBanya, Godrej's Natures Basket, Zopnow, AaramShop, Peppertap, Tokri.com, Grocart etc are competing to eat up this thin 1% sliver of market pie. It won't be a surprise if more players enter the market by the time this paper gets published. Most of the existing retailers offer their service in metros and major urban centres.

This paper has identified four major categories of the Indian grocery market players as follows:

**ORGANISED GROCERS**
1.    eGrocers
2.    Hypermarkets

**UNORGANISED GROCERS**
3.    Modern Mom and Pop Shops
4.    Traditional Mom and Pop Shop

eGrocers and Hypermarkets are the part of organized Indian food and grocery market. The last two categories are the part of fragmented and unorganized retail sector which constitute to the 90-93 % of the industry.

There are two sub categories of the eGocers: **Pure-play** online grocery retailers and **HyperLocal** Delivery Players. Pure-play online grocery retailers are at the forefront of the boom in grocery ecommerce, which has over tripled in size by number of players year-over-year. These companies build large warehouses and distribution centers outside of major cities and own fleets of GPS-enabled vehicles in order to serve online demand. BigBasket, LocalBanya & Reliance Fresh Direct are the main players leading in this space (Arora, 2015).

Hyperlocal Delivery players provide a front-end and logistics management service for smaller chains, as well as independent grocers for a recurring monthly/annual fee or commission basis. This model has been praised due to its lack of inventory investment. Peppertap, AaramShop, Grofers are few major players in this space.

**DEFINITION**
- **eGrocers:** A company that sells and delivers daily groceries through various e commerce channels.
- **Hypermarkets:** All the kinds of supermarkets and departmental stores selling groceries
- **Modern Mom and Pop Shops:** A convenient store that has enhanced its services by accepting orders over phones, selling and delivering groceries to the customer's house.
- **Traditional Mom and Pop Shops:** A convenient store or vendor selling groceries and staples without any additional services.

## OBJECTIVES OF THE STUDY
1.    To study the **general 'grocery and staples'** buying behavior of urban Indians.
2.    To study the **online 'grocery and staples'** buying behavior of urban Indians.

Following set of hypothesis were formulated to study the above objectives:

1-a)  $H_{1a}$: There is a significant difference between the groceries and staples buying behavior of people across different age groups
1-b)  $H_{1b}$: There is a significant difference between the groceries and staples buying behavior of people with different occupations
1-c)  $H_{1c}$: There is a significant difference between the groceries and staples buying behavior of men and women
2-a)  $H_{2a}$: There is a significant difference between the ratings of various aspects related to groceries and staples of people across different age groups
2-b)  $H_{2b}$: There is a significant difference between the ratings of various aspects related to groceries and staples of people across different occupation groups
2-c)  $H_{2c}$: There is a significant difference between the ratings of various aspects related to groceries and staples of people of men and women

## RESEARCH METHODOLOGY
**Type of Research**: This is a descriptive research conducted to study the online 'grocery and staples' market in urban India**. Sampling Technique**: The convenience sampling technique was used for the study. **Data Collection Tools:** Fifty retail consumers were surveyed using a structured questionnaire (see appendix) and interview technique. **Sample Description**: The respondents predominantly belong to three cities Mumbai, Pune and Ahmadabad. The demographic variables studied are age, gender occupation, annual family income, household members, number of children in the family. **Data Analysis:** The data analysis is done using frequency tabulation and one way analysis of variance.

The respondents were asked questions related to their 'grocery and staples' purchasing behavior, their preferences related to 'grocery and staples' buying places and various aspects that are important while purchasing them.

In this study the respondents were asked to rate the four types of grocery purchase places i.e. Hypermarkets, e-grocers, modern mom and pop shops and traditional mom and pop shops. The aspects related to groceries and staples selected are Quality / Freshness, Discounts, Brands, Convenience and Timely Availability. Further the respondents were asked few likert scaled statements and were asked to what extent they agreed or disagreed with them. These three inputs are analyzed across gender, age groups and occupation groups.

The small sample size, three urban centers and combining two product vategories "groceries and utilities" along with "fresh produce / vegetables and fruits" as 'groceries and staples' are few of the limitations of this study.

## DATA ANALYSIS AND INTERPRETATION
A total of 50 respondents were surveyed using structured questionnaires (see appendix) and interview technique. The respondents belong to Mumbai, Pune and Ahmedabad. The demographic classification in terms of age, gender and occupation of data is presented in the chart no. 1, 2 and 3.
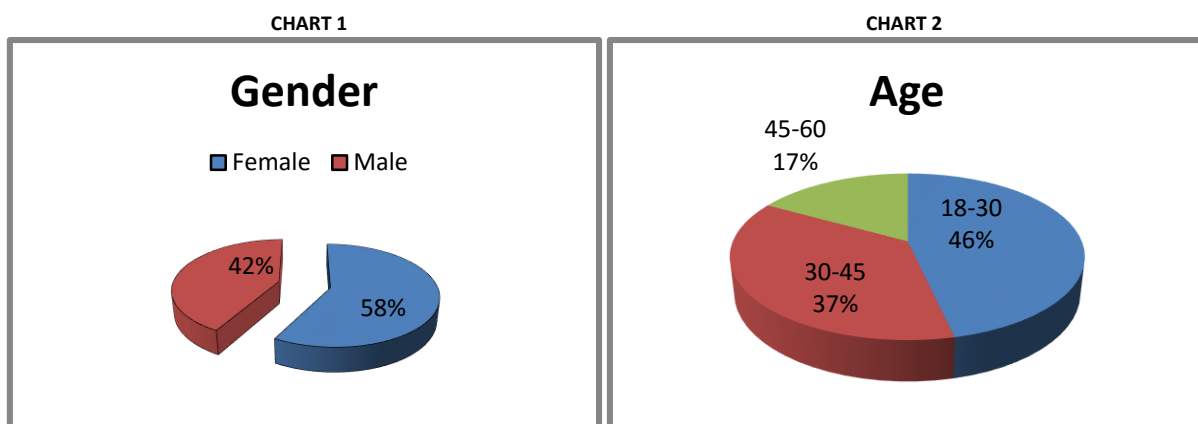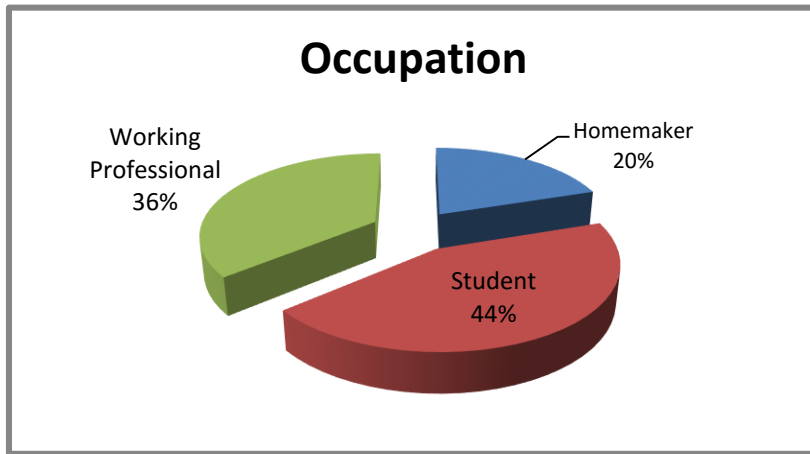


CHART 1 — Gender: Female 58%, Male 42%

CHART 2 — Age: 18-30 46%, 30-45 37%, 45-60 17%

**CHART 3**

## Occupation



The respondents were asked to indicate the frequency of their online 'grocery and staples' purchase. The responses are summarized in the Chart 3. It's evident that 26% of the respondents have purchased groceries online at least once a month in last one year. Also the proportion of regular online purchasers is just 10%. It indicates that 10% of the sampled respondents are using online grocers to purchase weekly utilities like vegetables, fruits, milk, confectionaries etc.

Respondents were also asked to record unaided brand recall of various online grocers. 80% of the respondents were able to recall atleast one online grocer. Mumbai respondents recollected the players like Bigbasket, LocalBanya, natures basket whereas the Ahmedabad respondents recalled online grocers like grocart.com, relieancefreshdirect.com. This shows that there is considerable awareness about online grocers within the urban centers in the country.

**CHART 4**

## Frequency of online grocery purchase
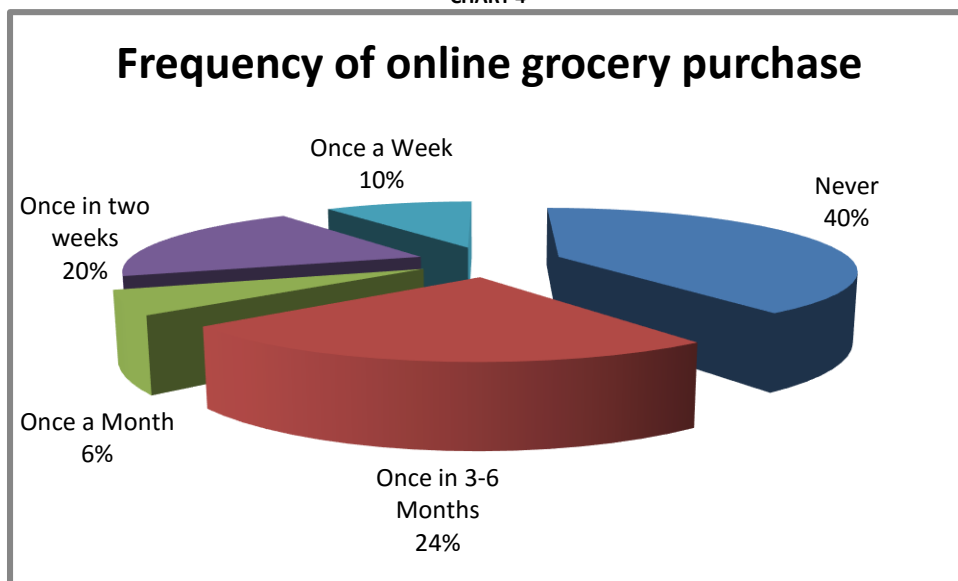


The respondents were asked to rate the four players as a preference to purchase groceries and staples. The ratings of the respondents were subjected to one way analysis of variance across three demographic variables i.e. age, occupation and gender. **Error! Reference source not found.**Chart 4summarizes the descriptive statistics and significant values for analysis of variance across age, occupation and gender. The significant results are highlighted for the reader's convenience.

**TABLE 1**

| Variable | Mean | Standard Deviation | ANOVA Significant Values (Age) | ANOVA Significant Values (Occupation) | ANOVA Significant Values (Gender) |
|---|---|---|---|---|---|
| Rating Local Stores / Manual Purchase | 3.52 | 1.297 | 0.003 | 0.181 | 0.080 |
| Rating Local Stores HD | 3.80 | 1.088 | 0.983 | 0.631 | 0.640 |
| Rating Hypermarkets | 4.00 | 1.291 | 0.018 | 0.774 | 0.657 |
| Rating Online Grocers | 2.96 | 1.428 | 0.209 | 0.774 | 0.337 |

The mean ratings indicate that the online grocers is the least preferred purchase place for groceries and staples amongst the respondents. The probable reason for these lower ratings is that just 10% of the respondents are actually purchasing their groceries online on weekly basis. The most preferred purchase place turns out to be hypermarkets followed by modern mom and pop stores.

From the Table 1 one can see that age and gender are significant differentiating factors towards 'grocery and staples' purchase behavior. The data is not sufficient to conclude that occupation has caused any variance in the data.

There is a significant difference between the preference to purchase groceries and staples manually or from local kirana / convenient stores of people belonging to different age groups (level of significance α = 0.10). Interestingly the mean ratings for this place of purchase increases with age. The younger generations have rated the manual purchase lower than the people belonging to 45 years and above. This can be good news to the online grocers that the habits of younger generations that constitutes to more than 50% of the total population in India (CIA), are different compared to the older generations in terms of groceries and staples purchase. It is easier to target the people from the age bracket of 18-30 as they aren't so inclined towards manual grocery purchasing experience.

Similarly the age group of 30-45 has shown higher preference for hypermarkets (level of significance α = 0.10). This result suggests that the particular age group is probably interested in the discounts, variety and the entire shopping experience offered by hypermarkets. The implication for online grocers is to ensure to make their products offerings as wide and inclusive as possible.

The ratings of manual purchase differ significantly between men and women (level of significance α = 0.10). The mean rating scored indicates that women tend to be more inclined towards manual purchase than men. This is the probable reason of why we see Mr. Shahrukh Khan boasting to be BigBasketeer. Men seem to not prefer manual purchasing and would rather have their groceries and staples delivered to their doorsteps.

The respondents were asked to rate 5 aspects related to 'grocery and staples' i.e. Quality and freshness, Discounts / Prices offered, Brands, Convenience, Timely Availability. The

Table **1** summarizes the descriptive statistics and significant values for analysis of variance across age, occupation and gender. The significant results (at level of significance α = 0.10) are highlighted for the reader's convenience.

**TABLE 1**

| Aspects | Mean | Standard Deviation | ANOVA Significant Values (Age) | ANOVA Significant Values (Occupation) | ANOVA Significant Values (Gender) |
|---|---|---|---|---|---|
| Quality and freshness | 4.72 | 0.640 | 0.669 | 0.250 | 0.001 |
| Discounts / Prices offered | 3.34 | 1.022 | 0.538 | 0.080 | 0.753 |
| Brands | 4.06 | .913 | 0.383 | 0.108 | 0.697 |
| Convenience | 4.26 | .899 | 0.033 | 0.035 | 0.275 |
| Timely Availability | 4.36 | .827 | 0.277 | 0.033 | 0.021 |

Unanimously quality and freshness and timely availability of the groceries and staples are rated higher than other aspects. Interestingly convenience in terms of home delivery queue free purchase, purchase while commuting etc is also rated higher than discounts and brands. This is an important insight for the online grocers as they can cater to these aspects which are important to consumers.

The analysis of variance of the ratings to these aspects across different *age* groups shows that only the "convenience" aspect is rated significantly different. By looking at the mean scores and fisher's least significant difference (at level of significance α = 0.10) the age group 30-45 has rated this aspect significantly lower than other age groups. The business implication of this result is that the younger age groups seem to prefer convenience of home delivery, queue free and cashless transactions owing to the fact that they are more exposed to the digital age, convenience being an integral part of it. At the same time probably the older generation between 45-60 has rated convenience higher considering that it is cumbersome to lug the groceries and staples in the crowded urban areas.

The analysis of variance of the ratings to these aspects across different *occupation* groups is significant for "discounts", "convenience" and "timely availability" (at level of significance α = 0.10).

By looking at the mean scores and fisher's least significant difference (LSD significant values) it's apparent that only housewives are sensitive towards discount. Students or bachelors and working professionals have not given much of the importance to discounts. LocalBanya has recently launched their smart grocery plans which offer up to 20-30 % discounts to the customers. If any online grocer has 'homemakers' as there major customer segment then they need to device strategies to offer deep discounts to make their product offerings attractive to their customers.

Contrary to the common assumption that working professionals are pressed for time and would rather opt for convenient chores options, this research indicates that they have rated this aspect lower than students and homemakers. The new age homemakers probably don't mind convenient good quality 'grocery and staples' purchase options. Timely availability of 'grocery and staples' seem to be important only to homemakers from these sampled respondents. This result is in lines with the literature found where its proved that the customers behave differently in "want" and "need" based food items (Milkman, Rogers, & Bazerman, 2009)

The respondents were asked to certain statements and were asked to record the extent of their agreeability. Analysis of variance was run for all the statements vis-à-vis gender, age and occupation. Of all the analysis the output for the last statement "I like to choose and pick groceries and staples with my own hands" is found to be significant across occupation (significant value = 0.096). The fisher's least significant difference (LSD α = 0.063) indicate that only the homemakers were sensitive towards being able to choose and pick their groceries and staples. Again this is good news to the online grocers as the working professionals and bachelors did not seem to agree so much with that statement.

## CONCLUSION

One of key outcomes of this study is that the awareness of the online grocery players is approximately 80%. Yet only about 10% of the respondents seem to be using these service providers on a regular basis. The saying seeing is believing is validated in this study. From the analysis it is evident that quality and freshness is very important to the customers. At the same time it's very critical for homemakers to see for themselves and then choose their groceries to ensure its quality. Although hypermarkets do cater to this need of choosing and picking things, it does not address the convenience concerns. When asked for the reason for not using online grocer's major reason cited by the respondents was "I like to choose and pick groceries myself".

Another important factor that could deter a person from using online grocers is timely availability of food items. Not all the meals are planned in advance, and if it's something special like biriyani/pasta/halwa/blueberry cheesecake and the ingredients are missing, it is unlikely that the order for those items would be placed online. The modern and traditional convenience stores get that edge over it.

If the online grocers can strike this balance of providing an interface to its customers to actually be able to see their stringent quality standards maybe the customers can be convinced that it's a win-win-win proposition for them in terms of quality-convenience- timely availability of their groceries and staples. Taking a cue from these outcomes studying online buying behavior of customers for each of the specific brands like localbanya, bigbasket etc and what strategies can they implement to have an edge over others can be the future scope of research.

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## APPENDIX

### QUESTIONNAIRE

We at ICFAI Business School, are conducting a research study on "online grocery market and its customers". We would appreciate if you could spend few of your valuable minutes to fill the below questionnaire.

**The information collected below would be kept confidential and not disclosed to any third party.** *Note: Term 'grocery and staples' means Atta, cereals, pulses, vegetables, fruits, home utilities etc used on daily basis.*

**Questions**
1. **Name:** _____
2. **Email ID:** _____

3.  **Mobile Number:**_____

4.  **Annual Family Income: [Tick (√) the appropriate option]**

| 0 – 2.5 Lacs | 2.5 – 5 Lacs | 5 – 10 Lacs | |
|---|---|---|---|
| 10 – 15 Lacs | 15 – 20 Lacs | 20 Lacs above | |

5.  **Age: [Tick (√) the appropriate option]**

| 18-30 | 30-45 | |
|---|---|---|
| 45-60 | 60 and above | |

6.  **Gender: [Tick (√) the appropriate option]**
    - Male
    - Female

7.  **Occupation: [Tick (√) the appropriate option]**

| Student | Working Professional | |
|---|---|---|
| Homemaker | Retired Person | |

8.  **Number of people in household: [Tick (√) the appropriate option]**

| 1 - 2 | 3 - 5 | |
|---|---|---|
| 6 - 8 | 9 and above | |

9.  **Number of children in household: [Tick (√) the appropriate option]**

| 0 | 1 | |
|---|---|---|
| 2 | 3 or more | |

10. **Name few online grocery stores**
    a) _____
    b) _____
    c) _____

11. **Rate the following places on a scale of 1 to 5 as your preferred place to purchase groceries and staples: (A rating of "1" signifies it is least preferred and rating of "5" signifies it is most preferred)**

| Place of Purchase | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Local Stores (Manual Purchase) | | | | | |
| Local Stores (Home Delivery) | | | | | |
| Hypermarkets like Hypercity, BigBazaar, Dmart etc | | | | | |
| Online grocery stores | | | | | |

12. **How do you purchase your groceries and staples**
    a) Go in the local market / hypermarket and purchase
    b) Have your maid/servant purchase it for you
    c) You place your order over phone and your local grocer delivers it to your house
    d) Order it online

13. **How often have you purchased groceries and staples from online grocers in last one year. [ Tick (√) the appropriate option]**

| Once a Week | Once in two weeks | Once a Month | |
|---|---|---|---|
| Once in 3-6 Months | Never | | |

14. **If you have ticked "never", answer the question below else skip to next question "Why have you never used any online grocer?"**
    a) Not aware of such a place to buy groceries
    b) Do not know how to purchase goods online
    c) Do not trust online transactions
    d) Have had a bad experience in the past with online purchase
    e) I like to pick and choose the groceries myself
    f) Any other _____

15. **Rate the following aspects of groceries and staples on a scale of 5.(A rating of "1" signifies it is not very important and rating of "5" signifies it is very important)**

| Parameter | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Quality / Freshness of edible items | | | | | |
| Discounts / Prices offered | | | | | |
| Brand | | | | | |
| Convenience (Home Delivery, Queue free purchase, Being able to do it while commuting to or from work) | | | | | |
| Timely availability | | | | | |

16. **Following are few statements about groceries and staples shopping, state the extent to which you agree or disagree with them**
(*Note:* SA = Strongly Agree; A = Agree; N = Neutral; DA = Disagree; SDA = Strongly Disagree)

| Parameter | SA | A | N | DA | SDA |
|---|---|---|---|---|---|
| I enjoy buying groceries and staples | | | | | |
| I think buying groceries and staples is a boring job | | | | | |
| I don't mind carrying the heavy grocery bags | | | | | |
| I prefer the groceries being delivered to my doorsteps | | | | | |
| I like to choose and pick groceries and staples with my own hands | | | | | |

********************** **Thank You******************************

# THE ENTREPRENEURSHIP'S CAPITAL ASSISTANCE IN ENHANCING THE MOTIVATION OF COLLEGE STUDENT TO BE AN ENTREPRENEUR

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## ABSTRACT

*The purpose of this final report is to know the entrepreneurships capital assistance in enhancing the motivation of college student to start their own business. The study was conducted on 96 respondents from the students in Politechnic of Sriwijaya, Diploma III Programme semester 2 and 4, 2014/2015 years. In this research, the writer used SPSS Versions 16.0 for analyze data. The result of the study found the mean from 96 respondents are 4,21 percent and standard deviation 0,32 percent. It means that variables of entrepreneurship's capital assistance in enhancing the motivation of college student to start their own business and the coefficient determination are 0,824 percent. It means that variable of entrepreneurship's capital assistance influences the motivation of college student to start their own business are 90,8 percent and 9,2 percent influenced by other reasons. So, the writer gave suggestion that increase motivation of college student to start their own business by to increase capital assistance such as facilities, training or on the job training on company (industries).*

## KEYWORDS

entrepreneurship's capital, motivation.

## INTRODUCTION

### BACKGROUND

*L*ately, Indonesia's economic situation has been increasingly difficult with the escalation of the needs of society and the scarcity of job opportunities. The data from Central Statistical Agency mentions that the rate of open unemployment in Indonesia in 2014 has reached 6,25% or 7,9 million with around 688.660 are college graduates (495.143 with bachelor's degree and 193.517 with diploma degree). Every year, this unemployment problem keeps being a national issue that needs to be solved. Because of this, many people try to be more creative and innovative to reach their financial security by starting their own business, or in other words, trying to be an entrepreneur.

Seeing from the trend, since the beginning of the 20th century, entrepreneurship has been introduced in several countries. For example, it is known as "*ordenemer*" in Netherlands and "*unternehmer*" in Germany. In few countries, entrepreneurship has many responsibilities, such as decision-making regarding technical, organizational, and commercial leadership, capital provision, manpower acceptance and handling, purchasing, selling, advertising, and many more. Then in 1950s, entrepreneurship education was started in some of the countries in Europe, America, and Canada. Since then, in 1970s, entrepreneurship education has entered some of the universities that taught entrepreneurship, small business management, or new business management. In 1980s, almost 500 schools in United States gave entrepreneurship education. Meanwhile in Indonesia, entrepreneurship education is still limited in certain schools or universities.

Since 2009, the Government of Indonesia has launched Student Entrepreneurship Program (SEP), or known as *Program Mahasiswa Wirausaha* (PMW), to be implemented and developed in universities through the Directorate General of Higher Education the Ministry of Education and Culture. This program is performed in all National Universities and Private Universities that were selected by Private University Coordinator (PUC), or known as *Koordinator Perguruan Tinggi Swasta* (*Kopertis*), with different funding allocations. SEP aims at giving knowledge, skills, and entrepreneurship attitude that are based on science and technology to the student so they can change their mind-set from being a 'job seeker' to being a 'job creator' and be a strong and success entrepreneur in the global competition. This program also pushes institutional or unit of entrepreneurship in university to support the development of entrepreneurship programs. A declining in unemployment rates is the end result that SEP wishes to achieve. The success of this program is measured from three indicators, which are the amount of student that has managed to build a business (as an entrepreneur), the existence of entrepreneurship capital knowledge in university, and the forming of entrepreneurship education development unit that coordinates broad range of activities that are related to entrepreneurship in university.

Student Entrepreneurship Program (SEP), as a part of the entrepreneurship education strategies in universities is intended to facilitate the students to have entrepreneurship motivation and start their own business with science, technology, and art basis. The facilities that are given include the entrepreneurship education and training, internship, business plan drafting, capital support and sustainable entrepreneurship assistance. SEP is hoped to support the vision and mission of the government into manifesting the nation's independency through the creation of job opportunities and empowerment.

Sriwijaya Palembang State Polytechnic is one of the educational institutions that has implemented Student Entrepreneurship Program and introduced it to Diploma III students in the second to fourth semester and to Diploma IV students in the second to sixth semester.

Every year, the average of students that submit entrepreneurship capital proposal is 140 from group proposal and 33 from individual proposal. Meanwhile, the amount of accepted proposals is 8 from group and 16 from individual. The fund that has been received by each group is ranging from Rp 12.000.000,00 to Rp 15.000.000,00 and the funds that has been received by each individual is ranging from Rp 4.000.000,00 to Rp 5.000.000,00.

Based on these backgrounds, this research is done to gain the knowledge whether or not the entrepreneurship's capital assistance can increase the motivation of students to start their own business.

## BASIC THEORY

### THE DEFINITION OF ENTREPRENEURSHIP

Suryana (2006:2) expresses that entrepreneurship is a creative and innovative ability that is used as a basis, tips, and resource to find the opportunity to success. Coulter enunciates that entrepreneurship is often associated with the establishment and growing process of a new business that is oriented on profit gaining, the creation of value, and the forming of new, unique, and innovative product or service (Suryana, dkk, 2011:25). According to Drucker in Suryana dkk. (2011:24-25), entrepreneurship is more referred to a nature, disposition, and characteristic of a person that has high willed in actualizing innovative ideas into a real business world and able to develop it strongly. Entrepreneurship means *applying creativity and innovation to solve the problems and to exploit opportunities that people face everyday*. (Zimmerer, 1996:51).

### THE BENEFIT AND LOSSES OF ENTREPRENEURSHIP

The benefits and losses of entrepreneurship are identical with the benefits and losses of private small business. Peggy Lambing and Charles L. Kuchl Suryana (2006:70) propounding these following benefits and losses of entrepreneurship.

❖    The benefits of entrepreneurship
1. Autonomy. Free management and is not bound in creating a business, being a boss that has much satisfaction.
2. Early challenge and achievement motive feeling. Early challenge or high motivation feeling is a delightful thing. The opportunity to develop a business concept that might result in profit can really motivate entrepreneur.
3. Financial control. Entrepreneur has the liberty to manage their financial and to feel that their wealth is their own.
❖    The losses of entrepreneurship
1. Personal sacrifice.
   Initially, entrepreneur has to work in a long and busy schedule. There is very minimum time that can be used for family or leisure matters because almost all the time that are available will be spent on business activity.
2. Weight of responsibility.
   Entrepreneur must manage all business function, from marketing, finance, personal, procurement, and training.
3. Small profit margins and big bankrupt possibilities. Because entrepreneur uses his own financial source, the profit margins that can be received is relatively small.

## ENTREPRENEURSHIP MOTIVE

In Entrepreneur's Handbook that was quoted by Yuyun Wirasasmita in Suryana (2006:55-56), there are few reasons why someone becomes an entrepreneur that was mentioned, such as:
1. Financial issue, which are to earning a living, to be wealthy, to get additional income, and as financial stability guarantee.
2. Social issue, which are to gain status, to be known and respected, to be a role model, and to be able to meet a lot of people.
3. Service issue, which are to give job opportunities to society, to help the orphans, to satisfy parents, and for family future.
4. Self-fulfilment issue, which are to be their own boss/independent, to gain something that is wished, to avoid dependency to other people, to be more productive and to be able to use own skill.

## ENTREPRENEURSHIP MOTIVATION

Motivation is a process to raise, direct, and establish the behaviour direction of a purpose. Motivation is a background for an individual to do an act to achieve a certain purpose. According to Robbins (2001), motivation is the willingness of an individual to unleash his effort in fulfilling his needs.

Based on the research of American accountants and technical experts from various industries, Herzberg expresses two factors motivation theory. Corresponding to this theory, there are two factors that affect a person's work condition, which are motivation factor that also called as *satisfier* or *intrinsic motivation* and hygiene factor that also called as *disatisfier* or *extrinsicmotivation* (Handoko, 2000).

This Herzberg theory sees two factors that push employee to be motivated, which are intrinsic factor, a thrust that appears from the insides of the people, and extrinsic factor, a thrust that appears from the outsides, especially from the organization that they work in (Hasibuan, 2005).

The factors that are included in intrinsic motivation are responsibility, appreciation, the work itself, development, and progress. The factors that are included in extrinsic motivation are salary, policy, work relationship, supervise work environment (Manullang, 2001).

## JOURNAL ECONOMIC LITERATURE

Sabri through his publicised research in an economic journal entitled Entrepreneurship: The human being capital in economy development, shows that the entrepreneurship as an asset or a capital for national development that should be kept and growth in the society, especially the educated society, which hoped can give support in accelerate the national development and decrease our nation burden in the other side.

Mariskha through his publicized research in an *eksistansi* jounal entitled base of statistical have significant influence between academic with lecturer entrepreneurship student in business administration department Sriwijaya State University, but percentage is small, although the student got A.

Purwanti in her research publicized in an article entitled "The influence of entrepreneur characteristic, business capital, and marketing strategy toward the development of micro entrepreneurship in Dayaan and Kali Londo Salatiga Village, shows that the entrepreneur characteristic, individually and cooperating business capital have a significant implication toward the entrepreneurship development, nevertheless the individually marketing strategy does not have any significant impact toward the business development.

## RESEARCH METHODOLOGY

### RESEARCH LOCATION

The research was done in Sriwijaya Palembang State Universityin Palembang, Srijaya Negara Street Bukit Besar, Palembang.

### POPULATION AND SAMPLE

The population in this research is all of the students in second semester and fourth semester in Diploma III program year 2014/2015 in Sriwijaya State University. The sample in this research can be determined with Slovin (Umar, 2001) equation, which is:

$$n = \frac{N}{1 + Ne^2}$$

Where:
n = sample amount
N = population amount
e = Error tolerance percentage (precision) because of the sample-taking
errors that can still be tolerated.
By using 10% precision rate, therefore the sample size in this research is as follows:

$$n = \frac{2.592}{1 + 2.592(0,1)^2}$$

$$n = 96$$

If rounded, the sample size is 96 people.

### RESEARCH INSTRUMENT

Research instrument is a tool that is used to measure both natural and social phenomena. Instrument can be defined as a supporting device that is a facility that can be applied in things (Ridwan, 2003:24). The instrument that is mentioned in this research is questionnaire. The questionnaire in this research is developed into 2 (two) variables, which are independent variable and dependent variable. Independent variable is entrepreneurship's capital assistance (x) and the dependent variable is entrepreneurship motivation (y). The statement instrument of these two variables can be shown in this following table:

**TABLE 1: VARIABLE AND RESEARCH INDICATOR** (In Percentage)

| No. | Variable | Indicator | Scale | | | | |
|---|---|---|---|---|---|---|---|
| | | | SS | S | KS | TS | STS |
| 1. | Entrepreneurship's Capital Assistance (X) | The granting of entrepreneurship's capital assistance is done through the socialization of Student Entrepreneurship Program. | 40 | 55 | 3 | 2 | 0 |
| | | The granting of entrepreneurship's capital assistance can improve student's creativity. | 41 | 54 | 5 | 0 | 0 |
| | | The granting of business facility development's assistance can improve business establishment. | 34 | 61 | 4 | 0 | 0 |
| | | The granting of training and entrepreneurship development can improve student's independency. | 45 | 53 | 2 | 0 | 0 |
| | | The granting of entrepreneurship's capital assistance can improve the society production and income. | 26 | 63 | 10 | 1 | 0 |
| | | The granting of entrepreneurship's capital assistance can reduce unemployment and criminality rate. | 32 | 55 | 13 | 0 | 0 |
| | | The granting of entrepreneurship's capital assistance both to group business and individual business is sufficient. | 16 | 47 | 30 | 6 | 0 |
| | | The granting of entrepreneurship's capital assistance will be done through administrative and proposal selections. | 27 | 63 | 8 | 2 | 0 |
| | | The granting of entrepreneurship's capital assistance through internship can provide business network that will support the business progress. | 31 | 62 | 7 | 0 | 0 |
| | | The granting of entrepreneurship's capital assistance through internship can provide information and specific technical skill that are needed in business such as production technical, packing, marketing, etc. | 37 | 59 | 4 | 0 | 0 |
| 2 | Entrepreneurship's Motivation (Y) | Starting own business can improve income that can be used to fulfilling life's needs. | 50 | 49 | 1 | 0 | 0 |
| | | Starting own business can help to manage finance better. | 39 | 53 | 8 | 0 | 0 |
| | | Starting own business can improve someone's pride. | 20 | 53 | 25 | 2 | 0 |
| | | Starting own business can avoid independency of other people. | 34 | 55 | 10 | 1 | 0 |
| | | Starting own business can induce happiness and satisfaction. | 35 | 56 | 8 | 1 | 0 |
| | | Family really supports entrepreneurship. | 41 | 53 | 6 | 0 | 0 |
| | | Social community really supports entrepreneurship. | 22 | 60 | 17 | 1 | 0 |
| | | The desire to be an entrepreneur because of the existence of opportunity and chance. | 37 | 54 | 8 | 1 | 0 |
| | | Education and knowledge that was gained through lecture really support the desire to be an entrepreneur. | 33 | 53 | 11 | 3 | |
| | | Practical skills that were gained through lecture really support the desire to be an entrepreneur. | 29 | 58 | 11 | 2 | |

Keterangan

SS : *SangatSetuju* (Really Agree)

S : *Setuju* (Agree)

KS : *KurangSetuju* (Not Really Agree)

TS : *TidakSetuju* (Not Agree)

STS: *SangatTidakSetuju* (Really Not Agree)

**RESEARCH HYPOTHESIS**

Hypothesis with probability technique (0,05) is tested and formulated statistically as follows:

Ha: Pyx ≠ 0

Ho: Pyx = 0

Hypothesis in sentence form:

Ha: Entrepreneurship's capital assistance affects significantly on students' motivation to start their own business.

Ho: Entrepreneurship's capital assistance does not affect significantly on students' motivation to start their own business.

**ANALYSIS AND DISCUSSION**

Analysis tool in this research is SPSS 16.0. The amount of the respondents in this research is 96 people. Based on the data that has been calculated with SPSS 16.0, the following result is gained:

**TABLE 2: DESCRIPTIVE STATISTICS**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| Student Entrepreneurship's Motivation | 4.21 | .411 | 96 |
| Entrepreneurship's Capital Assistance | 4.21 | .332 | 96 |

Source: Calculated Data (2015)

Descriptive Statistics table presents entrepreneurship's capital assistance variable (X) against student's entrepreneurship motivation variable (Y). The descriptive result of student's entrepreneurship motivation variable (Y) is explained with the amount of case (N) = 96 with an average (mean) of 4,21 and deviation standard = 0,411. The descriptive result of entrepreneurship's capital assistance variable (X) is explained with the amount of case (N) = 96 with an average (mean) of 4,21 and deviation standard = 0,332.

**TABLE 3: RESPONDENT'S GENDER**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 | 26 | 27.1 | 27.1 | 27.1 |
| | 2 | 70 | 72.9 | 72.9 | 100.0 |
| | Total | 96 | 100.0 | 100.0 | |

Source: Calculated Data (2015)

The gender of the respondents that answered the questionnaire in this research can be known from table 3, which are 96 people with 26 men and 70 women, with the data that was given is 100% valid.

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**TABLE 4: CORRELATIONS**

| | | CapitalAssistance | Entrepreneurship'sMotivation |
|---|---|---|---|
| Capital Assistance | Pearson Correlation | 1 | .908** |
| | Sig. (1-tailed) | | .000 |
| | N | 96 | 96 |
| Entrepreneurship's Motivation | Pearson Correlation | .908** | 1 |
| | Sig. (1-tailed) | .000 | |
| | N | 96 | 96 |
| **. Correlation is significant at the 0.01 level (1-tailed). | | | |

Source: Calculated Data (2015)

Based on the output level above, the obtained values are sig. (1-tailed) amounted to 0,000 < 0,05 and Pearson Correlation amounted to 0,908 (positive value +), so that Ha is accepted, which means there is a positive relationship between entrepreneurship's capital assistance (X) and student's entrepreneurshipmotivation (Y).

The correlation table shows the test of significance. The research hypothesis will be formulated in the following sentence form.

Ha: Entrepreneurship's capital assistance has a significant relationship with student's entrepreneurship motivation.

Ho: Entrepreneurship's capital assistance does not have a significant relationship with student's entrepreneurship motivation.

**DECISION RULES**
1.    If the probability value of 0.05 is smaller or equal with the Sig probability value (0.05 ≤ Sig), then Ho is accepted and Ha is rejected, which means it is not significant.
2.    If the probability value of 0.05 is larger or equal with the Sig probability value (0.05 ≥ Sig), then Ho is rejected and Ha is accepted, which means it is significant.

Correlation table is calculated with entrepreneurship's capital assistance variable and student's entrepreneurship motivations amounted to 0,000 Sig value. When compared to the probability value of 0,05, it turned out that the probability value of 0,05 is larger than the Sig probability value (0,05 > 0,000), then Ho is rejected and Ha is accepted, which means it is significant. It is proven that entrepreneurship's capital assistance has a significant relationship with student's entrepreneurship motivation.

**TABLE 5: MODEL SUMMARY[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .908[a] | .824 | .822 | .173 | .824 | 440.104 | 1 | 94 | .000 |
| a. Predictors: (Constant), Entrepreneurship's Capital Assistance | | | | | | | | | |
| b. Dependent Variable: Student's Entrepreneurship Motivation | | | | | | | | | |

Source: Calculated Data (2015)

The result from model summary table in this part shows R-value = 0,908 and determination coefficient ($R_{square}$) amounted to 0,824 (is the square of correlation coefficient, or 0,908 x 0,908 = 0,824). This shows the definition that student's entrepreneurship motivation (Y) is influenced as much as 90,8% by entrepreneurship's capital assistance (X), while the rest (100% - 90,8% = 9,2%) is explained by other causes. $R_{square}$is ranging from 0 to 1 with the note that the smaller is $R_{square}$, the weaker the relationship between these two variables.

**TABLE 6: ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 13.244 | 1 | 13.244 | 440.104 | .000[a] |
| | Residual | 2.829 | 94 | .030 | | |
| | Total | 16.073 | 95 | | | |
| a. Predictors: (Constant), Entrepreneurship's Capital Assistance | | | | | | |
| b. Dependent Variable: Student's Entrepreneurship Motivation | | | | | | |

Source: Calculated Data (2015)

The result from ANOVA test in this part shows that F-value = 440,104 with Sig probability value is 0,000. Because of the probability (0,000) is much smaller than 0,05, and then the regression model can be used to predict student's entrepreneurship's motivation (Y).

**TABLE 7: COEFFICIENTS[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.530 | .227 | | -2.340 | .021 |
| | Entrepreneurship's Capital Assistance | 1.125 | .054 | .908 | 20.979 | .000 |
| a. Dependent Variable: Student's Entrepreneurship Motivation | | | | | | |

Source: Calculated Data (2015)

The result from coefficient test in this part shows that the value (constant) = -0,530 and B-value = 1,125 with the t-count price and significance rate = 0,000. From coefficient table, the equation of simple regression calculation is:

$\hat{Y}$= a + bX = -0,530 + 1,125X

Information:

Constanta or intercept (a) amounted to -0,530can be reversed as follows:
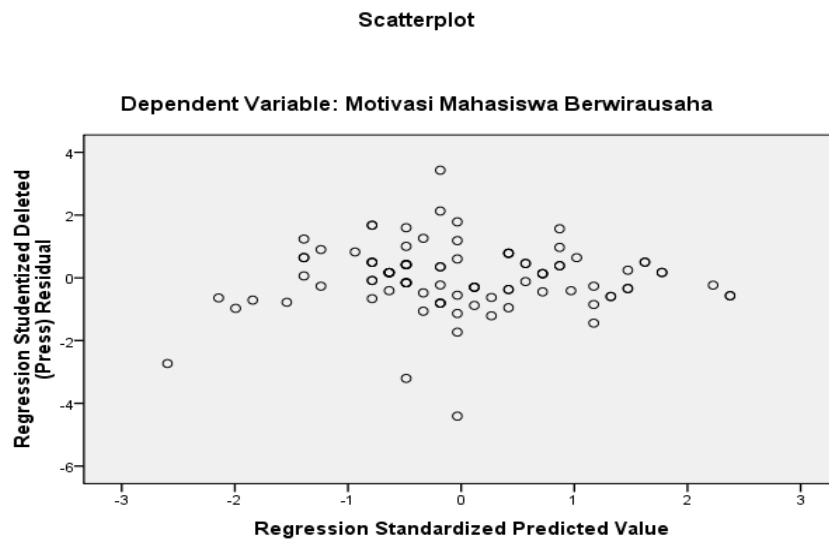
Y = 1,125(x) - 0,530

Can be defined that if entrepreneurship's capital assistance is amounted to X = 1, then the student's entrepreneurship motivation is amounted to 0,595. The regression coefficient that is amounted to 1,125 states that with a one-point increase, entrepreneurship's capital assistance is predicted to increase student's entrepreneurship motivation by 1,125. Conversely, if entrepreneurship's capital assistance drops by one point,then student's entrepreneurship motivation is predicted to be decreased by 1,125. Therefore, the increasing or decreasing of free variable (X) will cause the increasing or decreasing of bound variable (Y).

**GRAPHIC 1: HISTOGRAM**
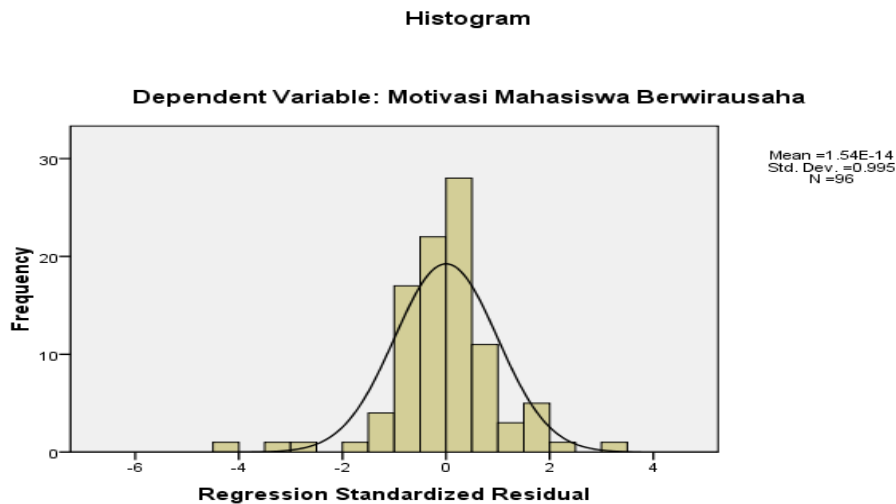


Based on the test result, it can be seen that histogram graphic shows the data spreads to all of the normal curve area so that it can be concluded that the data has a normal distribution. While the test result using P-Plot shows that the data follows the diagonal line so that it can be stated that the data has a normal distribution.

**GRAPHIC 2: SCATTERPLOT**



**GRAPH 3**



If the plot is occurred like the graphic, then the entrepreneurship's capital assistance variable (X) and student's entrepreneurship motivation (Y) shows a positive relationship. The increment that appeared in entrepreneurship's capital assistance variable (X) also happens in student's entrepreneurship motivation (Y). If X variable decreases, then Y variable also decreases.

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**GRAPH 4**

Scatterplot

Dependent Variable: Motivasi Mahasiswa Berwirausaha
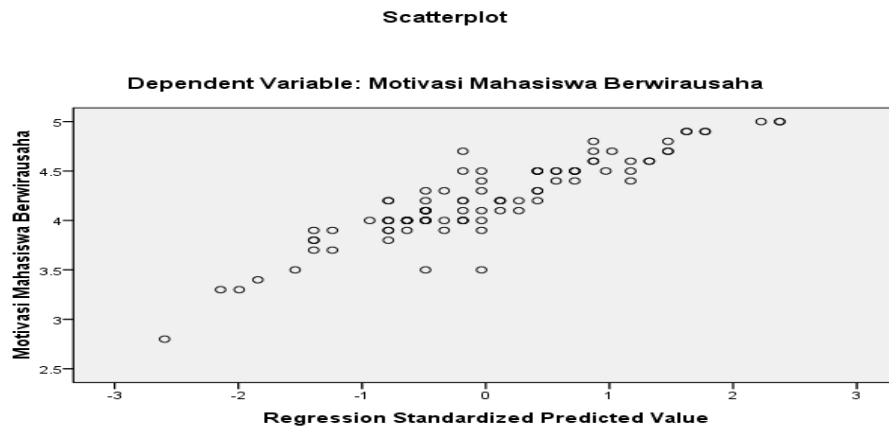


## CORRELATION COEFFICIENT

Correlation coefficient is usually given an *r* notation. The value of correlation coefficient is ranging from 0 to 1. The description of correlation coefficient can be explained as follows:

1.    If r = -1, it means that the closeness degree of two variables is really strong and has negative or opposite direction relationship.
2.    If r = 0, it means that two variables do not have any relationship.
3.    If r = +1, it means that the closeness degree of two variables is really strong and has negative or unidirectional relationship.

**TABLE 8: TOTAL VARIABLEVALUE** (N = 96)

| Y | X | XY | X² | Y² |
|---|---|---|---|---|
| 404 | 404 | 1713,13 | 1713,014 | 1716,24 |

$$r = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)} \; x \; \sqrt{[n \sum Y^2 - (\sum Y)^2]}}$$

$$r = \frac{96(1713,13) - (404)(404)}{\sqrt{(96(1713,014) - (404)^2)} \; x \; \sqrt{[96(1716,24) - (404)^2]}}$$

r = 0,89

Therefore, the closeness degree between entrepreneurship's capital assistance and student's entrepreneurship motivation is 0,89. After analysis, the relationship between these two variables is quite strong because the correlation value is approaching 1.

Aside from statistical data calculation, it can also be concluded based on the data of questionnaire recapitulation percentage value that the entrepreneurship's capital assistance can increase the student's entrepreneurship motivation. In the variable of entrepreneurship's capital assistance, students stated that they really agree to the statement that the granting of entrepreneurship's capital assistance can increase student's creativity. However, students stated they do not agree and really do not agree on the statement of the granting of entrepreneurship's capital assistance for both the group business and individual business is already sufficient.

On the variable of student's entrepreneurship motivation, students stated that they really agree on the statement that starting their own business can increase the income that can be used to fulfil life's needs. Whereas students stated that they do not agree on the statement of starting their own business can increase a person's pride and really not agree on the statement that education and knowledge that were gained through lecture really supports the desire to be an entrepreneur. Therefore, it can be concluded that students actually have the motivation from the inside to be an entrepreneur, but the motivation from the outside factor such as environment, family, and education is still not enough to motivate externally.

## CONCLUSION

From the result of this research, it can be concluded that:

Student's entrepreneurship motivation with the existence of entrepreneurship's capital assistance from Educational Institution, from n = 96, the average (mean) amounted to 4,21 and deviation standard amounted to 0,332 can be gained. Then in model summary table, it can be seen that the adjust value $R_{square}$ amounted to 0,824. It means that student's entrepreneurship motivation is affected by 90,8% from capital assistance, while the rest amounted to 9,2% is affected by other causes.

According to the regression equation y = - 0,530 + 1,125 x, the regression coefficient result above shows that capital assistance variable, in every one point increasing in entrepreneurship's capital assistance will increase student's entrepreneurship motivation by 1,125.

The suggestion that can be given by the authors to this research is:

Institution can increase the product support to students that want to be start their own business. The capital here is not just in monetary form, but also in other forms, such as facility development, trainings regarding entrepreneurship and internship in companies or industries.

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# PROBLEMS AND PROSPECTS OF HANDLOOM WEAVERS: A STUDY OF KARIMNAGAR DISTRICT

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## ABSTRACT

*The present study find out that most of the of the Handloom Weavers are facing financial problems, credit needs, marketing problems, production problems, raw material problems, social and personal problems, wages & employment problems, health problems and back pain problems.The study suggest atht The Government of India and State Governments provide assistance to handloom weavers, handloom weavers' co-operative societies for strengthening the share capital, improving the management of societies and modernization of looms and provide interest less loans in handloom weavers. The Government should enhance marketing facilities, increase the conducting handloom melas or exhibitions, provide new handloom looms for subsidy. The Government of India and State Governments has to be provide raw material  directly to the weavers and strengthen the handloom reservation act as well as establish counseling centers for empowering the weavers to eradicate suicide attitude. Apart from above the Government should provide free health insurance, health checkups, education for children, training & capacity building, interest free loans etc.*

## KEYWORDS
handloom weavers, Karimnagar.

## INTRODUCTION

Handloom industry is an ancient cottage industry with a decentralized setup. Handloom industry provides employment to nearly 43.32 lakhs of people with 23.77 lakhs looms, of people are depending upon the ancillary occupations connected with this Industry. Handloom Industry is highly concentrated on Man Made Art and Tradition. The handloom sector plays a very important role in the country's economic development. Tracing the importance of the textile sector in the Indian economy, brings us face to face with the different components such as the mill segment, the handloom segment and the power loom segment that make up this whole. All these three sectors are making three types of clothes, i.e., cotton, blended fabrics and non-cotton fabrics. In handloom sector weavers are classified into independent weavers, weavers working under master weavers, weavers working for cooperative societies, weavers for Non-Government Organizations and shed (wage) weavers.

There are totally 30 lakhs handlooms in the whole world, 85 percent of handlooms representedly to 23,77,331 lakhs located in India. Out of this, 19,96,958 looms are in the Rural Areas, while 3,80,372 looms are in the urban areas. In case of employment, handloom Industry provides direct employment to about 43.32 lakhs people with 23.77 lakhs handlooms. In the present socio-economic climate where dependency on foreign capital and know-how is Increasing in all round, the handloom industry presents a sustainable model of socio economic Activity, which is not energy-intensive and has low capital costs, as well as an Extensive skill base[1].

## HISTORICAL PROOF OF HANDLOOM

The Hindu epics such as the 'Ramayana' and the "Mahabharata" as well as "Buddhist" sources, chant in detail the processes and uses of handloom fabrics. The history of the handloom industry in India could be backed back to hoary part of dates back to the Epic times and it is reported to have been in a highly developed stage even then. In the 'Vedas and the "Puranas" there are innumerable references to the exquisite qualities and wide range of fabrics worn by the Gods, Kings said to have been very much fascinated by the exotic designs and textures of fabric work, by women on the earth, and there are stories of such Gods falling in love with mortal ladies by their dress[2].

"Kalidas" has described ruptial customers as Hamsa Chihita Dokoolo" of swan like wear. "Bana Bhatt," great poet in his work at many places has referred in detail to the artistic weaving of valuable cloth and contemporary elegance by mentioning garments made of extra fine thread. In Kautilya's "Arthasastra" the duties of Sutradhyaksha, a sort of sartorial officer have been described in great detail. In "Shukranti" too these are in mention of "Vastrya" an officer who looked after the demand and silken fabrics, in the market, kept an eye on the production of cloth manufacturing material and arranged for their collection of necessary sartorial information.The famous 'Ajanta Wall Paintings' of the 5th, 8th Centuries A.D, provided an invaluable record of the refined nature of the Indian-Textile Industries of the time. The cave frescoes clearly depict dancers, nobles, servants and musicians clothed in coin loom cloths and blouses, most probability patterned by the resist techniques of printing, tie and dye and ikat as well as brocade weaving[3].

Though India was famous even in ancient times as an exporter of textiles to most parts of the civilized world, few actual fabrics of the early dyed or printed cottons have survived. This it is explained is due to a hot moist climate and the existence of the monsoons in India. It is not surprising; therefore, that Egypt which has an exceptionally dry climate would provide evidence which India lacks. The earliest Indian fragment of cloth (before the Christian era) with a hansa (swan) design was excavated from a site near Cairo where the hot dry sand of the desert acted as a preservative.The last 100 years have witnessed the growth of mechanized textile production internationally. In part due to competition, handloom has lost much of its market and is almost non-existent in most countries. However, handlooms are still a force to reckonwithin India and some other Asian countries such as Srilanka, Bangladesh, Thailand, and Cambodia. Later, fragments of finely woven and madder-dyed cotton fabrics and shuttles were found at some of the excavated sites of Mohanjodaro (Indus valley civilization). Indian floral faints, dating back to the 18th century AD were covered by Sir Aural Stein in the icy waters of Central Asia. The evidence shows that of all the arts and crafts of India, traditional handloom textiles are probably the oldest. Though it employs the largest number of people, the handloom sector is considered a sunset industry, and there is an air of inevitability given the relentless march of mechanization, modernization and sophistication. Still, there are many advocates of handloom for reasons including ideology, philosophy, sheer love for handloom products and economic arguments. However, irrespective of the policies, projects and aspirations arising out of various quarters, the handloom sector is undergoing changes, that are showing impact on the livelihoods of handloom weavers [4].

## REVIEW OF LITARATURE

**D. Narasimha Reddy (2008)** Is of the opinion that, it is time that, government recognized the value of the handloom sector in achieving sustainable development of the country. Despite the adverse conditions, due to larger support from consumers and being a livelihood option for millions of weavers, Handloom sector has been surviving and has the potential to be so. Government has to ensure a 'level playing field' for this sector towards competition among the different sub-sector of textile industry.

**Sehgal H. K. (2009)** has examined that as far as the garment export sector is concerned, there have been mixed signals: continuing world economic downturn; some late recovery, however temporary and for some people; recent Rupee appreciation and with a new Government, expected to be stable, assuming charge.

**Prachi (2010)** has observed that Indian handloom is growing in its popularity not only among the people in India, but also among the people admiring Indian handloom and Indian handicrafts from around the globe. In spite of having distinct styles and ways of weaving, there is a lot of exchange of styles that happened among the diverse Indian handloom styles.

**TNN (2011)** has mentioned that the state government has taken several decisions to encourage weavers to boost handloom industry in the state. The state government with the cooperation of the Centre has formulated several schemes to ameliorate the socio-economic conditions of the weavers belonging to the handloom industry.

**IANS (2011)** has noted that Indian consumers need to change the thinking; they need to think 'swadeshi' rather than 'videshi'. The greatest tragedy weavers' face is being ignored not just by people but by designers as well. The fashion industry is a very powerful platform to convey the message across the masses that fashion is more than chic dressing; there has to be an essence to it.

**Dr. Srinivasa Rao Kasisomayajula (2012)** presented a paper basing on field work Socio-economic analysis of handloom industry in Andhra Pradesh A Study on selected districts. he was studied in the socio economic analysis of handloom industry in Andhra Pradesh a study on Selected district (East Godavari, Prakasam, Kurnool , Nalgonda ).

**A. Kumudha, M.Rizwana (2013)** in her paper Problems faced by handloom industry-A study with handloom weavers co-operative socities in erode district the paper focus on problems of handloom industry and problems of handloom co-operative society weavers.

**Venkateswaran. A (2014)** in his paper A Socio Economic Conditions of HandloomWeaving :A field study  in Kallidaikurichi of Tiruneveli District this paper studied in the A Socio  Economic Conditions of Handloom weavers and problem facing on handloom weavers.

## OBJECTIVES OF THE STUDY

1.    To study the present situation of handloom industry.
2.    To study the historical evidence of handloom industry.
3.    To examine the problems and prospects of handloom weavers.
4.    To give the suitable suggestions to improve the handloom industry.

## HYPOTHESIS

Ho. To test whether the Karimnagar handlooms give the sufficient income to the weavers or not
H1. To test whether there is any employment opportunity even today in the handloom industry or not.

## NEED OF THE STUDY

The handloom industry has facing many problems such as scarity of raw materials, marketing, finance and the most important being high incidence of mammals offered to officials. In view of this, there is an imperative need to undertaking a comprehensive study of the "problems and prospects of handloom weavers in Telangana" covering aspects such as, the impact of problems and prospects of weavers, structure of handloom weavers living conditions. Karimnagar district has been chosen for an intensive and detailed study since the district stands first in production and first in respect of membership in societies in the state.

## RESEARCH METHODOLOGY

### SCOPE OF THE STUDY
The study broadly examines the problems and prospects of handloom weaver in Karimnagar district from 2005-2015. i.e, 10 years period.

### SOURCE OF DATA
The study is based on primary data as well as secondary data.

**PRIMARY DATA:** The main source of the data are the weavers themselves and executive members of the society the elicit the proper information from the weavers a structured questionnaire was served to the weavers who were working in the societies. A part from this, personal interview group discussion and observation methods were used in collecting the first hand information

**SECONDARY DATA:** Secondary data for the study has been collected using published reports by the government, departments, offices Centre's consequently with the industry, published research papers in the reputed journals, books, thesis and dissertation and listing websites relating to the presented research.

### SAMPLE SIZE
Sample of 200 weavers selected from the Karimnagar District.

### AREA OF STUDY
This study was confined to handloom weavers of Karimnagar District

### LIMITATIONS OF THE STUDY
These are the limitations of the present research study. The study is essentially a micro level study. The information through the questionnaires may not have covered correct figures problems and prospects. The opinions and expressions of weavers are based on the personal experience with the societies the secondary data are taken as reported in the records however, the primary data is added to know the present conditions of weavers.

## DATA ANALYSIS AND INTERPRETATION

The data are collected from 200 sample Respondents by supplying the questionnaires, the data are analysed by simple tables on the basis of financial problems, marketing problems, production problems, social problems and health problems therefore, these aspects are covered in this paper.
Handloom weavers are facing several problems such as following:

### 1. FINANCIAL PROBLEMS
Handloom industry is one such delicate organization, which has been totally capital-straved at all the time. By and large, sound financial assistance from government alone could improve the competitive urge among handloom co-operatives. The Government of India and State Governments provide assistance to handloom weavers, handloom weavers' co-operative societies for strengthening the share capital, improving the management of societies and modernization of looms. Even then, the societies could not strengthen their financial position because, they are not able to repay in time the loan received and hence the societies have to pay interest to the District Central Co-operative Banks.
The below table 1 shows the financial problems of Respondents in the four selected Mandals

**TABLE 1: FINANCIAL PROBLEM**

| S. No | Financial Problem | No. of Respondents | | | | Total (%) |
|---|---|---|---|---|---|---|
| | | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi | |
| 1 | Yes | 40 (20.00) | 42 (21.00) | 38 (19.00) | 44 (22.00) | 164 (82.00) |
| 2 | No | 10 5.00) | 8 (4.00) | 12 (6.00) | 6 (3.00) | 36 (18.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** Field survey

The table-1 reveals about financial problem of Respondents. In Karimnagar Mandal has been selected 50 Respondents. The highest number 40 (20.00%) Respondents are facing financial problem, the lowest number 10 (5.00%) Respondents are not facing financial problem.

In Siricilla Mandal has been selected 50 Respondents. The highest number 42 (21.00%) Respondents are facing financial problem, the lowest number 8 (4.00%) Respondents are not facing financial problem.

In Thangallapally Mandal has been selected 50 Respondents. The highest number 38 (19.00%) Respondents are facing financial problem, the lowest number 12 (6.00%) Respondents are not facing financial problem.

In Garshakurthi Mandal has been selected 50 Respondents. The highest number 44 (22.00%) Respondents are facing financial problem, the lowest number 6 (3.00%) Respondents are not facing financial problem.

The overall observation reveals that the majority of the Respondents are facing financial problem.

Financial problems are divvied into four types, such as following:

**A. INFRASTRUCTURE AND INVESTMENT**

Investment in handloom sector has thus far been limited to input supply costs. There is no investment on sect oral growth, while there have been some piece meal projects such as work shed-cum-housing and project package schemes', they merely perpetuate the existing conditions. There has been no thinking on basic requirements of the producer. Facilities such as land, water and electricity need to be provided in many places that are a harbor for handloom manufacturing. Common facilities have not been developed such as godowns, credit facilities (banks in the vicinity), roads, proper sanitation, etc, have not been provided anywhere. In recent years, the investment profile in handloom sector has also been changing. Traditional investors - known as master weavers who have been investing for several decades in handloom production have been moving away, or have become reluctant to invest in new designs. There is a need for new programmes that enable the inflow of fresh investments and emergence of new entrepreneurs into the handloom sector.

**B. BUDGET ALLOCATIONS**

Allocations for handloom in national and state budgets are being reduced. This has to be reversed. Budget has to be increased with new schemes, which address the problems of the sector, in view of the linkage and the need to protect rural employment.

**C. CREDIT NEEDS**

The credit facilities currently available to weavers are far from adequate. Even those made available through co-operatives rarely reach the sections for which it is intended. This is because master weavers control a number of co-operatives and tend to corner a substantial proportion of institutional credit. As indicated earlier, the majority of weavers are to be found outside the co-operative fold, weaving usually for master weavers or on their own. The credit needs of this sector have remained unaddressed. The existing situation is one where the local master weaver provides consumption loans and/or advances, which, over time, render the weaver completely in debted to the master weaver.

**D. TAXES AND SUBSIDIES**

Presently, there are no subsidies for handloom sector. They are completely withdrawn. However, they need to be continued. There are no taxes. However, the benefits go to the traders and not the weavers[5].

The below table-2 shows the Types of financial problems of Respondents in the four selected Mandals.

**TABLE 2: TYPES OF FINANCIAL PROBLEMS**

| S. No | Financial Problem | No. of Respondents | | | | Total (%) |
|---|---|---|---|---|---|---|
| | | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi | |
| 1 | Infrastructure and investment | 8 (4.00) | 6 (3.00) | 4 (2.00) | 6 (3.00) | 24 (12.00) |
| 2 | Budget allocation | 7 (3.50) | 8 (4.00) | 6 (3.00) | 7 (3.50) | 28 (14.00) |
| 3 | Credit Needs | 17 (8.50) | 15 (7.50) | 18 (9.00) | 22 (11.00) | 72 (36.00) |
| 4 | Taxes and subsidies | 8 (4.00) | 13 (6.50) | 10 (5.00) | 9 (4.50) | 40 (20.00) |
| 5 | No | 10 (5.00) | 8 (4.00) | 12 (6.00) | 6 (3.00) | 36 (18.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** Field survey

The above table-2 reveals about types of financial problems of Respondents. In Karimnagar Mandal has been selected 50 Respondents. The highest number 17 (8.50%) Respondents are facing Credit needs, 10 (5.00%) Respondents are not facing any financial problem, 8 (4.00%) Respondents are facing infrastructure and investment, 8 (4.00%) Respondents are facing taxes & subsidies, the lowest number 7 (3.50%) Respondents are facing budget allocation.

In Siricilla Mandal has been selected 50 Respondents. The highest number 15 (7.50%) Respondents are facing Credit needs, 13 (6.50%) Respondents are facing taxes and subsidies, 8 (4.00%) Respondents are facing budget allocation, 8 (4.00%) Respondents are not facing any financial problem, the lowest number 6 (3.00%) Respondents are facing infrastructure & investment.

In Thangallapally Mandal has been selected 50 Respondents. The highest number 18 (9.00%) Respondents are facing Credit needs, 12 (6.00%) Respondents are not facing any financial problem, 10 (5.00%) Respondents are facing taxes & subsidies, 6 (3.00%) Respondents are facing budget allocation, the lowest number 4 (2.00%) Respondents are facing infrastructure & investment.

In Garshakurthi Mandal has been selected 50 Respondents. The highest number 22 (11.00%) Respondents are facing Credit needs, 9 (4.50%) Respondents are facing taxes and subsidies, 7 (3.50%) Respondents are facing budget allocation, 6 (3.00%) Respondents are facing infrastructure & investment, the lowest number 6 (3.00%) Respondents are not facing any financial problem.

The overall observation reveals that the majority of Respondents are facing Credit needs.

**2. MARKETING PROBLEMS**

The wake of new trends in fashions with man-made fibre and yarn fabrics having made in roads up to the rural areas. It is but natural that handloom fabrics face difficulties in marketing and sales promotion. Marketing is the central problem that calls for the drawing up of a suitable strategy. Otherwise, any amount of aid

given to this industry at the production level will turn out to be of no help. The industry has been pursuing the sales oriented philosophy. Inadequate marketing services and facilities have resulted in periodical accumulation of stocks, resulting in underemployment and unemployment among weavers.

Independent weavers, outside the co-operative fold, are not always able to dispose of their cloth directly to the consumer. They have to approach the middlemen. In case of weavers working under master weavers on wage basis, they return the finished cloth to the master weavers. The co-operative societies are wholly dependent on the TSCO for marketing of their products. In our state, TSCO is not performing well and not in a position to lift the finished products and make the payment timely. The efforts are directed to sell the quantity through the purchase of handloom cloth by the government departments, army personnel, local bodies and rebate schemes and other programmes that are directed to push the product to the market.

The below table-3 shows the Marketing problem of Respondents in the four selected Mandals.

### TABLE 3: MARKETING PROBLEM

| S. No | Marketing Problem | No. of Respondents | | | | Total (%) |
|-------|-------------------|--------------------|--------------------|--------------------|--------------------|-----------|
|       |                   | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi |           |
| 1 | Yesl | 48 (24.00) | 46 (23.00) | 47 (23.50) | 47 (23.50) | 188 (94.00) |
| 2 | No | 2 (1.00) | 4 (2.00) | 3 (1.50) | 3 (1.50) | 12 (6.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** field survey

The table-3 reveals about Marketing problem of Respondents. In Karimnagar Mandal has been selected 50 Respondents. The highest number 48 (24.00%) Respondents are facing Marketing problem, the lowest number 2 (1.00%) Respondents are not facing Marketing problem.

In Siricilla Mandal has been selected 50 Respondents. The highest number 46 (23.00%) Respondents are facing Marketing problem, the lowest number 4 (2.00%) Respondents are not facing Marketing problem.

In Thangallapally Mandal has been selected 50 Respondents. The highest number 47 (23.50%) Respondents are facing Marketing problem, the lowest number 3 (1.50%) Respondents are not facing Marketing problem.

In Garshakurthi Mandal has been selected 50 Respondents. The highest number 47 (23.50%) Respondents are facing Marketing problem, the lowest number 3 (1.50%) Respondents are not facing Marketing problem.

The overall observation reveals that the majority of the Respondents are facing Marketing problem

Marketing problems are divvied into five types, such as following:

**A. COMPETITION FROM MILLS AND POWERLOOMS:**
The powerlooms were able to misuse the concession given to handlooms and function under the cover of handlooms. The other advantages enjoyed by the powerlooms were low wages, wholesale evasion of protective labour legislation, low taxes on yarn, no levies on grey fabrics produced by powerlooms, low overheads, low requirements of working capital and flexibility in production mix. In addition to the fact that powerlooms are able to concentrate on synthetic fibres, would seem to give them an inseparable advantage over handlooms. The sector faces stiff competition from the powerlooms and mill sector, which is threatening its existence. While, most handlooms are made of cotton, the yarn consumption pattern is shifting towards other fibres also. Handloom products are increasingly being copied on powerlooms at a low cost due to rapid technological developments. If the present trend continues, handlooms could loose a sizeable market. The obligations of textile quotas would further aggravate the problem of handloom sector.

**B. MARKET FOR PRODUCTS**
Handloom products require more visibility. This means better and wider market network. One-off exhibitions organized with the support of government do not suffice presently, handloom products are available only in few places. An umbrella market organization, autonomous and financed by the government initially should be formed to undertake this task, financed by the sales of the handloom products.

**C. FREE EXPORT/IMPORT TRADE – OPPORTUNITY**
Post the WTO Agreement on Textile Clothing, there is going to be more free export and import of textiles. The handloom sector, as a traditional area, can claim some special packages or discriminatory measures, to protect this kind of production. Options and policy measures need to be worked out either by independent institutions or the government.

**D. INTERMEDIARIES (INDIVIDUALS/INSTITUTIONS)**
Government has created a few research, training and input institutions to help the handloom sector. These institutions include weaver service centres, institutions of handloom technology, NIFT, etc. But their performance has been below par and then presence has not helped in obviating the problems of handloom weavers.

**E.MARKET ENVIRONMENT**
Marketing environment are also effecting handloom industry[6].

The below table-4 shows the Types of Marketing problems of Respondents in the four selected Mandals.

### TABLE 4: TYPES OF MARKETING PROBLEMS

| S. No | Marketing Problem | No. of Respondents | | | | Total (%) |
|-------|-------------------|--------------------|--------------------|--------------------|--------------------|-----------|
|       |                   | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi |           |
| 1 | Competition from Mills&Powerlooms | 4 (2.00) | 5 (2.50) | 6 (3.00) | 5 (2.50) | 20 (10.00) |
| 2 | Market for products | 15 (7.50) | 26 (13.00) | 22 (11.00) | 23 (11.50) | 96 (48.00) |
| 3 | Free export and import trade opportuinity | 6 (3.00) | 4 (2.00) | 8 (4.00) | 6 (3.00) | 24 (12.00) |
| 4 | Intermediaries (Individual and Instuitions) | 1 (0.50) | 3 (1.50) | 2 (1.00) | 2 (1.00) | 8 (4.00) |
| 5 | Market environment | 12 (6.00) | 8 (4.00) | 9 (4.50) | 11 (5.50) | 40 (20.00) |
| 6 | No | 2 (1.00) | 4 (2.00) | 3 (1.50) | 3 (1.50) | 12 (6.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** field survey.

The below table-4 reveals about Types of Marketing problems of Respondents. In Karimnagar Mandal has been selected 50 Respondents. The highest no 15 (7.50%) Respondents are facing market for products, 12 (6.00%) Respondents are facing market environments, 6 (3.00%) Respondents are facing free export/import trade-opportunity, 4 (2.00%) Respondents are facing competition from mills and powerlooms, 2 (1.00%) Respondents are not facing any marketing problem, the lowest number 1 (0.50%) Respondents are facing intermediaries (individual/institutions).

In Siricilla Mandal has been selected 50 Respondents. The highest no 26 (13.00%) Respondents are facing market for products, 8 (4.00%) Respondents are facing market environment, 5 (2.50%) Respondents are facing competition from mills and powerlooms, 4 (2.00%) Respondents are facing free export/import trade-opportunity, 4 (2.00%) Respondents are not facing any marketing problem, the lowest number 3 (1.50%) Respondents are facing intermediaries (individual / institutions).

In Thangallapallly Mandal has been selected 50 Respondents. The highest no 22 (11.00%) Respondents are facing market for products, 9 (4.50%) Respondents are facing market environments, 8 (4.00%) Respondents are facing free export/import trade-opportunity, 6 (3.00%) Respondents are facing competition from mills and powerlooms, 3 (1.50%) Respondents are not facing any marketing problem, the lowest number 2 (1.00%) Respondents are facing intermediaries (individual/institutions).

In Garshakurthi Mandal has been selected 50 Respondents. The highest no 23 (11.50%) Respondents are facing market for products, 11 (5.50%) Respondents are facing market environments, 6 (3.00%) Respondents are facing free export/import trade-opportunity, 5 (2.50%) Respondents are facing competition from mills and powerlooms, 3 (1.50%) Respondents are not facing any marketing problem, the lowest number 2 (1.00%) Respondents are facing intermediaries (individual/institutions).

The overall observation reveals that the majority of Respondents are facing Market of products

**3. PRODUCTION PROBLEMS**

Handloom weavers are also facing production problems are scarcity of yarn, lack of technology development, raw material problems, design improvement, enhancement of value, technology& mechanization patenting designs/varieties and working hours.

The below table-5 shows the Production problem of Respondents in the four selected Mandals.

**TABLE 5: PRODUCTION PROBLEM**

| S. No | Production Problem | No. of Respondents | | | | Total (%) |
|---|---|---|---|---|---|---|
| | | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi | |
| 1 | Yes | 48 (24.00) | 49 (24.50) | 48 (24.00) | 49 (24.50) | 194 (97.00) |
| 2 | No | 2 (1.00) | 1 (0.50) | 2 (1.00) | 1 (0.50) | 6 (3.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** field survey

The table-5 reveals about Production problem of Respondents. In Karimnagar Mandal has been selected 50 Respondents. The highest number 48 (24.00%) Respondents are facing Production problem, the lowest number 2 (1.00%) Respondents are not facing Production problem.

In Siricilla Mandal has been selected 50 Respondents. The highest number 49 (24.50%) Respondents are facing Production problem, the lowest number 1 (0.50%) Respondents are not facing Production problem.

In Thangallapally Mandal has been selected 50 Respondents. The highest number 48 (24.00%) Respondents are facing Production problem, the lowest number 2 (1.00%) Respondents are not facing Production problem.

In Garshakurthi Mandal has been selected 50 Respondents. The highest number 49 (24.50%) Respondents are facing Production problem, the lowest number 1 (0.50%) Respondents are not facing Production problem.

The overall observation reveals that the majority of the Respondents are facing Production problem.

Production problems are divvied into eight types, such as

**A. SCARCITY OF YARN:** The handloom sector is mostly dependent on the organized mill sector for the supply of its principal raw material, namely, yarn. This sector uses the bulk of yarn in the form of hanks. A gross deficiency in the supply of yarn at reasonable prices is complained. The yarn is produced in composite mills and spinning mills. Though there is a stipulation of producing 50 per cent hank yarn for the handloom industry by the composite mills, the mills have not adhered to such a stipulation. The shortage of raw materials has been a problem for several years to the industry.

**B. LACK OF TECHNOLOGY DEVELOPMENT:** Weaving continuous to be a traditional and hereditary occupation. The weavers are following traditional methods of production and design due to lack of exposure, awareness and knowledge over changing technologies, methods and the requirements. The production capacity of these looms is low and the job is tedious. This sector encounters tough competition from superior quality products available at cheaper prices from the organized sectors. For technology development, major efforts are needed for modernization of looms, increasing productivity, quality of products, standardization of various processes and products and production of value added products. Lack of training is also another drawback.

**C. RAW MATERIAL PROBLEMS**: The success of any industry is based on the availability of raw material. The unavailability of raw material is one of the crisis faced by the handloom sector. Cotton yarn, dyes, silk and jute are important raw materials. Cotton handloom weavers have been largely dependent on spinning mills to provide them yarn, but nowadays, these mills find it more profitable to work with the power loom sector and weaving mills. Moreover, since the concentration of handlooms is higher in rural and semi-rural areas handloom weavers have to travel for to get the yarn. Also, the raw material used by this sector is not available at a low cost since cotton production costs are high in India. With the government now encouraging yarn export, there could soon be a further shortage of yarn. So handloom weavers are today facing a raw material crisis.

**i) PRICES OF RAW MATERIAL:** Handloom primarily uses natural fibres such as cotton, silk and jute. Prices of these fibres have been increasing during production and processing. Cotton production in India is expensive because of intensive and high usage of costly agricultural inputs such as pesticides and fertilizers. Secondly, while the fibre production most often happens in the vicinity of the weavers, their processing is done in distant areas, and as such the prices to the weaver are higher. With the Central Government now encouraging primary fibre and yarn exports, handloom weavers would be on the last priority for yarn suppliers.

The solution lies in establishing relatively low-post, decentralized spinning units in the villages where handloom and fibre productions co-exist. The units would enable direct linkage between farmers and weavers, which essentially decreases the cost of yarn and thus the cost of handloom products. Still, the cost of selling up the units may be too much for an individual, and hence governmental support will be required.

**ii) SUPPLY OF RAW MATERIAL:** Access to raw material such as yarn, dyes and dye stuffs has become a problem. (Yarn is made out of fibres such as cotton and is used to weave the cloth, horizontally and vertically. It is the primary material to produce the cloth or fabric.) Weaving is a rural and semi-rural production activity and weavers have to go far to get these raw materials. To top it off, yarn prices are steadily increasing. The availability of hank yarn - the basic material from which weaving is done - is a serious issue because it is controlled by modern spinning mills, who see more profit in large-volume cone yarn. Secondly, since hank yarn is tax-free and has subsidies, enormous amounts are diverted to the powerloom and mill sectors. As a result, there is a perennial shortage of yarn for the weavers. Despite a few schemes, the hank yarn access issue has not been resolved, Colours are expensive, and presently there is no system or mechanism to increase their availability.

**D. DESIGN IMPROVEMENTS:** While there are suggestions that handloom sector should increase its design in respond in changes in the market, the bottlenecks are many. The lack of change is not due to the weaver not being amenable to change, as is bandied. Rather, it is due to unwillingness of the investor to take risks and provide incentive to weavers for effecting the change.

**E. ENHANCEMENT OF VALUE:** There is a need for enhancing the value of handloom products through utilization of organic cotton and organic yarn, application of natural dyes and by increasing the productivity of the looms through research and innovation.

**F. TECHNOLOGY AND MECHANIZATION:** In the pre-loom processing (yarn preparation and dyeing), some degree of mechanization is being asked. Appropriate usage needs to be worked out.

**G**. **PATENTING DESIGNS/VARIETIES:** Handloom designs/varieties are not protected. As a result, investors are not interested lest they end up with the risk and those who copy the benefits. Protection options include development of handloom/silk/jute marks and registration under Geographical Indications Act. However more discussion is required on this, if handloom has to come up with designs that suit the market preferences[7].

The below table-6 shows the Types of Production problems of Respondents in the four selected Mandals.

**TABLE 6: TYPES OF PRODUCTION PROBLEMS**

| S. No | Production Problem | No. of Respondents | | | | |
|---|---|---|---|---|---|---|
| | | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi | Total (%) |
| 1 | Scarcity of Yarn | 4 (2.00) | 5 (2.50) | 6 (3.00) | 3 (1.50) | 18 (9.00) |
| 2 | Lack of Techonology Development and Mechanization | 7 (3.50) | 4 (2.00) | 5 (2.50) | 6 (3.00) | 22 (11.00) |
| 3 | Raw material problem | 16 (8.00) | 21 (10.50) | 20 (10.00) | 17 (8.50) | 74 (37.00) |
| 4 | Deasign Improvements and Patering Designs/varieties | 14 (7.00) | 10 (5.00) | 12 (6.00) | 12 (6.00) | 48 (24.00) |
| 5 | Working hours | 7 (3.50) | 9 (4.50) | 5 (2.50) | 11 (5.50) | 32 (16.00) |
| 6 | No | 2 (1.00) | 1 (0.50) | 2 (1.00) | 1 (0.50) | 6 (3.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** Field Survey.

The above table-6 reveals about Types of Production problems. In Karimnagar Mandal has been selected 50 Respondents. The highest number 16 (8.00%) Respondents are facing Raw Material, 14 (7.00%) Respondents are facing Designs improvement and patering designs/varities, 7 (3.50%) Respondents are facing lack of technology development and mechanisation, 7 (3.50%) Respondents are facing working hours, 4 (2.00%) Respondents are facing scarcity of yarn, the lowest number 2 (1.00%) Respondents are not facing any production problem.

In Siricilla Mandal has been selected 50 Respondents. The highest number 21 (10.50%) Respondents are facing Raw Material, 10 (5.00%) Respondents are facing Designs improvement and patering designs/varities, 9 (4.50%) Respondents are facing working hours, 5 (2.50%) Respondents are facing scarcity of yarn 4 (2.00%) Respondents are facing lack of technology development and mechanisation, the lowest number 1 (0.50%) Respondents are not facing any production problem.

In Thangallapally Mandal has been selected 50 Respondents. The highest number 20 (10.00%) Respondents are facing Raw Material, 12 (6.00%) Respondents are facing Designs improvement and patering designs/varities, 6 (3.00%) Respondents are facing scarcity of yarn, 5 (2.50%) Respondents are facing lack of technology development and mechanization, 5 (2.50%) Respondents are facing working hours, the lowest number 1 (0.50%) Respondents are not facing any production problem.

In Garshakurthi Mandal has been selected 50 Respondents. The highest number 17 (8.50%) Respondents are facing Raw Material, 12 (6.00%) Respondents are facing Designs improvement and patering designs/varities, 11 (5.50%) Respondents are facing working hours, 6 (3.00%) Respondents are facing lack of technology development and mechanization, 3 (1.50%) Respondents are facing scarcity of yarn, the lowest number 1 (0.50%) Respondents are not facing any production problem.

The overall observation reveals that the majority of Respondents are facing Raw Material problem.

**4. SOCIAL AND PERSONAL PROBLEMS:** Handloom weavers are also facing social and personal problems are co-operative system, wages, employment and livelihood issues, women related problems, welfare schemes and employment problems.

The below table-7 shows the Social and Personal problem of Respondents in the four selected Mandals.

**TABLE -7: SOCIAL AND PERSONAL PROBLEM**

| S. No | Social and Personal Problem | No. of Respondents | | | | |
|---|---|---|---|---|---|---|
| | | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi | Total (%) |
| 1 | Yes | 44 (22.00) | 45 (22.50) | 43 (21.50) | 46 (23.00) | 178 (89.00) |
| 2 | No | 6 (3.00) | 5 (2.50) | 7 (3.50) | 4 (2.00) | 22 (11.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** Field Survey.

The above table-7 reveals about Social and Personal problem of Respondents. In Karimnagar Mandal has been selected 50 Respondents. The highest number 44 (22.00%) Respondents are facing Social and Personal problem, the lowest number 6 (3.00%) Respondents are not facing Social and Personal problem.

In Siricilla Mandal has been selected 50 Respondents. The highest number 45 (21.50%) Respondents are facing Social and Personal problem, the lowest number 5 (2.50%) Respondents are not facing Social and Personal problem.

In Thangallapally Mandal has been selected 50 Respondents. The highest number 43 (21.50%) Respondents are facing Social and Personal problem, the lowest number 7 (3.50%) Respondents are not facing Social and Personal problem.

In Garshakurthi Mandal has been selected 50 Respondents. The highest number 46 (23.00%) Respondents are facing Social and Personal problem, the lowest number 4 (2.00%) Respondents are not facing Social and Personal problem.

The overall observation reveals that the majority of the Respondents are facing Social and Personal problem.

**A. CO-OPERATIVE SYSTEM:** While cooperatives do help in maximizing the benefits for weavers in the entire chain of production, their present condition is a cause of concern. The handloom cooperative system is riddled with corruption and political interference. Many handloom weavers are not members of these cooperatives. Government departments have to stop using them as primary sources for routing government funds and schemes. Cooperatives have to become independent of district level government officers in terms of management and decision-making.

**B. WAGES, EMPLOYMENT AND LIVELIHOOD ISSUES:** Wages have not increased in the last 15 years. Some sections of handloom weavers are living in hand-to-mouth conditions, with no house or assets for them, for years together. These issues need to be addressed. Given such a situation, government policies and actions are required to address such a situation. While there are many non-government initiatives, which try to obviate the problems, policy action would have a wider reach and impact. It would also ensure a way forward and give strength to the weavers to face the competition, with much more rigour and enthusiasm.

**C.WOMEN RELATED PROBLEMS:** Women, presently, share enormous work burden with no commensurate compensation system. Their work is not recognized. Their living and working conditions are a serious concern in many parts of India.

**D. WELFARE SCHEMES:** Education and health constitute a major concern for handloom weaver families government has to come forward to help the children, women and old people to overcome their health and education needs.

**E. EMPLOYMENT PROBLEMS:** The handloom sector remains a major source for self and casual employment. Apart from the direct employment to about 3.5 million people, it provides indirect employment during the pre- and post-production process. The primary importance of the sector providing gainful employment in rural India is under threat with growing competition from the powerloom sector, lack of government intervention, unfavorable. The handloom sector place an important role in the Indian economy since it is very large in scale and provides the largest employment opportunity, next to the agriculture sector. India is currently the world's largest producer of handloom products with a total production of more than 5 billion meters in 2005. The major handloom weaving states in India are west Bengal, Tamil Nadu, Uttar Pradesh Andhra Pradesh, Telangana, Assam and Manipur, in India, there are more than 3.8 millions handlooms in operations, with the livelihood of about 12.5 million people dependent on handloom weaving.

This makes of 23% of the total textiles production in the country. Overall, this sector place a vital role in local economies, especially in rural areas the handloom sector holds on about 12.5 million people are dependent on handloom weaving for their livelihood handloom carpets government policies, etc. because of lack of work, handloom weavers with many skills are today forced to work as construction workers, venders, etc[8].

The below table-8 shows the Types of Social and Personal problems of Respondents in the four selected Mandals.

**TABLE 8: TYPES OF SOCIAL & PERSONAL PROBLEMS**

| S. No | Social & personal Problem | No. of Respondents | | | | |
|---|---|---|---|---|---|---|
| | | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi | Total (%) |
| 1 | Co operative System | 10 (5.00) | 8 (4.00) | 9 (4.50) | 9 (4.50) | 36 (18.00) |
| 2 | Wages,employment& livelihood issues | 17 (8.50) | 21 (10.50) | 13 (6.50) | 25 (12.50) | 76 (38.00) |
| 3 | Women related problems | 3 (1.50) | 4 (2.00) | 5 (2.50) | 2 (1.00) | 14 (7.00) |
| 4 | Welfare schemes | 14 (7.00) | 12 (6.00) | 16 (8.00) | 10 (5.00) | 52 (26.00) |
| 5 | No | 6 (3.00) | 5 (2.50) | 7 (3.50) | 4 (2.00) | 22 (11.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** Field Survey.

The above table-8 reveals about Types of social and personal problems of Respondents. In Karimnagar Mandal has been selected 50 Respondents. The highest number 17 (8.50%) Respondents are facing Wages, employment & livelihood issues, 14 (7.00%) Respondents are facing welfare schemes, 10 (5.00%) Respondents are facing co-operative system, 6 (3.00%) Respondents are not facing any social and personal problem, the lowest number 3 (1.50%) Respondents are facing women related problems.

In Siricilla Mandal has been selected 50 Respondents. The highest number 21 (10.50%) Respondents are facing Wages, employment & livelihood issues, 12 (6.00%) Respondents are facing welfare schemes, 8 (4.00%) Respondents are facing co-operative system, 5 (2.50%) Respondents are not facing any social and personal problem, the lowest number 4 (2.00%) Respondents are facing women related problems.

In Thangallapallly Mandal has been selected 50 Respondents. The highest number 16 (8.00%) Respondents are facing welfare schemes, 13 (6.50%) Respondents are facing Wages, employment & livelihood issues, 9 (4.50%) Respondents are facing co-operative system, 7 (3.50%) Respondents are not facing any social and personal problem, the lowest number 5 (2.50%) Respondents are facing women related problems.

In Garshakurthi Mandal has been selected 50 Respondents. The highest number 25 (12.50%) Respondents are facing Wages, employment & livelihood issues, 10 (5.00%) Respondents are facing welfare schemes, 9 (4.50%) Respondents are facing co-operative system, 4 (2.00%) Respondents are not facing any social and personal problem, the lowest number 2 (1.00%) Respondents are facing women related problems.

The overall observation reveals that the majority of Respondents are facing Wages, employment & livelihood issues.

**5. MAJOR HEALTH PROBLEMS:** Handloom weavers are facing major health problems such as following:
1.    Eye sight weakness.
2.    Back pain.
3.    Knee pain.
4.    Joint pain.

The below table-9 shows the Major Health Problems of Respondents in the four selected mandals.

**TABLE 9: MAJOR HEALTH PROBLEMS**

| S. No | Health Problem | No. of Respondents | | | | |
|---|---|---|---|---|---|---|
| | | Karimnagar | Siricilla | Thangalla Pally | Garshakurthi | Total (%) |
| 1 | Eye sight weakness | 17 (8.50) | 15 (7.50) | 16 (8.00) | 18 (9.00) | 66 (33.00) |
| 2 | Back Pain | 22 (11.00) | 22 (11.00) | 26 (13.00) | 24 (12.00) | 94 (47.00) |
| 3 | Knee Pain | 5 (2.50) | 4 (2.00) | 3 (1.50) | 4 (2.00) | 16 (8.00) |
| 4 | Joint Pain | 6 (3.00) | 9 (4.50) | 5 (2.50) | 4 (2.00) | 24 (12.00) |
| Total (%) | | 50 (25.00) | 50 (25.00) | 50 (25.00) | 50 (25.00) | 200 (100.00) |

**Source:** Field Survey.

The above table-9 reveals about Major health problems of Repondents. In Karimnagar Mandal has been selected 50 Respondents. The highest number 22 (11.00%) Respondents are facing Back pain, 17 (8.50%) Respondents are facing Eye sight weakness, 6 (3.00%) Respondents are facing Joint pain, lowest number 5 (2.50%) Respondents are facing Knee pain.

In Siricilla Mandal has been selected 50 Respondents. The highest number 22 (11.00%) Respondents are facing Back pain, 15 (7.50%) Respondents are facing Eye sight weakness, 9 (4.50%) Respondents are facing Joint pain, lowest number 4 (2.00%) Respondents are facing Knee pain.

In Thangallapally Mandal has been selected 50 Respondents. The highest number 26 (13.00%) Respondents are facing Back pain, 16 (8.00%) Respondents are facing Eye sight weakness, 5 (2.50%) Respondents are facing Joint pain, lowest number 3 (1.50%) Respondents are facing Knee pain.

In Garshakurthi Mandal has been selected 50 Respondents. The highest number 24 (12.00%) Respondents are facing Back pain, 18 (9.00%) Respondents are facing Eye sight weakness, 4 (2.00%) Respondents are facing Joint pain, lowest number 4 (2.00%) Respondents are facing Knee pain.

The overall observation reveals that the majority of Respondents are facing Back pain.

**FINDINGS OF THE STUDY**

1. 82% of the respondents are facing financial problems.
2. 72% of the respondents are facing credit needs.
3. 94% of the respondents are facing marketing problems.
4. 48% of the respondents are facing marketing for products.
5. 97% of the respondents are facing production problems.
6. 37% of the respondents are facing raw material problems.
7. 89% of the respondents are facing social and personal problems.
8. 38% of the respondents are facing wages, employment problems.
9. 72% of the respondents are facing health problems.
10. 47% of the respondents are facing back pain problems.

**SUGGESTIONS**

1. The Government of India and State Governments provide assistance to handloom weavers, handloom weavers' co-operative societies for strengthening the share capital, improving the management of societies and modernization of looms.
2. The Government of India and State Governments are provide interest less loans in handloom weavers.
3. To enhance marketing facilities.
4. To increase the conducting handloom melas or exhibitions.
5. To provide new handloom looms for subsidy.
6. The Government of India and State Governments has to be provide raw material directly to the weavers.
7. To strengthen the handloom reservation act.
8. To protect do not copy of the designs made by handloom from powerlooms.
9. To establish counseling centers for empowering the weavers to eradicate suicide attitude.
10. Government should provide free health insurance, health checkups, education for children, training & capacity building, interest free loans etc.

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